THE

Vermont Medical Monthly

Official Organ Vermont State Medical Society.

Vol. ix. No. 1. Whole No. 97. | Burlington, Vt., Jan. 25, 1903. | $1 per year. Single copies, 15 cts.

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The Vermont Medical Monthly

Vol. IX. January 25, 1903. No. 1.

ETIOLOGY AND PATHOLOGY OF LOBAR PNEUMONIA.*

By F. E. Clark, M. D.,
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Synonyms:

Croupus or Fibrinous Pneumonia; Pneumonitis; Lung Fever.

Classification:

The most common classifications of the inflammations of the lungs, or pneumonias, are based partly upon etiology, morphology, and the kind of excitant. The names used suggest the topography of the lesion and the character of the tissue which is especially affected. For example, the term lobar pneumonia is topographical; tubercular broncho-pneumonia emphasizes the excitant; while interstitial pneumonia suggests the tissue involved.

Definition:

Lobar pneumonia is an infectious disease incited in seventy per cent. of the cases by the Micrococcus Lanceolatus, known also as the Pneumococcus of Fraenkel. The lung is the seat of an acute exudative inflammation, which is ushered in by a congestive hyperaemia. There is a toxaemia of varying intensity and a fever that terminates abruptly by crisis. Secondary infective processes may or may not be present.

General Consideration:

Before beginning the discussion of this variety of inflammation of the lungs, or any to which the organ may be subjected, it is well to recall some of those features of structure and function which influence to a large degree the local manifestations of the disease and largely determine the special character of the lesions.

First.—The lungs while well protected in the thoracic cavity are still in open communication with the external world, and are thus directly exposed to deleterious agencies.

Second.—That notwithstanding the vulnerability of location, the passages that lead to and the recesses of the lungs are provided with a protective mechanism that is very efficient. For example, in normal respiration the air which bears dust of either organic or inorganic substances, as well as living organisms, is largely cleansed by the repeated impingement upon the moist mucous surfaces of the nose, pharynx, larynx and bronchial tubes. The ciliated epithelium which has been so wisely and generously provided to cover these surfaces are constantly sweeping upward and outward such of these deleterious agencies as have lodged upon them, while other foreign substances which have escaped these barriers are either removed by the lymph channels or lymph-nodes or stored in some less harmful situation. Thus it can be seen that any damage or injury to these protective agencies, whereby their integrity and efficiency is impaired, is a most important factor in the causation of pulmonary diseases, and one too often ignored.

Third.—The rich capillary network which is found chiefly in the aveola septa almost directly exposes the blood to such deleterious agents as may gain access to the air spaces. This network especially favors the formation of an exudate which may be considerable in

* Read at a regular meeting of the Burlington and Chittenden County Medical Society.

amount and great accumulations of the same are made possible by the spongy structure of the lungs. One writer has found it to be from three to four and even six pounds in weight.

Fourth.—The transitional character of the epithelium lining the aveoli predisposes to cell proliferation and exfoliation, and thus to the formation of an exudate.

Fifth.—The rich supply of blood and lymph channels favors a speedy removal of this exudate in large quantities from the air spaces, while on the other hand they favor the absorption of toxic substances which may act as excitants of other local inflammation. Although pneumonia is commonly considered a local disease it is but a local expression of a general infection made doubly significant on account of the associated toxaemia.

Sixth.—The general structure of the lungs favors to a large degree,in mild types of inflammation long continued, the formation of fibrous tissue which is a very common pathological process found in this organ.

Incident:

Osler states that pneumonia is the most widespread and the most fatal of all acute diseases. During the census of 1900 there died in the United States from pneumonia 105,971,a death rate of 191.9 per 100,000 of population. The census report states that there are more deaths attributed to it than to any single form of disdisease. The census reports of 1870, 1880 and 1890 show that pneumonia as a cause of death has increased but slightly.

Etiology:

The most important factor in the causation of fibrinous pneumonia is the Micrococcus Lanceolatus or Diplococcus Pneumoniae. The germ is a somewhat elliptical, lance-shaped coccus usually occurring in pairs, hence the term diplococcus. This micro-organism is found in the sputa and in the lungs in seventy per cent. of the cases of pneumonia. This coccus is facultative anaerobic and will grow on agar-agar at a temperature of the human body. They form delicate translucent, glistening cultures which suggest the deposit of dew on a cover glass. They stain very readily with fuchsin and with gentian-violet. With these staining solutions the capsules become visible. They are also stained by Gram's method.

Occasionally other micro-organisms seem to produce typical fibrinous pneumonia. Among these may be mentioned the pneumococcus of Friedlander, streptococci, staphylococci, the bacillus of typhoid fever, the bacillus of influenza, and the bacillus coli communis. In some cases in which bacteria other than the diplococcus are supposed to be the cause, it is doubtless a case of mixed infection, although at present we must accept that a number of micro-organisms are capable of causing a more or less typical lobar pneumonia.

These bacterial excitants gain access to the lungs through the respiratory passage, and produce their typical lesions by coming in contact with the mucous membrane of the bronchial tubes and air vesicles. They may be taken into the lymph channels or blood and widely distributed throughout the body causing serofibrinous inflammation in the meninges, the pleurae, the pericardium and the peritoneum. They may under certain conditions produce seropurulent and fibrino-purulent inflammation. Furthermore, they may cause inflammation of the endocardium, the kidneys, the joints, the Fallopian tubes, the parotid and thyroid glands, the bone marrow and the periosteum. In cerebral and cerebrospinal meningitis the maxillary cavity, the tympanic cavity and the cribriform labyrinth contain an exudate in which the diplococcus is found.

Certain predisposing factors are recognized clinically as important etiologically in the causation of pneumonia.

Age:

Up to the sixth year the predisposition is marked, it then diminishes to the fifteenth year,

but increases for every subsequent decade. Holt's statistics of 500 cases give: First year, 15 per cent.; from the second to the sixth year, 62 per cent.; from the seventh to the eleventh year, 21 per cent; from the twelfth to the fourteenth year, 2 per cent. The census report of 1890 gives a death rate in pneumonia from the fifteenth to the twenty-fourth year of 100.05 per 100,000 of population; from forty-five to sixty-five years it was 216.12 per 100,000, and in persons of sixty-five years of age and over it was 733.77 per 100,000.

Sex:

Males are more frequently affected than females. The census report of 1890 gives a rate of 42,739 males against 33,757 females who suffered from this disease.

Race:

In the United States pneumonia is more fatal to the colored race than to the whites, the death rate being 278.97 blacks against 182.24 whites.

Social Conditions:

Pneumonia is more common in the thickly populated centers or large cities. The death rate being 234.07 per 100,000 for the cities as against 141.09 for the rural districts. Individually, those who are much exposed to cold and hardships are particularly liable to the disease.

Personal Conditions:

Debilitating conditions of any sort render the individual more susceptible to the disease. Alcoholism is the most important predisposing factor.

Previous Attacks:

There is no acute disease that recurs in the same individual with such frequency. The per cent. of recurrences have been placed as high as 50 per cent., the average being from 20 to 30 per cent.

Cold:

Cold has been regarded for years as an important etiological factor. We see the disease occur promptly after a wetting or a chilling due to some unusual exposure. This is probably due more to a lowering of the resisting powers, by some damage or injury to the protective agencies, mentioned before, such as a dry, congested mucous membrane, whereby its integrity and efficiency is impaired, rather than being a direct cause as was formerly supposed.

Climate and Season:

Climate does not materially affect pneumonia, as it appears about equally in hot and cold countries.

The season is much more important. The greatest number of cases occur during the winter and spring months, the highest percentage being reached in February and March.

Pathological Anatomy:

Lobar pneumonia most frequently involves the lower lobe of the right lung; next in order the lower lobe of the left lung. The apices are not frequently involved.

In this special variety of pneumonia there is a tendency to the involvement of the whole lobe. The diseased area is affected uniformly and simultaneously. There is at times, however, wide variations from this rule, for occasionally a typical fibrinous pneumonia presents an appearance of a lobular disease. This is frequently so if it follows an influenza. In typical cases not only are the diseased areas affected uniformly and simultaneously, but they pass through very distinct stages, viz.: congestion, consolidation and resolution.

Stage of Congestion or Engorgement:
Gross Appearance:

The lung is dark red in color, more or less swollen and heavy, firmer to the touch, and more solid. On pressure it crepitates much less than a healthy lung, while excised portions float. The pleura covering the affected areas presents a dull, lustreless appearance and is more or less dry. On sectioning the lung a bloody liquid exudes and the cut surface is bathed with blood and serum. This is simply

a condition of intense congestion with exudation into the aveoli and terminal bronchioles.

Microscopically the small capillaries found in the aveola septa are seen to be greatly distended and project inward towards the alveoli, where the epithelium by this time is much swollen, together with the beginning of an accumulation of the exudate in the air spaces. This exudate is composed chiefly of red blood cells, leucocytes, serum and fibrin. The epithelium lining the air vesicles proliferates and is usually detached in considerable number. Catarrhal bronchitis and pleuritis at this time develop. All this is brought about during the first few hours of this inflammatory reaction, and is termed the stage of "congestion," or "engorgement." It may last for a few hours or several days.

The process of exudation continues until the air vesicles are completely filled, when we reach the second stage of the disease.

Consolidation or Hepatization:
Gross Appearance:

The lung now is completely solid, and liver-like to the touch. It is greatly swollen and shows the indentation of the ribs on its outer suruface. Crepitation is entirely lost,and excised portions sink. The cut surface at first is red in color, but later becomes lighter; it is dry and coarsely granular due to the fibrinous plugs or casts in the air spaces. The lung during this stage is extremely friable and can be readily broken by the fingers. The pleura covering the diseased lobe is the seat of a fibrous inflammation, and is much thickened.

Microscopically the section presents an exaggerated condition of what we in saw the stage of congestion. The blood vessels are still engorged, the exudate contains more fibrin and leucocytes together with the already existing red-cell, serum, serum-albumin (in the form of fine granules), and exfoliated epithelium. The aveola walls are infiltrated, and leucocytes are seen in the interlobular tissues. This stage gradually passes into the stage of gray hepatization which appears to be the first step in the process of resolution.

Gray Hepatization:
Gross Appearance:

The lung is light gray in color, not so friable, and much less swollen. The pleura shows a subsidence of inflammatory reaction and a returning to its normal condition. The exudate begins to soften, the cut surface is more moist from which a pureform liquid can be squeezed. Crepitation is beginning to be re-established.

Microscopically, the capillaries are no longer engorged and do not project into the air vesicles. The alveola walls again return to their normal thickness. The red blood cells have lost their hemaglobin, and together with great numbers of leucocytes, fibrin and exfoliated epithelium which constitute the exudate now undergoes a fatty degeneration and liquefaction. This results in an emulsification of the exudate that is finally carried off by the lymphatics or expectorated. The process of resolution will be further completed by a proliferation of the epithelium cells of the alveoli and bronchioles to repair the diseased portions.

Associated Lesions in Other Organs:

It is often found that other portions of the lungs not involved in the pneumonic process are emphysematous and congested. The larger bronchial tubes are not much affected while the finer bronchi are frequently hyperaemic, throwing out an access of mucus upon its surface.

The very nature of this pathological process, and the tissueus involved, as we have seen, tend to greatly impair the function of respiration and circulation and to affect other organs that are quite remote. The heart is most seriously affected, and demands our first and most constant attention. This organ is distended with firm, tough coagula. There is no other disease in which we meet with such tenacious coagula. The right heart is very much dilated owing to the great interference of pulmonic

circulation. This favors the formation of coagula and produces a passive hyperaemia of the liver, kidneys and spleen. These organs in turn may, and frequently they are, the seat of an albuminous or parenchymatous degeneration. The left heart is but little affected by the mechanical interference of circulation, but it may show serious enfeeblement of action as a result of the general toxaemia.

Pericarditis occurs more particularly with pneumonia of the left lung, or a double pneumonia. Endocarditis is by far more frequent than pericarditis. It is caused by the toxic substances in the blood and the bacteria producing the same. If this develops as it is liable to into a malignant endocarditis then we may expect to get a cerebral or cerebro-spinal meningitis as a result of embolism. Osler states that out of twenty cases of meningitis following ulcerative endocarditis, fifteen could be traced to a pneumonia that produced the endocardial lesion.

A fibrinous or sero-fibrinous pleuritis is not uncommon, and is directly attributed to the micro-organism that produced the pneumonia.

Some of the best evidence of a general toxaemia are chromatolysis of the gangilion cells, the parenchymatous degeneration mentioned of the liver, kidneys and heart. The last three named organs will go on to fatty degeneration if the exciting cause is not speedily removed. There is also hyperplasia of the bronchial lymph-nodes, together with marked leucocytosis and fever.

Delayed Resolution:

Instead of the usual termination of the disease by liquefaction of the exudate and its absorption it may persist, and by a process of organization similar to that seen in granulative tissue, be gradually replaced by a new vascular fibrous connective tissue. The connective tissue grows out from the walls of the air spaces into the exudate and becomes vascularized by a proliferation of the endothelium of the capillaries in the alveola septa. These new growths of blood vessels and connective tissue fibre gradually coalesce and together form a fibrous consolidation of the lung known as atelectasis.

THE SYMPTOMS AND DIAGNOSIS OF PNEUMONIA.*

By W. G. Church, M. D., Burlington, Vt.

Pneumonia is the most fatal and widespread acute disease with which we have to contend, from which no age, race, sex, social or personal condition or locality are exempt—from which no previous attack or known serum immunizes and no medicine aborts. It is a self-limited disease characterized by a distinctive local lesion within the alveolar and vesicular portion of the lobule of the lung and by three distinctive stages.

The stage of congestion.

The stage of red hepatization or consolidation, and

The stage of grey hepatization with resolution or suppuration,—all of which are constant in every type of the disease and each having symptoms peculiar to itself.

Of the three forms of pneumonia given us by modern medical writers, viz.: bronchial, lobar and interstitial,—lobar or croupous pneumonia is by far the most serious and as Osler aptly puts it, "Is the captain of the men of death."

The discovery of the specific diplococcus and its relation to pneumonia, resulting from the investigations of Sternberg, Pasteur and Frankel, 1880 to 1884, demonstrated that this form of pneumonia was a constitutional disease rather than a local respiratory disease, due to cold or exposure, as many of us had been taught.

While we may accept the stereotyped definition of lobar pneumonia as an acute infectious

* Read at the regular monthly meeting of the Burlington and Chittenden County Clinical Society.

disease,caused by the presence of the diplococcus of Frankel in an especially virulent form, with characteristic pulmonary lesion due to the outpouring into quite an extensive portion of the alveolar structure of the lung of an haemorrhage. The vesicular and alveolar portion of the lobules of the lung must be in proper condition as a culture media for the propagation of the bacilli which produces the toxin poison, giving us the constitutional symptoms; that cold, exposure, intemperance, trauma, debility from disease, which lowers the vitality, are predisposing causes which render the individual susceptible by changing the tissue soil.

That the presence of the pneumococcus in at least 20% of all healthy persons, that its presence in other organs and tissues under like favorable conditions produces similar constitutional diseases, for the pneumococcus in a virulent form is often found in many other diseases as peritonitis, septicemia, synovitis, pericarditis, endocarditis, pleurisy and bronchial pneumonia, when no local lesion of the alveolar tissue of the lung is present, and is always found in those organs and tissues in which these diseases exist as complications or sequalae of pneumonia; that the amount of lung tissue involved in the local lesion bears no constant relation to the intensity of the constitutional symptoms are conclusive that the presence of the specific diplococcus is serious only when the sentinels set at the portals of our organisms are asleep and allow the enemy to pass unchallenged and become extensively colonized in favorable camps for propagation of their toxin; also that it is a constitutional disease dependent on the amount and character of the toxin produced in the infected area for the severity, peculiar form and variations which are often manifest in the course of the disease..

In frank pneumonia having distinct, uncomplicated typical symptoms, are found few if any streptococci, staphylococci or other bacilli save the pneumococcus which it is claimed produces this form of the disease, while in the asthenic form known as typhoid pneumonia we find bacillus typhosus, and in other forms the bacilli which usually are associated with the diseases, that pneumonia resembles, showing the ultimate relation and influence of these organisms in producing their characteristic constitutional disturbances when acting conjointly with the specific diplococcus of pneumonia.

The disease more often attacks the lower right lobe; the lower left lobe more often than the upper lobes and the right upper lobe more often than the left upper. The middle right lobe is often attacked when the lower right lobe is involved. A lobe on either side may be involved constituting double pneumonia and occasionally the entire lung is consolidated giving us the massive or complete variety which is often very difficult to diagnose. Frequently cases occur when the different stages of the disease exist in different parts of the lung at the same time. The disease never extends from one lobe to another. Each lobe is an independent foci and is usually completely involved when attacked,—one lobe after another bcoming involved as the disease progresses.

The symptoms and course of pneumonia vary greatly. Climate, age, habits, surroundings, previous physical condition, location of the lesion, as well as the virulence and character of the toxin, modify its symptoms, influence its course and produce the various types.

The symptoms are dependent both upon the local and the systemic infection, and while we predicate our diagnosis upon the local lesion in the lung, the constitutional or systemic infection and symptoms are never absent; are more often the cause of fatal termination; are of great diagnostic value and should never be ignored.

With a careful physical examination, pneumonia is one of the most readily diagnosed of the acute diseases, yet my experience with over 200 cases, some with other physicians, 20 per cent have failed of a correct diagnosis dur-

ing the first four days, and often the patient was not subjected to a thorough physical examination; the symptoms being masked or influenced by the associated sequalae or complications sufficiently to divert the attending physician's attention from the essential lesion.

Often following two or three days of indisposition, disturbed digestion, headache, backache, and general malaise, but more often without any prodromal symptoms, frank, lobar pneumonia of the sthenic form is ushered in by a severe chill lasting from thirty minutes to one hour—much longer than the initial chill of most inflammatory diseases and continuing at intervals of from 6 to 12 hours unless active measures are instituted to prevent. In children delirium or a convulsion is often the first recognized symptom, and as with adults, gastric disturbances with vomiting is no uncommon symptom. In alcoholics severe abdominal pains are complained of frequently before other symptoms are manifest, and occasionally acute mania or symptoms of tremens precede the chill or fever.

A full, bounding rapid pulse, often skipping a beat at irregular intervals in the severer forms with evidences of embarrassed heart's action in the earlier stages, as a result of obstructed vesicular anastomosis, are found.

Following the initial chill, temperature rises rapidly to 104 to 106 degrees F. and continues with but slight change until free expectoration of rusty sputum is established.

Respirations rapidly increase to 40 or 50 per minute with short jerky inspiration and a longer and audible expiratory movement or grunt. Within six hours after and sometimes preceding the chill, is developed a short, dry, sharp or harsh cough with which there is a scanty frothy mucus which during the first day or two becomes blood-tinged, viscid and tenacious, changing on the following day to the characteristic rusty sputum.

The headache and general pains present at the onset gradually give way when diaphoresis is established and sleep is secured. The characteristic pleural pain is a symptom of great frequency and may occur during the first few hours but not usually until the end of the first day; it is usually referred to the site of the lesion but may be located on the opposite side or in the epigastrium in exceptional cases.

The pain is quite pronounced whenever the lesion extetnds to or involves the periphery of the lung and is aggravated by the half suppressed cough; a full respiratory movement or change of position in bed and the patient, without anodynes, passes a restless and distressingly uncomfortable forty-eight hours previous to the development of the consolidation stage, on the second or third day, when the pain materially lessens. During this stage the temperature usually drops two or more degrees then continues to rise again to the point of crisis or when resolution or suppuration begins. Occasionally we find two or three changes of temperature of two or three degrees known as pseudo-crises, whenever the stage of hepatization is long continued.

In the asthenic type, which occurs in delicate children, among the aged and persons whose health has been impaired by alcoholism or disease, the symptoms are considerably modified. The chill is the exception rather than the rule, the prostration greater, the fever slight, with slow development and without a crisis, turning usually by lysis. The attack is more insidious; the pain, cough and expectoration are frequently absent or very insignificant; slight or no interference with respiration; physical signs masked and in no way proportionate to the constitutional symptoms. In the aged and feeble mental dullness and coma occur quite early in the disease, and in children and alcoholics the nervous symptoms more pronounced.

In the asthenic form, the sputum during the second and third stages assumes the characteristic prune juice color, instead of the rusty color of the sthenic form. Herpes, which occurs about the mouth and nose on the second or

third day, is of considerable diagnostic value in cases with central lesion or where absence of other symptoms make diagnosis doubtful. (I have only seen it in a few cases and only in the asthenics.)

Microscopically the sputum contains blood corpuscles in various stages of decomposition. Leucocytes are usually present from the earliest stage and continue to increase until the crisis, when they rapidly disappear. If the disease terminates by lysis the decrease is less rapid.

Absence of leucocytes is considered an unfavorable omen and their presence neither a good or bad sign. Nausea, jaundice and hepatic enlargement are not uncommon..

As in all acute infectious cases, the spleen is enlarged and the kidneys are to some extent involved. Albuminuria occurs in many cases; the chlorides become deficient but return during resolution. The right ventricle of the heart become much distended and the pulse, which at first corresponded with the intensity of the fever, after consolidation occurs, if extensive, becomes feeble, small and irregular and often dicrotic and collapse is the result at the crisis.

The subjective symptoms which usually occur in the disease (in a typical case during the first day), are often sufficiently definite to enable us to make a correct diagnosis, but as often complications, variations in type and varied conditions make a positive diagnosis impossible without the aid of physical signs.

In painless cases where the area of lung tissue involved is not extensive, the typhoid fever decubitus is often assumed. The patient lies upon the affected side in those cases in which pain is a symptom to avoid the pain produced by the rubbing together of the pleural surfaces by the respiratory movements. Cyanosis is a fairly constant symptom and is much more apparent in the severe cases, and when distinctly confined to one cheek or lip is indicative of serious termination (in my experience less than 2 per cent making recovery). Dyspnoea and increased frequency of respiration are noted early in the case and continues until resolution takes place. Respiratory movement is limited on the affected side during the stage of congestion when the pleural surfaces are involved and later, when consolidation has supervened, from inability to expand that portion of the lung. In proportion, as the disease progresses and consolidation develops, vocal fremitus is increased and might easily be confounded with pleural fremitus which is often present in the early stages. Vocal fremitus is liable to be masked by occlusion of large bronchial tubes and by pleural effusion. The percussion note may remain quite clear and normal during the first twenty-four hours, but gradually becomes boxey or higher pitched and as the air is driven out, dullness is more marked and continues until during the stage of resolution the vesicular portion of the lung again begins to fill with air. The tympanitic note over the consolidated area I have only found in a few cases and only where the lesion was limited to a small area and unaccompanied by bronchial disease.

Hyperresonance obtains in the unaffected portion of the lung during the stage of consolidation. The breath sounds diminished during the early stages, becomes bronchial as soon as the exudate occludes the alveoli. Early in the congestive stage the crepitant rale may be detected which is quite pronounced at the end of full inspiration and disappears as soon as consolidation occurs when the voice sounds assume the peculiar sounding-board character known as bronchophony. When the exudate becomes somewhat liquified and resolution begins the rales return and are both coarse and fine, dry and moist, and bronchophony disappears. A subcrepitant rale is often heard during the entire course of pneumonia from slight bronchial trouble.

The differential diagnosis between croupous pneumonia and pleurisy with pleural effusion, is sometimes difficult, but the onset of pleurisy is not attended with the same intensity of symptoms; the fever curve is much lower, the

chills less marked, the percussion note is flat, the cough is less and the characteristic sputum of and the physical signs of pneumonia are absent also in pneumonia the adjacent organs are not displaced, as often occurs in pleural effusion. Errors are more likely to be made between bronchial and croupous pneumonia. The lighter chill and lower temperature and slower onset, the subcrepitant rale, the vesicular murmur of the bronchial variety; the rusty or prune juice sputum, the cyanosis, the broncophony and the signs of solidification and the limitation of diseased area found in lobar pneumonia, are sufficient to differentiate between the two.

The presence of tubercle bacilli, the repeated chills, profuse sweats, found in phthisis pulmonalis and the absence of herpes and the physical signs of pneumonia will enable us to diagnose between acute lobar pneumonia and acute pneumonic phthisis.

Odema of the lung is another disease likely under certain conditions to be mistaken for pneumonia. The dullness unlike pneumonia is found alike on both sides and keeps its level whenever the position is changed. The absence of the characteristic rale, sputum and chill of pneumonia in odema of the lung should make a mistaken diagnosis unlikely.

Pneumonia is often complicated with other diseases among which are acute pleurisy, emphysemia, pericarditis, endocarditis, parotitis, meningitis, acute nephritis, capillary bronchitis and pulmonary tuberculosis.

It may terminate in resolution in two weeks; recovery is, however, sometimes delayed for from four to twelve weeks with intervening suppuration, empyemia or gangrene, or it may terminate in death any time after the fifth day.

Death may result from failure of the heart due to the specific action of the toxin of the disease or the distension of the right ventricle dependent on the hepatization of the lung structure, or indirectly from exhaustion following a long continued or suppurating case. Death more often occurs about the ninth day from heart distension.

Prognosis varies greatly in accordance with the condition with which it is associated. It is always a very grave affection with an average death rate of one to every four attacked. In alcoholics and those enfeebled by age or disease, and in the very young, eight out of every ten who contract the disease die.

Meningitis, endocarditis, pericarditis and alcoholism are serious complications which bring fatal results when associated with pneumonia.

COMPLICATIONS AND SEQUELLAE OF PNEUMONIA.*

By George D. Parkhurst, M. D., Fairhaven, Vt.

The subjective symptoms present, the symptoms of onset and those revealed to the eye are in many cases a sufficient basis upon which to form a diagnosis of pneumonia, but to determine the presence of some of the complications of pneumonia much observant care and diagnostic acumen are needed. It is needless to say that on this diagnosis hangs oftentimes the slender cord of life.

In the text-books, in the medical press, in consultation, one can find no end to therapeutics, therapeutics good and bad. How thankful we should be that they are most often harmless!

To make a correct diagnosis, however, on daily rounds, one must depend upon himself and the help he receives from our State Laboratory in a limited number of diseases. In diagnosis as summed up, the knowledge of anatomy, physiology, chemistry, pathology, and practice; and the personal factor of activity and accuracy of eyes, ears and fingers; and logical reasoning and sound deduction from the facts as gathered from the case before one, compared with those in the wide field of medical print and the smaller one of personal observation.

Upon the diagnosis should rest the prognosis and treatment. Let me say here, as one of the

* Read before the Rutland County Clinical Society, October 20, 1902.

country physicians, that our greatest weakness seems to be in the making of an early and correct diagnosis. This may be a weakness—or an impossibility in view of the field which we have to cover; a field including all the diseases to which man is heir in this latitude; we have also the women with their diseases; the women will have children and the children have their diseases, so that we have thrust at us besides the ordinary practice of medicine, obstetrics, gynecology, surgery, pediatrics, genito-urinary work; even after these the country doctor cannot oftentimes escape the responsibility of still more but must face some work on the eye and ear and perhaps some dental work, as our patients rarely can seek medical help from specialists. Be it weakness or impossibility for him to make a diagnosis, I leave that for you to decide. I only ask you to pardon me this disgression at the start of my paper; look at it that I am but using the County Society as a Father Confessor.

I do not look for absolution from my diagnostic sins of omission and commission, far from it. I hope only that I may go out strengthened by the discussion which should be aroused on this important subject.

Pleuritic pain is present in almost all cases of pneumonia save those cases beginning in the center of a lobe. The pain may however be present in such degree of severity as to give rise to a type of pneumonia, the pleuro-pneumonic. The physical signs in pleuro-pneumonia are not apt to differ from an ordinary case, except that the pulse and respirations may be more rapid; on the other hand, a greatly thickened pleura may lead one to think that an exudate may be present.

The treatment most successful in my experience has been the administration of Dovers powder or Elix. Opii et Ipecac, in doses large enough to control pain. Strapping, blisters or other local irritants and extremes of temperature in local applications are advised also in the text books. Whatever treatment is used the general condition seems to improve with the relief of pain.

Slight pleural effusion may be present often, but an effusion large enough to give rise to physical signs is an exception. The time of effusion varies; it may have been present before the onset of the pneumonia; it may come as early as the sixth or seventh day or some days after the crisis. Ordinarily after the crisis the pulse, respirations and temperature come down, and general improvement may be manifest for one, two or three or more days, when again the pulse and temperature rise. The increased fremitus lessens, fulness soon surges into flatness over the fluid, breath sounds are distant, rales disappear and other signs of fluid present themselves.

1st. Effusion may be classified as slight when causing flatness only at the base posteriorly.

2nd. Moderate with dullness to the fourth rib.

3rd. Large with dullness to the second rib.

4th. Copious with dullness to the clavicle and extending perhaps beyond the sternum on opposite side.

Commonly a slight exudate lasts for seven to ten days and then is absorbed, as moderate effusion is much slower in disappearing, but absorption with recovery is the rule. Rare terminations are perforation of a bronchus or the external chest wall. Empyema follows a serous effusion occasionally, but here there must be an added infection; this infection is most commonly the streptococcus, staphylococcus or the tubercle bacillus. The tubercular effusion is often found to be sterile. Sudden death in pleural effusion has followed exertion. Autopsy showed thrombosis or embolism of the right heart or pulmonary artery and degeneration of cardiac muscle or an oedema of the opposite lung. The physical signs of serous effusion following pneumonia are similar to those of primary serous pleural effusion. The affected side expands imperfectly and if the effusion is

large there is an increase in the circumference of the side with obliteration of the intercostal spaces; bulging of the spaces of oedema of the chest wall is rare. Depending upon the amount of the fluid the apex beat is displaced. In right side exudation the apex goes to the left mammillary line or beyond in the fourth or fifth interspace; it may go even into the axilla. In left side exudation the apex may be behind the sternum and no beat be visible, or it may be found to the right of the sternum. It should also be remembered that the liver and spleen may be displaced downward and stimulate enlargement of these viscera. Vocal fremitus is lost or diminished unless there be bonds of adhesions conveying it to the chest wall. This loss of fremitus is less reliable in women and in infants when crying. The increase in chest measurement is from one and one-half to one-half inch and is especially marked at the end of expiration. Impaired resonance passes with dulness or absolute flatness as the fluid increases; this change in the percussion note is usually first found posteriorly. If the upper limit of dulness is accurately determined, usually it is found higher in front than in back; in the upright position the curve of dulness passes obliquely upward from the spine curving over the back to the axilla where it descends somewhat anteriorly to the sternum. Movable dulness is an unmistakable sign of fluid, but it cannot be determined in large or encysted effusions. The dulness over a fluid has a peculiar resistant quality. Skoda's resonance may be elicited under the clavicle or above the level of the fluid posteriorly. When found it is very suggestive of fluid. In large effusion cracked pot or tracheal tone may be found. On the right side dulness is continuous with the liver and on the left side it may encroach on the tympanicity in Traubi's semilunar space. Commonly the breath sounds are weak, distant, or absent but not infrequently in large effusions there is a distinct distant bronchial breathing. At or about the end of the period the breath sounds are bronchial or broncho-vesicular. The bronchial resonance is usually annulled over the body of the fluid, yet there may be bronchophony. There are often many fine moist rales heard, at the upper limit of fluid. There is often a quavering hesitating quality of the voice sounds In children the voice sounds may have a metallic or amphoric quality, which if there be large moist rales, will strongly but incorrectly suggest a cavity. If a portion of the pleura overlying the pericardium is inflamed there may be a pleuro-pericardial friction rub heard.

Having described the symptoms of serous effusion before taking up their treatment to save time and for the sake of comparison, say that the symptoms of empyema are similar save for these very important exceptions.

The patient generally gives an impression of a decidedly more serious affection; the temperature is more irregular, with chills and sweats, with other septic symptoms; there is always leucocytosis, often of high degree; the urine may be loaded with indican and albumoses. In empyema there is more often distention of the veins of the chest wall; bulging of the interspaces. odema, even fluctuation in the chest wall may be found. The enlargement of the chest is far greater, especially in children. Bacelli's sign is to be remembered.

Empyema necessitatis occurs most frequently in front and in the fourth or even in the third or fourth space or behind at the angle of the scapula. In certain cases of empyema, though very rare in serous effusion, there is a pulsation in the second and third space in front at the side, but seldom posteriorly; the pulsations are synchronous with the heart's action. A protruding tumor of an empyema necessitatis may also pulsate. The effusion in pulsating pleurisy is very large and with rare exceptions is on the left side and is found in patients with strong and forcible heart action.

Diagnosis of serous and purulent effusion. This rests upon the history, the general physical condition, the pulse and respiration, the temperature and the foregoing physical signs. In case of doubt, the trump to be played is the large hypodermic needle, in fact I fully believe that the use of the needle is more neglected than abused. Practically it is free from any danger if used with proper surgical precaution, though very rare cases of pneumothorax have been attributed to its use. If the needle is too short it may not reach the fluid, or if too small in caliber the lumen may be plugged by fibrin or coagula. Careful observance of all the signs will usually differentiate effusion from pneumonia; here the obscurity is mostly in the auscultatory symptoms of tubular breathing, particularly high pitched even amphoric usually heard at end of expiration, leads one to think of consolidation in pneumonia. Here again when in doubt use the needle, better still, when you suspect effusion use the needle.

In pericardial effusion the pulse is more rapid and smaller with extreme dyspnoea; pulsus paradoxicus is apt to be present; there is resonance at the base, tympany or dull tympany in the axilla and around the border of the distended pericardium, and the heart is not displaced to the right of the sternum but is more apt to be lifted upward. Intra-thoracic growths may displace the apex beat; dulness is limited to an unusual situation and is more nearly confined to or from the middle line or the upper part of the chest.

The clinical history should be very carefully taken and will be of help; an effusion, however, often accompanies intra-thoracic tumor. Hepatic cysts or abscesses push the lung upward and the line of dulness is immovable and curved upward in a bowl shape. A pleuritic friction sound, heard at the upper limit of the dulness, will arouse suspicion as also the presence of icterus. Unilateral hydrothorax gives, of course, identical symptoms, but here the clinical history and the presence of causative factors help in the diagnosis.

Malignant disease of the lung and of the pleura cause effusion, but here the emaciation and lymphatic enlargement and the dulness after removal of fluid limited to an unusual area will possibly differentiate the conditions with the history.

The clinical history in aneurism shows much; the tracheal buzzing; the presence of a direct and diastolic shock and the location of the swelling and its pulsations; the condition of the other arteries should be ascertained and noted.

When effusion has occurred, everything should be done to support the patient and maintain the strength. The pain should be relieved if present by cupping, leaches, strapping or use of codeine or Dover's powder. Counter irritation may be useful. The restriction of liquids and administration of salines may be tried. Diuretics and diaphoretics are seldom to be used; iodide of potassium has not been of great value. When the effusion is large or slow in disappearing, aspiration is the proper procedure. It is to be done in the seventh space in the mid-axilla or the eighth at the outer angle of the scapula, close to the upper margin of the rib; the fluid should be withdrawn slowly to the amount of about one litre if the effusion is loose. Prior to the aspiration stimulants should be used and during it the patient is to be in the half-upright position supported by pillows which are to be withdrawn gradually as fluid escapes. Every antiseptic precaution is to be taken to prevent infection.

In empyema early and prompt treatment is absolutely essential and into it cannot enter hesitancy and vacillation; delay here is not allied to prudence but to cowardice or reprehensible ignorance. Free thorough drainage is the end sought for and once obtained the majority of cases recover. It is to be obtained by a pre-

incision or the resection of one or more ribs as may be necessary to allow for complete outflow of the pus. Early incision is demanded because then the lung expands more promptly and sooner becomes normal in relation to the chest wall. In children it is called for by the fact that early there is apt to be absence of pus cocci and per contra in adults early there are commonly found pus cocci. In children no irrigation is needed if tubercle bacilli are present without the pus germs nor in adults if the pus is not fœtid. If irrigation is used the fluid must be warm as cool solutions have caused death from shock; it is a noteworthy fact that dangerous symptoms have always occurred during the withdrawal of irrigating fluid. Osetander's thoracoplastry is to be done only on failure of incision or resection of rib to produce cure.

In empyema of both sides the wisest course is to tap both sides and then resect ribs from each side after an interval of four to six days.

Of complications in the pericardium a plastic pericarditis is the most common, especially in the pneumonias of children,and here in the double form or in the left side. Difficulty in diagnosis rarely arises except when the portion of lung covering the pericardium is involved; exudate is hard to demonstrate unless large in amount. The symptoms are an increase in the pulse rate, fulness and gradual suppression of the heart sounds; cardiac distress may be prominent; cyanosis and dyspnœa are apt to be more pronounced; friction movements may be felt and heard; after exudation they are lost and the area of dullness is pear-shaped. Pus is found in 5 per cent. of the fatal cases.

Treatment is supportive and symptomatic except in presence of large amount of fluid or pus, when incision or aspiration is called for.

Endocarditis is found in 10 to 16 per cent. of the fatal cases of pneumonia. "In no other acute febrile disease is endocarditis so frequently found," says Osler. It is more common in disease of left lung and in old cases of valvular trouble. There may be no demonstrable symptoms but it may be suspected in cases where the fever is protracted and irregular with septic symptoms and embolic phenomena. The development of a hard cough murmur particularly diastolic, is suggestive.

Meningitis frequently develops with endocarditis. Osler reports 8 cases in 100 autopsies on pneumonia. This is a high rate. It usually comes at the heighth of the disease and then it is not recognized unless the base is involved; coming later in the disease the symptoms are less easily mistaken. With it we may have fevers, heart embolism, plugging of the cerebral vessels and hemiplegia.

The treatment of the last two complications and a further discussion of their diagnosis are almost uncalled for. I will but mention the rare complications, such as peripheral neuritis, parotitis, croupous gastritis, nephritis and of jaundice which is more common, I will say that it is hematogenous, sets in early and has no relation to congestion of the liver; it is irregularly associated in different epidemics. Peritonitis is very rare and is apt to be confounded with excessive tympanites. Arthritis also is very rare, it may come on in the course of the disease or in convalesence. It closely resembles rheumatism. The large joints are usually involved and unless the process is septic it runs an ordinary course. Relapse in pneumonia is an occurrence open to serious doubt, but recurrence is very common. Rush reports one case with twenty-eight attacks.

The sequelæ of pneumonia are few in number: abscess, gangrene and fibroid induration. Abscess comes on soon after the crisis and is marked by severe constitutional symptoms. If pus is absorbed, as it is usually, septic symptoms are unmistakable, if carefully observed. The physical signs are a limited unnatural area of dullness, the other portion of affected lung tissue usually clearing up as in ordinary cases, although the contrary may be found. There is at first absence of respiratory sounds, in-

crease in the fremitus, and vocal resonance. After expectoration becomes free and a cavity is formed, the commoner signs are manifest. Abscess is usually small but may involve a large part of a lobe. The sputum is very offensive, the pus is greenish-yellow or brown in color. The sputum will be found to contain shreds of tissue, for crystals, elastic fibres and hematoidin. Septic micrococci are found. If tubercle bacilli are not present there is a probability that tuberculosis is not present. This is, however, *probable* only and not *impossible*.

Abscess of the lung may terminate in recovery by eradiation into bronchus or pleura being emptied by coughing or on opening the chest wall. The most encouraging results are from surgical intervention, 15 per cent. (?) of recoveries having been recorded as following operation. In brief the method consists in locating by physical signs and the use of aspirating needle, then cutting down through an intercostal space and finding or making pleural adhesions, the lung tissue is cut through with cautery or cautery knife. The dangers of use of Paquelin's cautery in presence of either must be remembered; a drainage tube should be inserted and left in situ as long as pus is discharged. The medical treatment is entirely supportive and symptomatic.

Gangrene of the lung may be diffuse or circumscribed. In the diffuse form nothing can be expected from treatment. In the circumscribed form the gangrenous area varies in size from that of a large bean to the size of a butternut. It is usually found in the lower lobe and near the pleura. The symptoms are markedly severe constitutionally. The odor of the breath is exceedingly offensive as is also the expectoration. The sputum separates into three layers, an upper frothy, greenish-yellow, opaque; the middle, serous in nature; and the lower is brown or green in color and contains pulmonary tissue, pus corpuscles, fat globules, and acids, crystals of the triple phosphates, and bacteria. The physical signs reveal the seat of the gangrenous area if it is of any considerable size, in some cases the signs indicate a cavity.

Fetid bronchitis may simulate gangrene of lung but in this case no lung tissue is found in the expectoration. The medical treatment is indicated as in abscess, the surgical also is the same, pneumotomy.

Probably the rarest sequel to pneumonia is fibroid induration. Osler found it in 1 of 100 fatal cases.

ACTIVE PRINCIPLES IN THE TREATMENT OF DISEASE.*

By E. S. Weston, M. D., New Haven, Vt.

Mr. President and Gentlemen:

Times change, and we change with them, is an old saying, and is as true in the practice of medicine, as in other vocations of life.

The methods of our fathers will not do for us, nor, do I suppose that our methods will be those of the physicians of a few years hence.

Those of the older members, who were in practice a quarter of a century ago, can look back and see a great progress, not only in diagnosis and pathology, but, also, in the treatment of disease.

Our fathers carried their remedies in the crude form of roots, barks, leaves and berries. We carry the same remedies in the more palatable form of pills, tablets, elixirs and tinctures. One of the great difficulties we have to contend with in all of these, is that we do not exactly know just what effect we are going to get from any given dose.

If we give a dose of opium or nux vomica, we have to wait and see just what the effect of that specimen is. Every new lot has to be tried by itself, and a mental note kept while using the lot. The same holds good in the use of the various preparations that are placed upon the market, so that, do as we will, we are in a continual query as to what our medicine is going to accomplish.

* Read before the Addison County Medical Society.

It is worse in the liquid preparations, than in the crude drug, because no one can tell what the change has been in evaporation by the frequent opening of the container.

The difference in the medicinal properties of the various drugs, which may arise from a variety of soils where grown, the different seasons at which gathered, or the difference in curing, make it impossible for the manufacturer, however honest in his intention, to give us a standard preparation that will be invariable in the active qualities, that are our whole reliance when called to battle with disease.

Analysis of samples of opium grown in the same section, gave a variation of from 9.60% to 21.46% in the amount of morphia contained. Another section gave a variation of from 14.83% to 22.88%. Now, it will be readily seen, that a tincture made from these various samples would be far from reliable and results looked for would not be obtained.

Then, beside, there are more than twenty principles in opium, so one must carry a good deal in his head if he is going to use opium in its crude form, or in the galenical preparations made from it. For this reason, but few now use opium in its crude form, but, as a general rule, they use whichever of its active principles they desire the effects of, such as morphine, codeine, heroin, etc. These other constituents of opium vary in as large degree as does the morphia. If we give opium in bulk, tincture or elixir, we may be giving a large dose of morphia, codeine or some of the other ingredients. It is a matter of guesswork and results in a great deal of anxiety, in many cases where life hangs in the balance.

The pharmacopœa has tried to, in a measure, obviate this state of affairs, by directing that the finished product shall contain a specified amount of morphine, but is silent in regard to the other ingredients. For this reason, as well as the fact that we prefer only the effects of but one ingredient, we, who use the active principles, prescribe that ingredient whose effect we wish to obtain.

So great is the variation in the amount of active principle of drugs, that the pharmocopoea directs, in case of the stronger ones, that the finished product be standardized. Were our pharmacists qualified to do this, one objection would be removed, but, as a class, they are not. The usual course is to take a given amount of crude drug, together with the required amount of menstrum, and go through the process of manufacture, as laid down in the pharmacopoea, and consider that they have complied with all the requirements.

Let us examine the finished products a little. It has been found that fluid extract of ergot varies in the active ingredient, ergotine, from one to fifty, gelsimum the same, cannibas indica, from nothing up to the most lethal and intoxicating character, while opium, digitalis and ipecac, now nearly extinct, vary from two to a hundred fold, not only in the finished product, but in the crude drug, depending upon locality, growth and methods used in gathering, preserving, etc.

"In the valley of the Amazon there lived an Indian who eked out a miserable existence as a collector of medicinal herbs. One day he came upon a patch of jaborandi, in a clear place, where the sun shone relentlessly upon his naked skin. He gathered a package of leaves, which were dried and sent down the river to the warehouse. The next day he had another streak of luck, finding another patch of the same plant growing in a shady glade surrounded by giant trees. These leaves he also gathered, dried and sent to market. Both reached New York and both were rated as A No. 1. As it happened, both packages were purchased by the same firm, one of the first class. From these two packages two lots of fluid extract were manufactured, and labelled fluid extract of jaborandi. A bottle of each kind reached a certain city, and were purchased by two drug-

gists, only a block apart. A physician was called to see a lady suffering from facial erysipelas, and prescribed fluid extract of jaborandi. The prescription was filled from that made from the first lot of leaves, grown in the sun, and, consequently, rich in pilocarpine. The lady made a speedy recovery, but in a few weeks had another attack, similar to the first; the same prescription was given, but it was filled at the store where the medicine was made from the second lot of leaves, that had grown in the shade, and was rich in jaborine. The result was that in the morning the lady was dead."

Take the remedy digitalis, it contains five active principles, digitonin, digitalin, digitalein, digitoxin and digitin. Of these, digitalin and digitoxin are the strongest heart tonics, while digitalein is the more powerful diuretic; digitoxin is an irritant, and digitin is practically inert. Now when we give digitalis, we give it for a definite purpose. Supposing we wish to strengthen the heart and give either the crude drug or the tincture, what means have we of knowing whether the remedy is rich in digitalin and digitoxin as we hope, or is it rich in digitonin, which is an irritant, or is it the inert principle, digitin. Let us suppose, for instance, that you are called to see a case where it is necessary, in your judgment, to get the heart tonic effect, that you expect from digitalis. You give a dose of the tincture or any galenical preparation. You evidently wished for the effect that must be obtained from digitalin or digitoxin. If, now, as may be the case, the sample contains but little active principle except digitin, what will be the result? Precious moments are lost, and it may be that a life is sacrificed that might be saved. Had it happened that the active principle most prominent was digitonin, the effect would have been practically the same, only the end would have come more quickly, for it would have been a heart depressant.

Most remedies that are obtained from the vegetable kingdom, contain more than one active principle. In nux vomica we find strychnine and brucine; the former is the stronger and is the one we wish to use when we prescribe any of the galenical preparations of nux vomica. In this case, the secondary active principle is simply weaker. In other plants we find that the secondary principle is directly antagonistic to the primary one, as in jaborandi, where jaborine is antagonistic to pilocarpine.

It is evident, then, that when we give the crude drugs or any preparation of them, we neither know what we are giving, nor how much.

Some of the leading manufacturers of medicine, to obviate this great variation, analyse the finished product, and then, by the addition of the required amount of the active principle, bring the finished product to the required standard. Could this finished product be kept in air tight containers, and all loss by evaporation avoided, we should feel more confidence in the dose we give; but there is no way to prevent this loss, and consequent change in the strength of the medicine. Every time the container is opened, loss of menstrum occurs, and consequently, the strength of the medicine is increased.

Now, why not give the active principle at once and know that your patient is getting just what you wish him to have?

The great discrepancy in the results obtained from remedies that were supposed to contain the same amount of active principle, made me ready, when my attention was called to the alkaloids, as they are called, some six years ago, to try them. I began very carefully, at first, trying one at a time, and carefully noting their action and comparing results with those obtained under the old method. My first experience, had in a severe case of grippe, encouraged me, and I began to extend my list of

these definite remedies. Perhaps my first case, under this method of treatment, may be of interest at this time. I had just received a small case containing nine different kinds of the active principles, one of which was aconitine, in granules of 1-134 grain. According to the directions, I placed 24 granules in 24 teaspoonfuls of water, and directed that a teaspoonfuul be taken every hour, until free diaphoresis, and then only often enough to keep the patient moist. As it was my first trial with any thing in this line, I had some worry over the case, until my next visit, when I found my patient doing finely. Upon enquiring if he had taken a good sweat, he replied, that he had never taken so good a one; that after taking a few doses, he had begun to sweat freely, and then by lengthening the time between doses, he had kept in a fine perspiration.

This gave me courage, and as I was in the midst of an epidemic of grippe, I had a good opportunity to give it a good trial, and I found it reliable at all times. Whenever I found any tendency to weakness of the heart, I would fortify by using digitalin of strychnine. Some recommend that such a combination be always used, but my custom has been to use them only as indicated.

In a short time I had a severe case of pain in the stomach or bowels, of a neuralgic character. Now I thought was a good time to try another of the active principles. This time it was hyoscyamine that seemed to be indicated, and I began giving it in doses of 1-250 grain, giving it every half hour, until the patient complained of dryness of the throat, which is an indication that we are getting the physiological effects. As soon as this sensation is felt the patient is easier, and the medicine should be given at greater intervals. Since beginning its use, I have given much less morphine, as I find that this remedy works better without the bad after effects. In this way I have gradually got to using the active principles, so that, at the present time, I think I use them much oftener than the old time preparations.

One objection that has been raised to their use is, that they are so powerful that it is not safe to use them. For myself, I prefer to give 1-60 grain of strychnine, and know that I have given that amount, than to give an uncertain quantity, as we must if we give the crude drug, nux vomica. The same reasons that induce you to give strychnine in preference to nux vomica, should cause you to use aconitine rather than crude aconite.

This is no new pathy, but simply a sensible application of old remedies. It is rifle practice, as compared with that of the shot gun. I feel much more certainty as to the results of medicine when given in this way than I did under the old way. I still use many of the galenical preparations, but each year finds me using more and more of the active principles.

This manner of treating disease is called alkaloidal medication, although not all of the active principles are alkaloids, some are glucosides, others are resinoids, but they are used in the same way, and the same reasons apply for using them.

Combinations can be made with them, the same as with the galenical preparations.

As we have taken up morphine, strychnine and other active principles, so I believe we shall, ere many years, give our remedies in this form in preference to the kinds we now use.

At first, when these remedies were all made abroad the expense was one of the greatest objections to their use, but at present there are reliable manufacturers in this country that I think make as reliable goods, and at a price that places them within the reach of all. The demand at present is not sufficient to induce druggists carry them in stock. When the demand increases, however, they will keep them, as they do other remedies that we use frequently.

In my own case this makes no difference, as I deal practically all my medicine myself.

SPECIAL THERAPEUTIC ARTICLES

COUGHS AND THEIR TREATMENT.

By Drs. Alex. De Soto and C. W. Crimpton, of Wayside Mission Hospital, Seattle, Wash.

An intractable cough!

What condition so persistently tries the patience of every physician?

Careful examination has been made, the diet regulated, and one of the innumerable prescriptions for that ailment selected, but still the cough continues.

Then more investigation, and more careful prescribing; but still after weeks that familiar cough re-echoes through your waiting room, and you wish Mrs. Smith would change her doctor.

No such good fortune attends you, and that cough haunts you as dismal thoughts of phthisis do your patients, until you are almost determined to advise a change of climate.

It is not the object of this paper to go into details regarding the only too well known disadvantages of most of our familiar cough mixtures. Down to that household standby, "Cod liver oil in every form," they have proven in the vast majority of instances,—discouraging failures.

The above mentioned remedy, which the patient considers proof-positive of the doctor's having made a diagnosis of consumption, may invariably be depended upon to disarrange the digestion at least.

Cod liver oil, once begun, must frequently be continued throughout the entire winter season.

Nor can it be shown that the ingestion of fats and oils into the system, to become oxydized when coming in contact with the oxygen in the lungs, ever does more than raise the local temperature, by combustion.

Although this may prevent cold in comparatively healthy lung tissue, its therapeutic (?) effect on the inflamed pulmonary structure may be described as positively harmful.

Cough is a symptom, varying in intensity and character according to its cause.

Nor is that cause always situated within the respiratory organs themselves.

Cough is essentially a reflex act depending upon an irritation of the respiratory center.

These sources of irritation may be subdivided as follows:

Dropping of mucous from the posterior nares in chronic catarrh.

Polypi, enlarged uvula or tonsils, defective closure of the glottis, irritation within the larynx from whatsoever cause, malignant or otherwise.

Bronchitis, Pneumonia and Pleurisy.

Gastric when due to derangements of the stomach.

Cardiac disease, irritations of auditory canal and organic diseases within the abdominal cavity.

From the foregoing causes, it may be readily estimated that to arrive at the exact nature of any given case may not always be an easy matter. Nevertheless, we must relieve the patient, without risk of disturbing either digestive or circulatory systems. Any remedy which will attain this object in a goodly number of cases is indeed a Godsend to patient and physician, and in every sense an ideal remedy.

Not until our attention was called to Glyco-Heroin (Smith) did we become acquainted with a remedy which we have used with a most unvarying success in coughs of every description, and in patients of all ages and conditions, without the slightest unfavorable effect.

The points which recommend Glyco-Heroin (Smith) are:

1st. Palatability. 2d. Economy (3 to 4 oz. being ample for cure of the average case).

3d. Its immediate action, soothing the most trying cases.

4th. Its absolute freedom from unpleasant or unfavorable effects.

5th. It is not only palliative but a curative agent.

6th. The Hyoscyamus it contains reaches those trying cases of dry cough due to other causes than simple catarrhal irritation of the respiratory tract.

We are convinced that Glyco-Heroin (Smith) has no competitors in results, its action being almost specific. It will give satisfaction in every case where results may be reasonably expected, and in many cases its beneficial effects go beyond the most sanguine expectations.

The character of the cases coming to the Wayside Mission Hospital for treatment may be imagined when it is remembered that it is essentially a charity institution; that the vast majority of patients come to us after having tried everything else. These are worthy prospectors and miners, broken in health and pocket by exposure and misfortune.

As proof of the above we submit the following cases:

I.

Dr. McK. Laborer, 22 years. Had typhoid fever, convalescence much impeded by severe coughing spells, frothy white expectoration, irritable stomach. This condition defies all treatment. There was marked dullness at apices of both lungs to the third intercostal spaces.

Morning temperature normal, respiration 28, pulse 104.

Evening temperature 101, respiration 36, pulse 120.

This condition had persisted for nine days, with progressive loss of strength.

Dec. 16th. Glyco-Heroin (Smith), teaspoonful every 2 hours.

A. M. Tem. normal, pulse 104, resp. 28.

P. M. Temp. 101, pulse 120, resp. 36.

Dec. 17th. Slight relief to cough, had some sleep.

P. M. Temp. 100, pulse 96, resp. 24.

Dec. 18th. Relief marked.

P. M. Temp. normal, pulse 80, resp. 20.

Dec. 19th. Expectoration free, appetite and spirits better, rapid improvement.

Dec. 20th. Improvement continued, sat up about 2 hours.

Jan. 8th. Dullness and cough gone, spirits and appetite good, gaining flesh rapidly.

Jan. 11th. Discharged cured.

II.

February 19th.

Wm. M. Cook, 52 years. Has had severe cough for last three months, due to cold caught in a typhoon on the China Sea after three days' exposure to cold and wet. Has hardly any sleep, incessant dry night cough. Glyco-Heroin (Smith) teaspoonful every 2 hours.

Feb. 21st. Immediate relief, has had quite a little sleep.

Feb. 22d. Improvement continued.

Feb. 24th. Slept all night.

Feb. 26th. Has had no cough for 48 hours.

Feb. 28th. No return of cough and discharged cured. Is now in charge of the culinary department of Hospital.

III

January 23d.

D. A. Coolie, laborer, 48 years. Marked dullness at base of left lung, severe pain and dyspnœa. Temp. 102, pulse 104, resp. 40. There was daily chillness at 11 A. M., followed by temp. of 103 to 104. Expectoration muco purulent. Emaciated, irritable, and appetite completely lost.

Jan. 26th. Glyco-Heroin (Smith) teaspoonful every 2 hours.

Jan. 27th. Some relief to cough, other conditions same.

28th. Free expectoration, all conditions still unchanged.

29th. No morning rise of temperature; P. M. tem. 102, pulse 96, resp. 32.

30th. Seems somewhat better; had a profuse night sweat.

31st. Tem. 101; pulse 88, resp. 24. Took considerable nourishment.

Feb. 1st. Temp. normal, pulse 88, resp. 24. Less dullness, no expectoration, cough disappearing.

Spirits vastly improved. Said it was his third attack, and that in each former instance he was in bed 11 and 8 weeks, respectively. Continued to improve, and was discharged Feb. 26th, well.

IV.

January 17th.

J. J., laborer, 19. Pneumonia, 3d day, dull-

ness of entire right lung. Temp. 103 3-5, pulse 120, resp. 60. Expectoration *pruin juice,* very restless and thirsty. Slight delirium. Glyco-Heroin (Smith) teaspoonful every 2 hours.

18th. Tem. 102, pulse 102, resp. 48. Much easier.

19th. Temp. 100, pulse 84, resp. 36.

20th. Temp. nor., pulse 80, resp. 24.

Expectoration has changed, and is feeling much better. Absolutely refused to believe that he had pneumonia. Discharged cured.

V.

November 3d.

S. J., a diver, 34 years. Had just been discharged from another hospital where he had been treated for four months for typhoid-pneumonia. Had considerable dyspnœa; cough dry, spasmodic, at times slightly frothy expectoration. Temp. normal, pulse 100, resp. 28. Right plural cavity filled to the fourth intercostal space with pleuritic fluid which could be heard to splash on slight agitation of chest. Appetite poor, and is much dispirited.

At 5 sittings three and three-fourths gallons of fluid were withdrawn by aspiration.

Nov. 6th. Glyco-Heroin (Smith) teaspoonful every 3 hours, has much relieved the spasmodic cough; conditions in general seem to be improving.

Nov. 11th. Cough has almost disappeared. Continued in this condition to Jan. 14th, when two and one-half quarts of fluid were withdrawn.

Feb. 3d. Complained of pain under scapula and was given a dry hot air treatment followed by violent cough, fever 104 1-5, pulse 124, resp. 28; Glyco-Heroin (Smith) every 2 hours.

Feb. 4th. Had a hemorrhage and was sightly delirious; the general condition unchanged.

Feb. 5th. Cough almost gone, temp. 101 2-5, pulse 82, resp. 21. Is eating some, and feels much better.

Glyco-Heroin (Smith) has always relieved his cough promptly, and I believe he would have been dead but for its soothing influence. While we do not look to the remedy as a cure for Hydrothorax, we appreciate the sedative effect, in which it is superior to *morphine* and harmless.

VI.

January 11th.

Jan. 11th. W. McD., age 18. Measles thoroughly developed. Tem. 103 2-5, violent cough, yellow expectoration, cannot find rest because of the cough. Glyco-Heroin (S) teaspoonful every 2 hours.

Jan. 12th. Cough is much better.

13th. Has not coughed all night.

18th. Discharged without return of cough. Entire quantity of Glyco-Heroin used was 4 oz.

VII.

L. G., age 10 mos. Jan. 29 operated upon for radical cure of right inguinal hernia; on Feb. 6, although doing well in every way, he was seized with violent paroxysms of coughing (probably due to dentition.). The stitches threatened to tear out and the operation prove a failure. Glyco-Heroin (Smith) *XV Guttae* every 4 hours completely controlled the cough in five doses and so saved the case. There were no visible unpleasant effects of any kind whatsoever from the medicine.

VIII.

J. K., age 22, in hospital one year for tubercular disease in the lumbar region. Jan. 15th was operated on and much diseased tissue removed. He developed a violent cough Jan. 16th, which caused him great pain and bleeding in the wound. Glyco-Heroin was given, two teaspoonfuls every three hours, with splendid effect. Five doses removed the cough entirely.

IX.

Outdoor Cases:

Mrs. T., depot matron; had a cough that had defied the treatment of several physicians. It was a dry, hacking cough, and she had had no sleep in five nights. Completely cured by four oz. of Glyco-Heroin (Smith).

Mrs. M. had been to several physicians; her case had been diagnosed as phthisis; she was taking one-half bottle Emulsion of Cod Liver oil per day. She was also using morphine freely; 4 oz. of Glyco-Heroin completely cured her, and she gained at the rate of one pound per day.

Miss E., seventeen, coughed four months without relief; was immediately relieved by a few doses of Glyco-Heroin (Smith).

Mrs. D., distressing cough and some dullness at base of right lung. Her cough completely cured by less than 1 oz. of Glyco-Heroin.

McD. Aged 36. Policeman. Had been coughing three weeks and was getting worse. Four oz. of Glyco-Heroin completely cured him.

Mr. R., with all symptoms of pneumonia. Temp. 104, pulse 126, respiration 40; 4 oz. of Glyco-Heroin completely cured him.

NEWS, NOTES AND ANNOUNCEMENTS

Dr. C. B. Hussey, U. V. M. Med. Dept. '95, was elected president of the Thurber Medical Association at the last meeting at Milford, Mass.

Burlington and Chittenden County Clinical Society.—A regular meeting was held at their rooms, 162 College St., Friday, Dec. 26, 1902, at 8.30 P. M. Following was the programme:

Contagious foot and mouth disease,
Dr. F. A. Rich.
Discussion opened by Dr. M. J. Wiltse.
General discussion.

The paper was very instructive and interesting and gave an excellent idea of the strenuous efforts necessary to stamp out the disease.

Recent Death.—Charles Edmond Chase, M. D., University of Vermont, Burlington, 1873, president of the Middlesex East District Branch of the Massachusetts Medical Society, died at his home in Woburn, Mass., Dec. 26, 1902, after a lingering illness, from Bright's disease, aged 53.

Tuberculosis Among the Insane.—It is generally admitted that tuberculosis is apt to be unusually prevalent among the insane, and especially among those confined in hospitals for the insane. The Consulting Board of Physicians of the Danvers Insane Hospital in their report to the trustees this year call attention to this fact and to the necessity for arrangements to meet it, and not for the first time. We take the following statement from their report: "There is the same need as ever for the segregation of tuberculous patients. It is well understood that the insane are peculiarly prone to tuberculosis, perhaps because they are, in general, less resistant to disease. Out of the large proportionate number who have the taint in one form or another there are thirty to forty who have pulmonary phthisis, and who are therefore actively contagious. There ought to be provision for preventing those who are likely to infect others with disease from doing so. There ought to be a larger opportunity for the so-called outdoor treatment of suitable cases, in substituting for the tents which of late years have been found so useful somewhat more permanent buildings,—wooden, inexpensive, with detachable sides."

The medical director and pathologist of the Vermont State Hospital for the Insane discusses the same subject in the last report of the trustees to that institution. Dr. Berry states that: "In computing the amount of tuberculosis from our autopsies, the percentage has been reckoned as fairly as possible. The common adhesions of the apices of the lungs, and pleurisy with or without effusion, have not been considered as of tuberculous origin. Those cases which have shown substantial evidence of the existence of the disease have alone been counted. With this idea in view, the percentage computation figures 31.2 per cent, of tuberculosis found in ninety-three autopsies in this institution." In response to active appeals, the legislature of Vermont has made an appropriation for a separate pavilion, in connection with the state hospital, for the insane suffering with tuberculosis. Massachusetts might well do the same.—*Boston Med. and Surg. Jour.*

Addison County Medical Society Meeting.—The annual meeting of the Addison County Medical Society took place at the Addison House in Middlebury, Thursday, Jan. 15th, beginning at 11 o'clock in the morning. The progamme consisted of an essay, "The Treatment of Typhoid Fever," by Dr. F. C. Phelps, discussion by Dr. Edward Pilon; essay, "The Active Principles in Disease," by Dr. E. S. Weston, discussion by Dr. C. W. Howard; essay, "Alcohol in Medicine," by Dr. H. E. Bogue, discussion by Dr. O. M. Bump; essay, "General Paralysis," by Dr. F. E. Farmer, discussion by Dr. H. L. Townsend. President Dr. William N. Platt of Shoreham and Secretary M. H. Eddy worked to make this meeting one to be remembered and the programme proved an exceptionally good one.

The Vermont Medical Monthly.

A JOURNAL OF REVIEW, REFORM AND PROGRESS IN THE MEDICAL SCIENCES.

Burlington, Vt., January 25th, 1903.

EDITORIAL.

THE CONQUEST OF PNEUMONIA.—The increased prevalence of pneumonia within the last few years makes the subject one of prime importance to the general practitioner. This disease has always been one of the bug-bears of practice, and the comparative little influence of any form of treatment in reducing its mortality rate has not redounded to the credit of modern therapeutics. Much has been learned of its pathology and probably the disease is diagnosticated more accurately now than ever before. But it goes on claiming as great if not a greater proportion of victims each year and as a consequence the paramount question is, how can we lessen its ravages?

The solution of the problem can only be evolved by a closer and more accurate knowledge of the chemical phenomena incident to the pneumonic process. To be sure we know that pneumonia is an acute, infectious disease resulting from an infection with the diplococcus pneumoniae. But when this infection takes place we know nothing of the process aside from its physical characteristics. The pathologist tells us of the stages of congestion, red and gray hepatization, resolution, etc., but science thus far knows nothing of the chemical changes present. What we know of the disease in its morbid aspects is purely physical, but no one can question that the physical expression of the disease is the result of forces, a thousand times more intricate and complex. Therefore in the pathologic chemistry of the pneumonic process rests the answer to many queries that must be answered before treatment will ever be anything but empiric. It makes no difference whether pneumonia is a local disease with a systemic disturbance, or a general disease with a local expression. Behind the process or systemic disturbance there are changes chemical in their primal action, however physical in their expression. When we know why the diplococcus pneumoniae can remain innocuous in the air passages of many people, and produce pneumonia immediately on introduction to the respiratory tract of others; when we know how the germ does its work and what the nature of the processes in its substance are that enables it to live and multiply; when we know the chemical character of the excretions or secretions of the diplococcus that produce the physical changes of the disease; when we know why the human organism is swept with the fury of a process, that increases in intensity up to a point almost mathematical in its constancy and sudden in its abatement; when we know what forces in the human organism limit the extent of the process and arrest it after a given period; when we know these things, then will the mastery of pneumonia be close at hand.

But will we ever obtain these facts? The future must answer, but our greatest hopes rest on what we can learn of the pathologic chemistry of the disease. Neither study of the diplococcus pneumoniae, nor of the lung tissue can give us the information we need, any more than study of the acorn or of the soil it grows in can give us knowledge of the oak. We must study the resulting product of the seed and the soil, the pneumonic process itself, if we ever hope to limit or arrest its course. Pathologic

chemic research is therefore the need of the hour to conquer pneumonia as well as countless other diseases.

Bloodless Surgery.—The enormous quantity of matter in the lay papers relative to bloodless surgery is very interesting to the student of "fads." Dr. Lorenz of Vienna, who is the leading living exponent of bloodless surgery, in many of his addresses made during his recent triumphant tour of the United States, referred to the greater safety to the patient of bloodless operations. Indeed he has strongly urged this claim of lessened danger as the leading argument in favor of his methods. This has impressed the popular fancy and the great throng of people to whom the word operation only means blood and gore, have been quick to popularize the thought of "bloodless" operations. They have not stopped to think of the comparatively small field in which so-called bloodless operations can prove useful, or the really few cases in which they can be applied. Then again, there is a real question, whether the mauling and bruising made necessary by bloodless methods can really be so much safer than cutting operations in this day of aseptic surgery. The injury to nerves and blood vessels and other delicate structures that must follow the mighty force required to break up old adhesions in our mind presents real dangers that cannot be overlooked. Dr. Lorenz is doing a noble work. So does any man who masters a specialty or makes his life count in any direction. We are not criticising his methods nor trying to detract one iota from the good work he is doing. But we do wish to emphasize this important fact, that surgery is and almost must be complex in its methods, and the part should never be exalted above the whole. Popular enthusiasm often tends to narrow views, and while bloodless surgery has its place, we hope that the splendid work of modern aseptic surgery will not be overlooked nor forgotten in the popular mind.

MEDICAL ABSTRACTS.

The Seed and the Soil.—In a recent number of the *Lancet,* Dr. W. Howship Dickinson reviews certain facts with special reference to the germ theory of disease, in what seems to us a very sensible way. At the present time the discovery of a microbe in a disease conforming to the recognized criteria of pathogenicity, is too commonly accepted as ending discussion as to its treatment—we must keep out the germ of infection and the disease is conquered. Hence, the premature and exaggerated deductions as to the importance of isolation, disinfection, etc.—all measures good in themselves and absolutely essential in many infections, but by no means so much so or so beneficial in certain others where their all-importance is at the present time so much agitated. We must keep in mind that the soil as well as the seed is essential and the human organism does not in all cases and at all times furnish the same pabulum and foothold for the germs. They may sometimes fall on stony ground or the thorns or other more or less serious pathologic conditions may overwhelm them. In every epidemic and with every infection there are those who are immune, often only the insignificant minority are susceptible. Dickinson discusses these facts, using as an apt illustration the well-known microbic disease, relapsing fever, which depends so absolutely for its occurrence upon the non-resistance favoring environment that non-nutrition, etc., can supply; that is accepted synonym is famine fever. The most attention, however, is given by him to tuberculosis, which he considers stands first as a striking example among diseases of the importance of susceptibility as a determining etiologic factor. The microbe, though the undoubted cause of the disease, is of secondary importance; it is not so much the bacillus as the reception offered to it that needs to be seriously considered. This depends upon various factors, first among which Dickinson recognizes heredity as of unassailable import-

ance, then come local inflammatory conditions, such as pneumonia or capillary bronchitis and influenza, irritant inhalations, alcoholism, exhaustion and depression, damp sub-soil, overcrowding, and insufficient ventilation. Without these singly or together the microbe is harmless as a rule. "We can imagine," says Dickinson, "an isolated item of humanity on some mountain summit or isle of the ocean congratulating himself if on nothing else on his exemption from tubercle, but in common soil conditions the seed is sown broadcast and the vital question is not where it will be deposited, but where it will grow." There is danger, as he says, that we may have too much thought for the microbe and too little for the man, and in the contest between the two it is more to the purpose to support the man than to attack the microbe. As a rule, the bacilli of the disease are out of our direct reach, but we can make, he thinks, the conditions so unfavorable for their existence in most cases that they will have to succumb. There is abundant evidence that our systems are constantly getting the better of diseases that we consider hopeless, and even cancer has been reported to have undergone, in rare cases, a spontaneous cure. The antitoxins are also used by Dickinson as an apt illustration of the law that the seed is important if the soil is unfavorable. They do not destroy the bacilli; the diphtheria bacillus he is assured will grow in its antitoxin, but they somehow or other so modify the blood and tissues as to render them no longer capable of supporting the germs. He would not be understood as ignoring the latter for we can do something by excluding them, and we may even hope to see some of them exterminated. There are two sides, however, to be looked upon in the management of diseases, the attacking organism and the resistance, and both must be considered. We have of late perhaps relied too much upon direct frontal attacks on the enemy in some diseases and tuberculosis may be one of these. It is well that we should be occasionally reminded to reform our strategy. The optimistic notion that by isolation, etc., we can stamp out tuberculosis seems very little warranted when we have in mind its widespread distribution throughout the animal kingdom; but we are learning facts every day that make it seem less formidable. We have already a partial immunity and it may be that with further knowledge of the disease we can make it far more nearly complete.—*Jour. of the A. M. A.*

Pneumonia.—Five very excellent articles upon this subject were read before the last meeting of the A. M. A., and appear in *The Journal*. Four in the issue of Nov. 15th and one in that of the 22nd, 1902.

The first paper by Dr. Edward P. Wells of Chicago, deals with the increasing prevalence, the mortality and individual prophylaxis. By a careful compilation and reduction of statistics to tables, he proves quite conclusively that pneumonia is rapidly increasing; the increase, however, seems to be principally confined to larger cities. Fortunately he seems to show quite conclusively, that the percentage of mortality has not increased; if this is true the profession may draw a very small amount of consolation from the fact. From his paper he makes five interesting deductions. (1) That the mortality of pneumonia has increased very little if any during the past eight years. (2) The prevalence has become greater in the last half century, and very much greater in the past twenty years. (3) For individual prophylaxis "The upper air passages should be kept free as possible from large accumulations of mucous, and particular effort should be made when these secretions show pneumococci." Avoid chilling when fatigued, keeping the individual away from infected persons and places; the prompt destruction of respiratory excretions from infected persons, such persons being required to cough and sneeze into moistened cloth. (5) For real prophylaxis, the above advice should be kept before physicians, and given as instructions to their patients. (6) That it is important to discover some simple effective means of prevention and to place this disease on the list to be reported to health officers; environments to be carefully noted and results analyzed.

The paper of Dr. James J. Walsh of New York, deals with the subject along practically the same lines as Wells, excepting where he states "The mortality of pneumonia is distinctly on the increase in all our large cities," but furnishes no statistical proof. His statements, however, are very logical and emphasize the importance of prophylaxis. In emphasizing its infectious cause he states conclusively "That the best clinicians all over the world agree that it is contagious." "In wards of hospitals in many parts of the world, the admittance of a case of pneumonia, even when the infection was not due to grippe, has been known to be followed by other cases among patients in the same ward." He cites epidemics in schools,

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one school having two epidemics in one winter. Such statements from good authority, should make a deep impression upon the readers of these papers. He emphasizes, but more strongly than Dr. Wells, the importance of prophylaxis, as applied to acute cases, especially the prompt destruction of pneumonic sputum and respiratory excretions. He warns municipalities regarding foul streets, gas leakage, and defective drainage. Neither of the two papers discuss the relative effect of La Grippe as a factor in the increased prevalence of the disease, but Dr. Wells speaks of it in the discussion but also states that La Grippe is not sufficient explanation for the increase.

The paper by Dr. H. B. Favil, of Chicago, is commendable because it deals with blood-letting in the treatment of this disease, and as this treatment for certain conditions, more or less vague, has been revived, it is well to consider seriously anything capable of being so badly misused. The essence of his article is contained in the second paragraph in three deductions. (1) The growing tendency to place greater value upon bleeding. (2) The vague and indefinite indications for its use as defined by literature. (3) The importance of not disgracing the procedure by its indiscriminate use. The last being a very sensible warning. He fails to supply any rule or indication for its use, but hints at cyanosis, dyspnoea, and labored heart's action and very appropriately raises the question whether the embarrassed heart's action is due to mechanical or toxic influences. In summing up, he doubts the utility of the measure as an early procedure.

Dr. James Lyson, of Philadelphia, in his article takes a more radical stand in favor of bleeding and defines two periods in which it may be of service; in the early stage for relief of pain and dyspnoea, and in the advanced stage, with engorgement of right heart associated with intense dyspnoea, and general venous stasis. He states that no remedy whatever will so quickly relieve the pain as wet cups, and prefers these for the pain, with bleeding at the arm for dyspnoea, engorgement, and venous stasis. When used in the advanced stage he advises the simultaneous use of hypodermoclysis and oxygen inhalations.

The consensus of opinion brought out in the discussion of these papers was that blood-letting might do good by reducing pressure, eliminating toxines, or both, but no adequate rule for its use is given at all. The various modern drug treatments in vogue, including the experiments in serum therapy made by Wilson and Sears, are discussed in a paper by Dr. A. A. Stevens, of Philadelphia. His investigations and citations would show that serum therapy up to date is of no more avail than any other methods of treatment. Stevens' remarks upon general expectant treatment seem very sensible and logical. He says: "In a large number of cases no drugs are needed. By confining his services in the sick room to the selection of nutritious and easily digested food, to the recommendation of suitable external applications, and to the critical study of symptoms from day to day, the medical attendant will as conscientiously discharge his duty to his patient as he will by systematically prescribing drugs, which, even if they do no harm, cannot possibly be of benefit." This author advises the relief of symptoms only by appropriate remedies.

This very interesting symposium, on this very much treated disease, is closed by the paper by E. Fletcher Engalls, M. D., of Chicago, in *The Journal* of Nov. 22, and reviews the well-known ground of drug and general treatment, and one regrets to see an authority so well established, lending itself absolutely to emperical methods, and in the same breath confessing to a mortality of 36 per cent. These writings and discussion should be read with interest because they come from men of experience and who are good observers, and more important they treat of a disease, whose etiology and pathology is well understood, and whose treatment is very much a matter of guess work. It seems appropriate to quote from the appeal of Dr. Osler of Baltimore, made after the reading of Dr. Ingalls' paper. Dr. Osler says: "We have had presented to us a statement which should impress us all as appalling. When we think that other infectious diseases we treat, have had their mortality reduced ten or fifteen per cent., it is terrible to realize that we, as physicians, must listen with mute impassive faces to the announcement of a thirty-six per cent. mortality in pneumonia. It is an old story and one we have been listening to for years. What I feel deeply," he says, "is that something should be done in a sytematic and energetic way to study this problem of pneumonia and see if we cannot reduce this mortality of thirty-six per cent." One thing anyone can see, that in spite of all treatments advised and defended, from authority good, bad, and indifferent, the disease is increasing, and the mortality, if not actually increasing, is not decreasing. What more proof of the inefficiency of any or all the present methods of treatment is necessary?"—*Northwest Medicine.*

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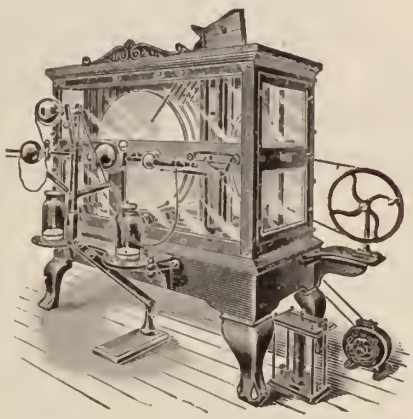

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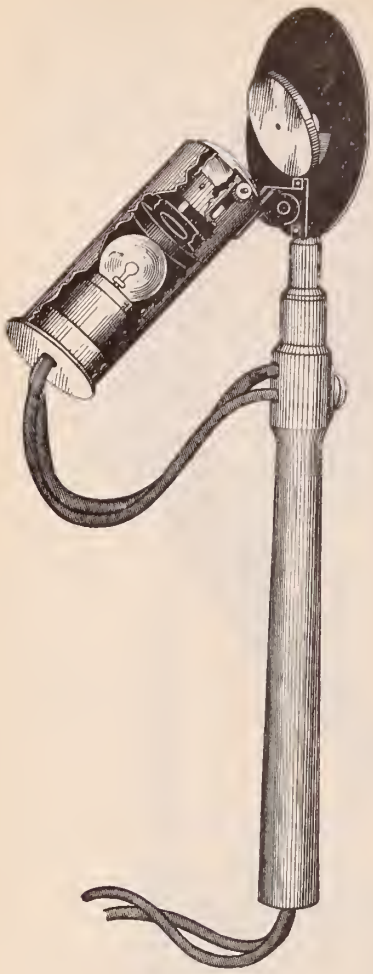

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Vermont Medical Monthly

Official Organ Vermont State Medical Society.

Vol. Ix. No. 2. Whole No. 98. | Burlington, Vt., Feb. 25, 1903. | $1 per year. Single copies, 15 cts.

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Entered as second class matter at Burlington, Vt., Post Office.

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The Vermont Medical Monthly

VOL. IX. FEBRUARY 25, 1903. NO. 2.

ORIGINAL ARTICLES.

PUERPERAL SEPTICAEMIA.*

By M. F. McGuire, M. D., Montpelier.

Notwithstanding that there is probably no other branch of medical science which has furnished us with such a wealth of literature, within the past few years, as that of obstetrics, of which my subject to-day forms an important part, I will attempt to enter into some discussion upon it, doing so, however, with misgivings, as my views may be of little value compared with that of learned authorities.

PUERPERAL SEPTICAEMIA-CHILDBED FEVER.

Puerperal Fever is a fever beginning usually within the first five days after labor, attended with septic infection of the woman's blood and with acute inflammation of one or more of the reproductive organs.

History.—The first light thrown upon the subject of puerperal septicæmia was kindled by Ignatius P. Semelweise, a young Hungarian, who had charge of the lying-in department of the Vienna General Hospital over half a century ago and whose mortality had reached the enormous figures of 10 per cent. Astounded at such a fatality, he sought to ascertain the probable cause, when what at first seemed obscure, soon became transparent by the death of one of his assistants as the consequence of a wound which he received in the dissecting room, followed by symptoms identical to those of the fatal cases in lying-in wards. From this time forth Semelweise insisted on a thorough cleansing of the hands with soap and water and then holding for some time in chlorine water or a solution of chloridated lime, and as a further precaution also restricting the number of examinations, thereby greatly reducing the mortality. Yet, notwithstanding the indisputable evidence his theory was not accepted by his colleagues, and I believe he died before the merits of his discovery were appreciated. As it was, he deservedly won for his memory the distinction of being called "The Father of Antiseptic Midwifery."

Etiology.—In the changed condition of the blood in which the quality is altered, as in plethora and anaemia, we find an increased susceptibility to inflammation. The dilatation of the blood and lymph vessels of the pelvis, by predisposing or favoring the formation of thrombi, which may become fertile soil for pathogenic organism.

Then we have the supersensitive condition of the nervous system, the highly emotional state of the parturient, the increased susceptibility to worry and excitement which all tend to lower the vitality and resisting powers of the woman. Then after labor the woman is exhausted and has lost more or less blood, with probably slow and irregular contractions of the uterus which, instead of closing the uterine vessels by agglutination, preventing the formation of clots, we have the open spaces in which to form a medium for the growth and development of bacteria. We may have more or less traumatism produced by labor all through the parturient canal, especially laceration on the inner surface of the perineum, while on the outer surface it remains intact, forming as it does a pocket in which we have an accumulation of pus from which we may get rapid absorption. A small piece of placenta or membrane,

*Vice-President's Address before the 89th Annual Meeting of the Vt. State Med. Soc.

which soon swarms with saprophytes,may have been left behind in utero, or even lochia which fails to drain properly, makes a good culture medium.

The streptococcus pyogenes, as found in all fatal cases, is the usual cause. Lawson Tait lays considerable stress upon gonococcus, and Kronig reports a number of cases, all of which were mild and recovered without treatment.

Atmospheric infection as a cause is held by some writers. It is a comforting belief, as it casts the responsibility on nature, but it is not a tenable one. Of course, the whole question is one of wound infection. Given a woman delivered in an aseptic manner and cared for similarly afterward, and she may lie in a room infected with any of the infectious diseases and the puerperum may be unaffected so far as septicæmia is concerned. She may develop the disease and it will run its proper course, only modifying the puerperal state in so far as to arrest involution. If she die, the lesion peculiar to the intercurrent disease will be found with arrest of involution, and we may find nothing of septicæmia. On the other hand shouldany of the virus of these diseases come in contact with the wounded genital, septicæmia will follow and we may, or may not, have the development of the disease from which it was taken.

When we remember the vascular supply of the sexual system is increased manifold during pregnancy, and when we recall the rich lymphatic supply to the same system, it is not surprising that infection starting in this locality should spread to the various serous cavities and be deposited in the various organs in the body. Hence it is that puerperal septicæmia is always serious, although much can be done by proper treatment to save life, yet these patients are left in the most exhausted condition and require more tonic treatment and longer time in which to recover than any acute infectious disease. Danger increases with the degree of septic infection; when the poison is extremely virulent death may occur within 24 hours, even without recognizable post mortem evidence. Cases of less severity may continue five or six days, when convalescence usually begins. Among the worse cases are those involving the veins, lymphatics and peritoneum.

Symptoms.—Clinically puerperal septicæmia offers a varying symptomology, according as the infection affects chiefly one or another of the pelvic organs, and as to whether the infection is detected early and treated promptly. It seems best not to try to differentiate a symptomology of one organ from another, for very rarely will one organ be affected without the consecutive affection of another. Again the symptoms of infection of the system at large predominate over the signs affected by the local lesion.

As a rule it is about 36 hours after delivery that the first symptoms of septic infections manifest themselves. A chill is by no means a precursory symptom except in the so-called fulminating types, when a woman seems to pass from health to death. It has been my experience that although a woman may have no chill the majority complain of a creepy sensation up and down the spine, which, if the disease continues, soon becomes frigid, the occurrence of which always awakens suspicion of impending danger. The pulse rate affords, as a rule, most valuable evidence of alteration in the smooth course of the puerpera. A slow pulse is incompatible with sepsis in its early stage—a rapid pulse a danger signal. When the pulse increases in frequency and the temperature rises to 99 or 100 degrees about the third day, impending mischief of a septic nature may usually be suspected. To-day the so-called milk fever is not recognized. Acute constipation may cause it but a laxative should clear the doubt. If it does not and no intercurrent disease is developing, sepsis is. At once a careful examination is called for. I usually make a general physical examination. If the pelvic floor has been lacerated, sloughing in

this locality may be found. If not, the cervix should next be examined with a speculum, for lacerations and sloughs, and at times a fragment of membrane or placenta may be found protruding. These failing to show cause, the uterus must be carefully examined, thus proceeding at an early date to establish the source of infection while it is probably amenable to local treatment, at any rate before general infection has progressed to a great degree.

Probably in the vast majority of cases septicæmia emanates from the uterus. Either its lymphatics have absorbed the septic virus directly or else a decomposing mass is lying in its cavity and is being infected. As a rule the relation between the pulse and temperature in the puerperal state is of exceeding value from a prognostic as well as a diagnostic standpoint.

Acute septic conditions, where the system is surcharged as it were with the poison, are associated with a rapid pulse and a very low temperature. The sytem is shocked by the poison and we have a condition of collapse with a gloomy prognosis. On the other hand, where the lesion is more acute, inflammatory and systematic infection slight, we are apt to have a high temperature and slow pulse. Associated with rapid pulse and high temperature, the lochial discharge becomes altered, it may be partly or altogether arrested and it may become fetid. Odor to the lochia is simply a sign of decomposition and it is an accompaniment of sapremia and the most common cause of which is a portion of placenta, membrane, clot or retained lochia in the uterine cavity.

In this connection then it is to be remembered that the most acute types of sepsis may be unassociated with odor. Whilst on the early recognition of odor and on its prompt treatment sapremia may be abated before it merges into septicæmia.

In early sepsis pain is usually absent, as a rule it becomes marked as the peritoneum becomes involved. Of course, pressure over the uterus at any time will cause pain. As systemic infection develops and the various organs become affected, pain emanates from each in turn. Thus we may have complicating sepsis, pleurisy with a sharp pain over the affected lung as though unassociated with septic infection. The pain associated with exudate in the pelvis is sharp, and as I have observed, spasmodic in character and radiating. When the systemic infection is deep and associated with peritonitis of a purulent type, pain may be absent altogether, or in rupture of an accumulation of pus into the peritoneum cavity pain may for a time disappear.

The intestinal tract sympathizes markedly with this systemic septic phenomena, constipation may result from peritonitis when absolute paresis of the intestine frequently ensues, and as a result we have tympanitis with consequent pain in the abdomen and interference with the respiration from pressure on the diaphragm. As the peritonitis becomes more severe the intestinal coils cannot move, as they are firmly bound together by bands of lymph or adhesion. Exceptionally we do get diarrhœa. The stomach also sympathizes in the trouble and is shown by the coated tongue, nausea and vomiting, with a sweetish odor to the breath. The skin assumes a characteristic sallow hue and the woman sinks into a torpid condition.

Diagnosis.—Since this condition is one of fever producing toxemia, the symptoms may be readily confused with other serious febrile conditions. The analogy between septicæmia and typhoid fever is more striking (so much so that I sent two specimens of blood to the laboratory for examination which gave me no support in my error), both diseases presenting the common symptoms of a septic infection. They are both likely to be characterized by abdominal symptoms, also of nervous exhaustion, chief of which is delirium. In both conditions the spleen may be enlarged, also in some cases diarrhœa is present. The points which tend to remove doubt are: First, the history of the disease, the slowly developing prodromal stage,

the presence of rose spots and the widal reaction. The facial expression in typhoid fever is dull, while in that of septicæmia it is anxious and excited.

Pneumonia is not an uncommon condition in the puerperium, and yet its manifestations are not those distinctly of the bronchial involvement, as the symptoms in the beginning of the disease are rather due to the severity of the infection than to the catarrhal process. In differentiating symptoms common to pneumonia and septicæmia the character of the sputum and the early localization of pain are important points.

As we are not troubled with malaria in this region I will not go into the differential diagnosis of the disease. A good deal is written on a bacteriological examination of specimens taken under aseptic precaution from the interior of the uterus, but which I think impractical to the ordinary practitioner.

Treatment.—Of course the first thing to consider is the preventive treatment. I try to observe all the antiseptic precaution necessary at the time of labor, and advise the subsequent care to the same, and I also advise untrained nurses to place all the material used about the pelvis and perineum in the oven for twenty minutes, or until they become brown, when I feel sure they are then sterilized, and to bring them directly to the patient. All these directions are given in the presence of the patient, and advised of their necessity to prevent blood poisoning, which *she* will then surely remember.

I advise bathing the perineum with 1-5000 Bi. Chlo. Sol. twice daily, or oftener if necessary.

Notwithstanding that all care and antiseptic precautions have been observed, cases will occasionally spring up which give alarming symptoms, and so much depends upon prompt action (as we well realize the rapidity with which micro-organisms multiply under such favorable environments.) I usually, after excluding other causes, inspect the vagina and cervix, washing same in a 1 per cent. carbolic solution, and failing to find cause I continue to the uterus, which I examine with my finger, removing any foreign substance, if found present, with a curette or fenestrated sponge forceps, then following by introducing the uterine irrigator, which, if lochia has been retained, will allow to escape through the canella and which proves one cause for the disturbance.

I then continue the intra uterine irrigation with 1 per cent. carbolic solution, followed by a quart of sterilized water, which I repeat in 12 hours if the temperature remains elevated. If I find the uterus is not draining properly I introduce, through a gauze packer, which I believe a very valuable instrument, as it prevents the gauze coming in contact with anything which may not be sterilized, an important thing in many of the inconvenient bed rooms in which everything looks, as well as the patient, to be germ-laden. For the relief of temperature and restlessness I advise bathing every two hours.

As it is so important to support the bodily strength, I advise a nutritious liquid diet given every four hours and also give Ammon. Chlor. 5 gr. in one-half tumbler of water every four hours, as it maintains the tongue in a clean condition, producing a greater relish for nourishment, accelerates the action of the kidneys and supports the system.

As convalescence advances I advise Elix. Gentian and Tr. F. Cl. dr. T. t. i. d. with a wineglass of malt every four hours. If after a time the exhaustion and anaemia continue I advise a tablet composed of:

R. Blauds Mass.....Gr. ¼
Ac. Arsenori ..... Gr. 1-50
Ext. Nux. Vom.....Gr. ⅛
Cascara.....Gr. 1

I have never tried the serum or continuous irrigation advised by some writers.

In closing I must say that I sometimes think that perhaps some of the cases, in which I have resorted to early radical treatment, might have recovered without such measures, but when I realize the preciousness of a woman's life, when the word *mother* has its fullest significance, and as delays are dangerous, the fear that the helpless offspring, and perhaps many other dependent ones, may lose their counselor, I feel that I did the right thing, for as the saying is:

"The hand that rocks the cradle rules the world."

FAMILY HISTORY IN TUBERCULOSIS.

By A. B. Bisbee, M. D., Montpelier.

It has been said that "Medicine is the noblest of arts and the most uncertain of sciences," or words to that effect. Without now considering the nobility of the healing art, we are all doubtless prepared to agree that that branch of medicine with which we have to do in life insurance has not yet reached a high degree of exactness. When we inventory our present holdings we find many theories but few fixed facts. After years of continuous growth and uninterrupted success, life companies are to-day guided in the selection of lives, in part by certainty of knowledge, but in much larger part by individual opinions and judgments, and the best and most experienced of their advisers are still only investigators, striving for a degree of accuracy which will produce average and safe results. The problem which we have to face is such an exceedingly difficult one. The duration of human life is affected by such a multitude of causes and is, therefore, so extremely uncertain. A man's vitality and resisting power cannot be measured with mathematical precision. Disease is not an entity, whose progress and results can be foretold with certainty.

But when we look backward and recount the great gains which have already been made —when we remember that our experience is daily widening—when we think that there is, at the present time, stored up in the offices of this country a mass of data sufficient, if properly studied by competent actuaries as a part of it is now being studied, to render easy the definite and final solution of many of the questions which have heretofore been obscure and perplexing, is it not reasonable to expect that the horizon of absolute knowledge will soon be extended far beyond its present limits? May we not fairly conclude that, as the years go by, our methods will grow more and more exact—that divergencies of opinion in individual cases, which are now so disturbing, will become less and less common and that increasing numbers of people will receive the benefits of life insurance? May we not go further and conjecture at least that, at some time in the dim future, our experience will be large enough, our knowledge precise enough, to admit all classes of men and women who can pay premiums—that the various impairments will be so well understood that a price can be put upon them and every applicant be accepted on some terms? Such a scheme is not so utopian as might at first thought appear. All that is necessary to make it entirely practicable is an experience with a sufficiently large number of cases, in which precisely the same impairment exists, to afford a basis for premium computation. It is needless to say that to-day this requirement cannot be met. We must wait for further development, for clearer and larger knowledge. Meanwhile our duty plainly is to see to it that our attitude is not one of non-progression, of idle waiting, that each fresh fact is utilized, that traditional rubbish is thrown aside, that our methods reflect the best thought and the safest conclusions of the time. No better touchstone can be applied to our theories and our practice than that of free and frank discussion, and I have to thank you for another opportunity to consider with you some of the

questions which are of such great interest and importance to us all.

Of such questions I know of none in the whole realm of selection concerning which business men and physicians have found it more difficult to harmonize their opinions, none which has been more generally misunderstood in the past, none which now calls more loudly for intelligent attention and revision, than family history. It is not my purpose at this time to consider the general doctrine of heredity. I desire to call your attention in a practical way to the bearing of inherited predisposition in the production of a single disease, tuberculosis, and I shall use this term as applying only to that form of the disease known as pulmonary tuberculosis or consumption. No reference will be made to tuberculosis of other organs.

I have chosen this trite subject for to-day's discussion for two reasons: (1) Because of the paramount importance of everything pertaining to consumption which, year after year, heads the list of causes of death; and (2) because the advent of the infection theory and its almost universal acceptance has apparently occasioned the greatest uncertainty in the minds of many people as to what extent the older ideas of inheritance have been disproved. It is sometimes charged that insurance companies are still applying rules which were formulated before the real nature of tuberculosis was known, that their practice in this regard does not conform to our present knowledge. We are often asked by field men why it is that stress is still laid upon family history of consumption by selecting departments since it has been so clearly shown that heredity is not a factor in its causation. Such enquiries demonstrate the urgent necessity of arriving at a better mutual understanding of a question which so frequently confronts us in our daily work.

As you very well know consumption was formerly looked upon as a constitutional disease, and one of its most common and most potent causes was supposed to be heredity. It was not thought that the disease itself is inherited; that is that consumption itself is directly transmitted from parent to offspring, but that a habit of body or a predisposition is thus transmitted which, irrespective of other exciting causes or with the assistance of other influences, leads to the development of the disease later in life. This habit of body, this predisposition was held to be something more than simple debility or susceptibility to diseases in general. It was believed to be something which tends to consumption alone. That a tubercular tendency may be also acquired was well understood, but the frequent occurrence of this affection in several members of a family gave, it was supposed, such conclusive proof of the role of inherited transmision that this cause overshadowed all others in importance. These views represented the sum of clinical experience and observation before the days of modern bacteriology.

The announcement of Koch's great discovery in 1882, however, gave such an impetus to the study of tuberculosis, and such remarkable advancement has since then been made, that the older conceptions, regarding its nature and causation, have, to a large extent, been lost sight of. We are now accustomed to think that our exact knowledge of the subject dates back only about twenty years. It will not be necessary for me to review except very briefly the standard theories of to-day. You all know that consumption is now believed to be not a constitutional but an infectious malady, and that it has been proven as clearly as any fact in medicine that a microscopic organism known as the tubercle bacillus is the infecting agent or exciting cause. These organisms are invariably found in the lungs of patients who are suffering from the disease, and they are thrown off in large numbers with the expectoration. They do not grow under ordinary conditions

outside the body, but they may retain their virulence in the dried sputum for a long time and be widely distributed in the form of dust. They are taken into the lungs with the inspired air by healthy individuals, and, if suitable conditions are met with, they find lodgment, grow and mulutiply, producing characteristic tubercular lesions. They may, it is supposed, also get into the body with the food. Meat and milk from tuberculous animals, although this has recently been disputed, are generally regarded as capable of transmitting disease, but by far the most common mode of entry is by the lungs. It has been found that dust, taken from rooms which have been occupied by consumptive patients, contains the germs in an active state and possessing the power to excite the disease in animals, when used for their inoculation. Tuberculosis is communicable and its appearance in several members of a family does not necessarily indicate inheritance, as was formerly supposed. It may be transmitted from one member to another by intimate association. Consequently every tubercular patient, unless proper and rigid precautions are observed, is a menace to his family and to his neighborhood.

Widely different conclusions have been drawn from this newly discovered evidence. On the one hand we find some men, particularly those who have observed in laboratories the experimental production of the disease in animals, who hold that the old doctrine is altogether fallacious, that the only factor in the production of tuberculosis is the bacillus, that predisposition is a myth, that heredity has no influence whatever as a causative agent. Great publicity has been given these views and special stress has been laid upon the idea of non-inheritability. Boards of health have been compelled by the exigencies of the times to be more or less dogmatic in their assertions. Prior to the promulgation of the bacillary theory, the world had assumed a helpless and hopeless attitude towards consumption. It was looked upon as a baneful inheritance and it was supposed that nothing could be effectually done to ward it off or to modify its progress. People looked on supinely while this one affection caused more deaths every year than all the other infectious diseases combined. An epidemic of diphtheria or typhoid fever would excite the greatest alarm and activity, but tuberculosis carried off more slowly its thousands without seriously disturbing the public mind. It was manifestly the duty of health authorities, as soon as the true nature of the disease became known, to inculcate ideas of prevention, to give forceful warning of the dangers of infection, to urge the importance of strict cleanliness and the early destruction of sputum, to emphasize the fact that consumption is not necessarily fatal, that it is many times possible to arrest its progress in its incipiency. All this has been done. In their bulletins, in their public discusssions and in various other ways they have drawn particular attention to the bacillus as the essential causative factor, to the possibility of lowering the consumptive mortality by destroying this germ wherever it is to be found, to the danger of spreading the disease in shops and in houses in which consumptives have worked and lived. Tuberculous cattle have been slaughtered in great numbers. Compulsory notification laws have been passed, as have also laws prohibiting spitting in streets and in public conveyances. Enforced isolation of the tuberculous patient has often been suggested.

I refer to the teachings and regulations of health boards simply to indicate one great source of the one-sided views which many people now hold concerning the cause of consumption. These regulations, it must be remembered, represent the organized effort of the municipality to restrict the spread of the disease by destroying the infecting micro-organism, and their effective enforcement calls for the instruction of the public in regard to its communicable nature, but such teachings do not cover

fully the whole subject. They are not intended to convey the idea that tuberculosis depends solely and exclusively upon the bacillus or that preventive measures, other than those I have just mentioned, will not assist in stamping it out. There is another side of the tuberculosis question, concerning which we hear comparatively little because it falls outside the domain of state medicine, but which is really of quite as much importance, from a life insurance standpoint, as is the bacterial.

When we take into account the evidence derived from clinical experience and from life insurance statistics as well as from laboratory experiments, we must conclude that tuberculosis has a two-fold cause: (1) An exciting cause, the tubercle bacillus, and (2) predisposing causes or conditions of the human system without which the specific microbe is innocuous. The exciting cause is omnipresent Consumption occurs in all civilized communities, and, wherever there is consumption, bacilli abound. Exposure to infection is, therefore universal. That only a fraction of the human family develop the disease is strongly indicative that the bacillus alone is not effective. Other causes are necessary to produce results and for such other causes we must look to the individuals exposed. It is estimated that about 50 per cent. of the entire population, at some time in their lives, become infected with tuberculosis, and that about one-seventh die from this cause. In other words, about one-half of the total number of persons who come in contact with the ubiquitous parasite escape infection. Of the remaining 50 per cent., who are unable to repel the invader, two-sevenths die and five-sevenths recover. These figures illustrate well the varying degrees of resistance offered by different individuals. Some have a resisting power which amounts to practical immunity. Others possess a smaller degree, which admits infection but which is sufficient to arrest the tuberculous process before fatal damage is done, and still others are so non-resistant as to be wholly unsuccessful in their attempts to combat the disease. The term predisposition is applied to all those conditions which render the body non-resistant to those influences which fit the tissues to harbor the tubercular germ. Such conditions are passive, not active. They denote absence of strength, lack of vital energy.

It is easy to understand how such a predisposition may be acquired. An individual starts out in life with an inherent vigor which adequately protects him, but a bad environment, an unhealthy occupation, dissipation or other debilitating causes so reduce his normal stamina that he becomes unable to offer the necessary degree of resistance. On the other hand a proneness to consumption may be inherited. A weakness of fibre, a feebleness of constitution, an under average power of resistance may be received at birth. It has always been supposed that these predisposing conditions are especially liable to come from a consumptive ancestry, that persons who spring from consumptive stock are more likely to be frail and delicate, less resistant, as a class, than are those who have not lost near relatives from this disease. We may say to-day that this is a well established fact. Common observation indicates it. Medical and insurance statistics prove it. It is not necessary for me to adduce the evidence which substantiates this declaration. You are all familiar with the many investigations which have been made along this line, and you know how conclusive the results have been. A history of consumption in the immediate family must be looked upon as increasing the liability to this disease. We cannot safely ignore such a history. There is nothing in the modern doctrine which subverts entirely the older teaching of inherited susceptibility. Our definitions may differ from those of our fathers and we may not count a predisposition either hereditary or acquired of the same binding force as was formerly the case, but the great fact that a something is transmitted by inheritance, which favors the development of con-

sumption, has not been refuted. We cannot explain the frequent occurrence of the disease in several members of a family solely on the ground of over-production of the seed and increased opportunity for infection. Unless the soil is receptive the seed will not germinate. It is this receptivity of soil, outwardly manifested by spare build, narrow chest, frail appearance, poor nutrition which is inherited and which bears quite as important a casual relation to consumption as does the tubercle bacillus. The attacking germ and the individual attacked must both be considered. The relative strength of the assault and of the defense determines the result.

It follows, then, that the disease may be rationally prevented in two ways: (1) By destroying or avoiding the bacillus, and (2) by increasing the individual index of resistance. We hear a great deal nowadays concerning the efficacy of the first method, but in my judgment much more can be done and has been done to limit the spread of consumption by strengthening the individual than by attempting to remove the sources of infection. In proportion as the general hygienic conditions are improved the prevalence of the disease is diminished and the decline in the tubercular mortality, which has been observed during recent years throughout the civilized world, must be attributed in larger measure to the fact that the great mass of humanity has been better housed, better fed, better clothed and worked shorter hours, than to the growing knowledge of the infectious character of the disease and the great care which has been taken to prevent its transmission. While, therefore, we accept the doctrine of hereditary predisposition, we must, at the same time, recognize the fact that the individual has it in his power to make successful effort towards nullifying such an inheritance. By giving careful attention to personal hygiene, to physical culture and to diet, feeble powers of resistance may be made stronger, defective chest development and faulty nutrition may be, in a measure at least, overcome. The young man with an inherited consumptive taint, who keeps away from unusual sources of infection, who leads an outdoor life, who chooses an occupation which will tend to develop his chest, improve his muscular power and general nutrition, who avoids undue exposure, dissipation and everything that debilitates will thereby materially strengthen his defenses. On the other hand, if he is brought into close association with tuberculous patients, if he works indoors in dusty, ill ventilated rooms, if he uses alcoholics intemperately, if his surroundings are unsanitary, the inherited tendency will be greatly enhanced.

The practical deductions to be drawn from the views I have just expressed are obvious. In attempting to make forecasts for selecting purposes we must bear in mind, (1) that a family history of consumption is always an impairment, and (2) that the seriousness of the impairment can be determined only by a careful study of all the features of each individual case. We cannot safely run away with the idea that the theory of hereditary predisposition has been disproved, that it is an antiquated hold-over doctrine from a less enlightened period. Our best knowledge does not warrant the conclusion that we can pass over this question more lightly than has been the custom in the past. I do not mean that our practice in this particular has not been and should not have been modified by increasing insurance experience and advancing medical thought. Great progress has been made. A consumptive family history is, it the present time, treated, I will not say more leniently, but more intelligently than in years gone by. We now know that such an impairment may be either greatly intensified or largely offset by other conditions and that, for this reason, the family history ought not to be considered alone. We can get a proper understanding of its significance only when it is taken in connection with age, occupation, habits, personal history and physique. Rules based on

this one feature alone are, it seems to me, not wise rules. We cannot reasonably hold that two, three or any number of deaths from consumption in the family shall always reject. Neither can we rule that a single death from this cause shall always be disregarded. Under some circumstances one consumptive death is a more serious disqualification than is under others the record of several such deaths. We cannot be guided solely by the degree of the consumptive taint. This explains why we are not able to answer definitely enquiries which are very frequently sent us. We are asked nearly every day whether the company will entertain formal application in cases in which there is a record of a given number of deaths from consumption. Such questions should be accompanied by a statement of the applicant's name, his age, occupation, his habits, the sicknesses he has had, the complete family record, height, weight, and chest measurement. When the deaths occurred should also appear. It is only after giving attention to the applicant himself, his personal history and his environment that we can fairly decide what importance should attach to his family record.

I will now point out briefly some of the conditions which modify either favorably or adversely an inherited tendency to consumption.

(1) *Contagion.* That consumption may be communicated from the sick to the well, that susceptible persons may contract the disease from patients with whom their relations are intimate, there can be little question. It is also no doubt true that the danger of infection, under such circumstances, is greater than from an ordinary exposure. Either the presence of bacilli in large numbers increases the infecting force, or the anxiety, the depression, the loss of sleep which follow from the serious illness of a member of the family diminish the resistance. While it is clear that the influence of contagion has, of late, been exaggerated far beyond what the facts justify, we must not forget that it is sometimes the determining cause. It should be understood, therefore, when the consumptive relatives died and whether the applicant lived in the same family with them during the fatal illnesses. If several years have elapsed since the deaths occurred, or if the applicant was not a member of the same household at the time, the possibility of direct transmission may be eliminated. In general terms it may be said that deaths from this cause, which date back a number of years, are less significant than are recent ones, and that the individual, who is in close association with a consumptive at the time insurance is asked for, should not be accepted at the usual rates.

(2) *Age.* It has been quite conclusively demonstrated that consumption is not a disease peculiar to any one period of life. It occurs rarely in infancy and early childhood, but, during adult life, it is about as common at one age as another in proportion to the number of people living at the different ages. It cannot be argued, therefore, that, because an individual has reached age thirty or thirty-five, the period of greatest liability has been passed. Neither has it been fairly shown that in different families the disease has a predilection for any particular age. In other words there is little proof that the son of a tuberculous father is likely to develop the disease at about the age at which the father died. For this reason, in deciding upon the question of insurability, in cases in which there is evidence of a family tubercular tendency, it is not our practice to regard of serious consequence the ages at which the consumption occurred. Consideration is given the applicant's own age to the extent that increasing years, other things being equal, are looked upon as lending a certain measure of protection. A consumptive family record at middle life is of less importance than at early adult ages, not because the disease occurs less frequently at the former period but because the mere fact that a man has lived forty years and remains in sound physical condition argues

in favor of the good quality of his vitality and resisting power.

(3) *Occupation.* An outdoor life strongly tends to eradicate an inherited susceptibility to consumption. People who live in the open air and who take sufficient exercise to properly develop their lung capacities and muscular systems become, to a large degree, immune. On the other hand, indoor and sedentary employments have an opposite influence. There are some occupations which are so decidedly unfavorable as to call for special mention. I refer (*a*) to the so-called dusty occupations, (*b*) to those which involve stooping and constrained postures, (*c*) those which expose to extremes of temperature, and (*d*) those which shut people up in close, ill ventilated rooms. Stone cutters, nail makers, glass workers, grinders, file cutters, needle sharpeners and others who are exposed to the inhalation of dust are notoriously predisposed. Telegraph operators, stenographers, bookkeepers, tailors, printers, etc., are apt to become stoop-shouldered and proper lung expansion is interfered with. Bakers, glass-blowers, heaters, puddlers, etc., who are subjected to extreme oscillations of temperature, are more liable to become tuberculous than are average men. The same may be said of those who work in poorly ventilated and overcrowded rooms. Some of these occcpations of themselves constitute serious disqualifications, and all of them, when coupled with a consumptive family taint, augment the importance of the latter.

(4) *Habits.* It is a well known fact that consumption appears with great frequency among intemperate users of alcoholic stimulants. Alcohol undermines the nervous system. It impairs digestion and thus interferes with normal nutrition. It induces tissue changes in vital organs. It lowers the bodily resistance. The past and present habits of the applicant are, therefore, matters which must be taken into account in attempting to measure the importance of hereditary weaknesses or tendencies.

(5) *Personal History.* There are certain local lung affections which impair the vigor of the pulmonary tissues and thus unfit them to offer the normal amount of resistance to the tubercle bacillus. So long as these tissues remain in a healthy condition they provide an uncongenial soil for the growth and development of the invading germ, but attacks of pneumonia, bronchitis or pleurisy break down some of the natural barriers and thus increase the liability of infection. A recent pneumonia or pleurisy or protracted attacks of bronchitis are always significant. Any of these disorders may be tubercular in character and at best they leave behind a variable amount of permanent damage. A personal history of prior lung disease is, therefore, of import when there is evidence of family consumption.

(6) *Weight.* This is by far the most important of the personal factors to be considered. Insurance statistics show conclusively that thin, light weight individuals are very much more vulnerable to consumption than are the robust, the over-weights. We have so much evidence bearing upon this point and it is so positive and convincing, that practically every one now agrees that under-weight is a very strong factor in predisposition. It is more significant than are consumptive deaths in the family and, when it appears in conjunction with an inherited tendency, the danger is greatly increased. On the other had, the man whose body is well developed and whose weight is above the standard, manifests pronounced immunity, although other members of his family may have shown a consumptive tendency. The overweight appears to offset, in large part at least, the inherited susceptibility. When we endeavor to gauge the importance of a consumptive family record, the weight of the applicant must first of all receive consideration. If his weight is fully up to the average, if his appearance is vig-

orous, if his chest is well developed, much of the danger which ordinarily attaches to such a family history, is neutralized. Reversely, if the applicant's weight is considerably below the standard, the appearance of even a slight consumptive taint in the family record greatly impairs the value of the life.

The points upon which I wish to lay particular emphasis in this discussion are: (1) That there is nothing in the modern doctrine of tuberculosis, or in the recorded experience of life companies, which justifies the conclusion that we can safely leave out of account a consumptive family history in selecting insurance risks; (2) that, while the death of a parent, or brother, or sister from consumption increases the liability to this disease, it is possible to get a proper understanding of the degree of impairment only by giving attention to the applicant himself, his environment and his personal health record, as well as his family history. In other words, each case should be decided on its own merits and not according to set rules. (3) That an active out-door life, temperate habits and a robust physique may be looked upon as compensating features when there is an inherited tubercular tendency; while in-door, sedentary and dusty occupations, previous lung diseases and under-weight affect the risk adversely.

ACUTE CONFUSIONAL INSANITY.

By G. G. Marshall, M. D., Wallingford, Vt.

"Acute Confusional Insanity" is the name first given by H. C. Wood, to a form of insanity characterized by active hallucinations and a general confusion of ideas, together with great physical prostration. Other writers have referred to this form of insanity under such terms as "Acute delirious mania," "Acute hallucinatory confusion," "Acute delirium," and other similar titles.

Toxaemia is thought to be the chief factor in the causation of this psychosis. The poisoning may be the result of the prolonged use of opium, chloral, lead or other similar drugs, or, as is probably more frequent, the result of self-intoxication from ptomaine absorption, generally due to intestinal fermentation. Prolonged mental strain or anxiety predispose to this form of insanity. It is not thought that heredity plays a very active part in its etiology, though it is apparent that a nervous system, encumbered by a weak ancestry, would more quickly succumb to the evils of toxaemia and nerve strain, than would a more healthy organized system.

Symptoms.—The prodromal stage may be very insidious and deceptive. Headaches may have been the only prominent symptom for several weeks prior to the final outbreak, or a neuritis may precede the attack by one or more weeks. There will be periods of great nervousness and sometimes there is a general muscular agitation. These periods may last an hour or two when they pass off and the patient then feels quite well for a time. During this period there is a gradual loss of weight, but with the full development of the disease, strength is rapidly wasted and emaciation is extreme. The pulse becomes very quick and the tongue heavily coated and dry. Sometimes there is a rise in temperature. In this stage the appearance of the patient very closely resembles typhoid fever. Insomnia appears early and continues throughout the course of the disease. A return of natural sleep is one of the first signs of recovery. The more pronounced mental symptoms may not appear until the patient has been compelled to take to bed either from exhaustion or on account of the severe headache or other neuralgic pains.

First the patient becomes confused as to time, being unable to keep track of the days of the week or hours of the day. The sense of time seems to be lost, words are misplaced or forgotten, and memory is greatly impaired.

No sooner does a person go out of the room than they forget having seen them. At first they are perfectly conscious of their confusions and are greatly annoyed by them.

About this time they may begin to see mice, squirrels, or other small animals crawling along the walls and over the bed. At first they can be assured that these are only creatures of the imagination but soon they grow, not only to be more real, but more hideous. The patient grows suspicious and jealous, sometimes leading to acts of violence. With the hallucinations of sight, appear voices calling and telling of great calamities. Spots of blood are seen on the clothes, skeletons in the bed, strange persons in various parts of the room and under the bed, and so the hallucinations of sight and hearing grow worse, until the distressed patient is continually in the greatest terror and excitement, in which condition they present a most pitable spectacle. Members of the family are being killed, and they themselves are being cut up; their friends' affections alienated, and their food poisoned. In this condition the patient grows very weak and death from exhaustion is to be guarded against. Sometimes, for a few moments, the hallucinations may be pleasing, and they may have lucid moments. Acting under the influence of their hallucinations, they are continually talking incoherently to imaginary persons, and trying to escape from their tormenters.

These symptoms continue from three to six weeks, when there may be a rapid disappearance of the mental symptoms, a return of the appetite, and a speedy recovery made. A small percentage lapse into chronic dementia or die of exhaustion. During the stage of acute insanity, the premonitory pains disappear, or at least the patient does not notice them.

Diagnosis.—Acute confusional insanity in its early state of hallucinations very closely simulates delirium tremens, and should the patient be an alcoholic, it may be impossible to make the distinction without closely following the subsequent history.

Should the prodromal period be marked by severe headaches, meningitis or cerebral tumor, must be eliminated before making a diagnosis of confusional insanity. In meningitis you get muscular rigidity, vomiting, slow pulse and a contracted pupil. With cerebral tumor, there are localized muscular spasms or paralysis, and frequently inequality of pupils.

In acute mania there are exaltations of feelings, acuteness of perceptions and memory; while in confusional insanity, there is from the first a failure of all the mental powers. In acute mania, hallucinations are rare, while in confusional insanity they are characteristic and dominate every emotion and act of the patient. There is seldom, if ever, hallucinations or exaltations in acute confusional insanity. In melancholia the patient can reason logically and have correct perceptions on most subjects not pertaining to themselves. In confusional insanity the patient is wholly unable to reason connectedly on any subject, and their mind is not self-centered, except so far as their hallucinations give them fear of personal danger.

The prognosis of acute confusional insanity is usually good, from 75 to 80 per cent. should recover. Death from exhaustion is the greatest danger.

Treatment.—This form of insanity should be recognized as an acute disease dependant on some toxic substance, the tendency of which is to recovery. When there are conveniences at the home, it is not necessary that they be sent to an institution, though this is desirable.

The Albany hospital has very recently established a pavilion especially arranged and equipped for just such cases as these. Patients suffering from temporary mental derangement may be taken here without a commitment, as is necessary in the regular asylum for the insane, thus avoiding the stigma associated with inmates of asylums. Albany, I believe, is the

only hospital in the United States having such a pavilion.

Rest in bed and plenty of good, easily assimulated food are of the first importance. Owing to the insomnia and great excitability there is a tendency to the excessive use of hypnotics. The hot pack may be tried for the insomnia. Of drugs, morphine alone or combined with hyoscine may be necessary. Sometimes, however, hyoscine only increases the hallucinations. Thymol and sulphonal in combination are recommended by Dr. Peterson. Calomel should be given to insure elimination of intestinal toxines. Strichnine, digitalis and brandy are generally required.

A competent nurse should always be in attendance.

A NEW METHOD OF TREATMENT FOR CHRONIC ANTERIOR URETHRITIS AND FOR THE DECLINING STAGE OF ACUTE URETHRITIS.*

By William Warren Townsend, M. D., Rutland.

Mr. President and Gentlemen of the Vermont State Medical Society:

By the term chronic urethritis is understood an inflammatory process, involving the urethra subsequent to an acute invasion of that canal. It may be localized in any part of the urethra, that is to say, in the anterior or posterior portion.

However, as it is the purpose of this paper to treat upon the form of urethritis that is the "bete noir" of the general practitioner, chronic anterior urethritis, I will merely mention the fact that chronic posterior urethritis oftentimes exists independently for some time after the chronic anterior condition is cured,and very frequently co-exists with anterior urethritis,but as the condition (chronic posterior urethritis) demands a separate and distinct form of treatment, I will confine my remarks to the treatment of that form which is most common,—chronic anterior urethritis.

Chronic anterior urethritis results from a previous acute, inflammatory condition of the urethra and inasmuch as acute urethritis has the natural tendency to linger indefinitely in the tissues, and with the inability to control the physical forces of one's patients, who most generally are obliged to continue at their usual vocations during the acute stages, and who are apt at the first indication of the diminishment of discharge, to indulge in alcoholic and sexual excesses, it is not to be wondered at that the condition becomes chronic, and especially so when one stops to consider the virulency of the gonoccocus and the great disadvantages that have to be overcome in the management of the case.

Too protracted and energetic treatment in the early stage will tend to assist in the disease becoming chronic, and the popular habit of "seeking discharge" by stripping the penis prior to urination, and at various times during the day, adds materially in promoting chronicity, by burying the germ-laden pus cell deep into the submucosa.

The condition of anterior urethritis is popularly known as gleet and numerous are the preparations advertised to cure. Most of them consist of injections of zinc and copper and the internal medicines are, as a rule, balsamic in character.

The pathological appearances of the lesions as determined by the endoscope in chronic anterior urethritis vary. Follicular inflammation shows itself in small, deep red pus oozing, spots varying in size from that of a pin head to a pea; likewise does inflammation of the lacuna magna and other crypts show itself. A deep red, purplish color of the thickened mucous membrane is the most constant morbid symptom and may vary in extent, involving a segment of the canal or simply cover a limited

* Read at the 89th Annual Meeting of the Vermont State Medical Society.

portion,—associated with this form, one will most generally find a generous pus secretion.

Another condition in which there is epithelial hyperplasia and a budding appearance of little eminences caused by the growth of new capillary vessels, is common and is known as granular urethritis; and a further advancement of this hyperplastic and capillary condition has also been honored with the dignity of a name and is described as a separate and distinct condition under the name of papillomatous urethritis.

This has always seemed to the author to complicate the study of the pathological condition of the urethra rather than to simplify. As stated, the papillomatous condition is simply a granular urethritis in an advanced and aggravated stage. Erosions and ulcerations of the urethra are frequently the cause of chronic anterior urethritis. The mucous membrane in this condition, is thickened, red, and does not show the lustre and shining appearance of the surrounding tissue, owing to the loss of the epithelial covering. While all these superficial lesions are observable by the endoscope, there is a deeper exudative process at work in the submucosa and all the superficial appearances are a result of this deeper condition.

"The morning drop" or tear, as it is sometimes called, is the pus accumulation of the night before and may be small in quantity. It is generally greenish white in color and in numerous instances there is just enough of it to seal the meatus; and a separation of these lips will disclose a drop of glary mucus; and it is the alleviation of this symptom that we are frequently put to our wits' end, and I do not believe there is a man within my hearing who has not had a case that has proven rebellious to every effort at treatment attempted by him; and it is for this class of cases that I wish to suggest a form of treatment that in my hands has proven most effective.

Hundreds of remedies have been vaunted in the treatment of gleet and one can hardly pick up a medical journal without seeing this or that remedy suggested as being applicable with good results. And I will state now, that it is not my purpose to extol the virtues of any given drug, but to offer to you a method of application that, as stated before, has proven of value to me, and one which I have given a fair trial in a considerable number of cases in the past five years. The actual statistics, I regret I am unable to give, as I treat my cases symptomatically and have been in the habit of using this form of treatment in a special way rather than in a routine manner.

However, it has suggested itself to me, that to the general practitioner, who is not familiar with endoscopy and is too busy or has not the inclination to investigate it, that the use of the instrument I present to you to-day, will accomplish more towards the cure of your chronic cases and in a more scientific manner than the ordinary treatment by means of injections of varying strengths and internal medications. The instrument that I refer to is as follows:

Consisting as it does (see cut) of a (D) glass rod, 22 French, bent at right angles and being perforated by a canal (B) bored through it from end (E) to air chamber (C), and with another canal (A) extending from air chamber (C) and having an outlet at (A). The air chamber (C), as will be seen, is perforated at its proximal end by the openings of the canals (A and B), and its distal end is open except when in the urethra, at which time the urethral walls fall over the end, thus making a closed air chamber.

It is obvious that when this insufflator tube is attached to a powder container at (E) and the powder forced, it will follow the direction of the arrows and reaching the air chamber (C) will become agitated and necessarily a portion will adhere to the moist mucous membrane of the urethral walls, forming the distal wall of the air chamber.

As the powder is forced from the container into the insufflator, the tube is gradually with-

drawn, and the mucous membrane of the urethra is consequently covered with the medicant used. To this insufflator, I have given the name of "Duplex;" as will be seen it can be used in any cavity or sinus as well as in the urethra, and will, I believe, find a field of usefulness by supplying a means of thoroughly applying an impalpable powder to any region desired. It offers the advantage of being simple in construction and being easily cleaned.

Sterilization is accomplished by boiling and it may be dried rapidly by passing through the flame of an alcohol lamp after shaking out any water that may be in the capillary tubes (A dan B). Especial care should be given to the last mentioned detail, as if it is done carelessly, the water will boil in the tuubes and by the generation of steam, the tubes will crack. Hence, keep in motion while in the flame of the lamp and be sure all the water is out of the capillary tubes before applying heat.

The drugs that I have been in the habit of using are those that are astringent and antiseptic, and any other that suggests itself to me in each individual case. However, will say that the sulphate of copper and zinc combined with the stearate, as put up by a reliable house in New York City, have proved most satisfactory to me. The same house also prepares a combination of the stearate with acetanilid and iodoform.

In the cases where there is a quantity of pus accumulation, I am in the habit of giving several treatments with aristol, prior to applying an astringent. It is impossible, as stated, to set down any hard and fast rule as to the selection of drug or the number of treatments to be given. In my experience, zinc, copper, and aristol have accomplished the desired effect and I have averaged to treat my cases three to four times a week.

I want it distinctly understood that I recommend this method of administration in chronic anterior urethritis and in the declining stages of the acute condition, and under no circumstances in the early stages, as nothing but harm could accrue from its use at this time; but in the two first mentioned conditions, I consider it a rational treatment as it is a well known surgical fact that astringents and antiseptics are indicated in conditions similar to those presenting themselves in chronic anterior urethritis; and the orthodox treatment for this condition depends upon the unreliable solution of drugs which are injected into the urethra by the patient and to the ingestion of various balsams which do nothing but exert a bland condition to the urine and do harm by disarranging the assimilation, whereas the condition is a local one and should be so treated.

Those making genito-urinary work a specialty treat the conditions of chronic anterior urethritis locally with astringents and antiseptics by means of special instruments which the general practitioner is unfamiliar with, and it was to devise a means of easy access to the morbid urethra that prompted the idea of this little device which, as you will see, has a twofold action. That of a sound, as by its passage into the urethra the "ironing out" process of the urethral folds is accomplished and at the same time the drug used is being deposited upon any diseased area that may be covered by these folds.

CORRESPONDENCE.

A VERMONT EXCURSION TO THE MEETING OF THE AMERICAN PUBLIC HEALTH ASSOCIATION.

The trip of the "presidential party" to New Orleans for the purpose of attending the American Public Health Association, December 8-12, will long be remembered by those who joined in forming it.

The meeting and papers presented have been so fully reported in the various medical and lay journals that we will only speak of a few of the social features. The Vermonters were

especially pleased that the efficient Secretary of our State Board of Health, Dr. Henry D. Holton, was president of the Association, as it is seldom that, no matter how well fitted for the position the member may be, one from a small state is honored by the presidency of any of our international societies or associations, but the presidential address and marked ability as presiding officer showed that the association, composed of members from Canada, Cuba and Mexico, as well as the United States, made no mistake when they selected a Vermonter for the position.

Our state was well represented by sixteen, a majority being of the gentler sex. The State Board of Health and Laboratory was represented by Drs. C. S. Caverly, Henry D. Holton and B. H. Stone, all three being accompanied by their wives, while Brattleboro was still further represented by Miss Susan E. Clark, Mrs. C. H. Thompson and Misses Katharine and Ellen Ware, which made a most pleasant addition to the party, as did also the presence of General and Mrs. F. G. Butterfield of Derby Line, and Rev. and Mrs. H. L. Ballou of Chester. Dr. and Mrs. Edward R. Campbell of Bellows Falls completed the Vermont delegation.

Connecticut was most worthily represented by Ex.-Pres. Dr. C. A. Lindsley and wife, and Dr. Frank W. Wright, treasurer of the Association, while Dr. Benj. Lee,another ex-president of the Association, and Mr. and Mrs. H. K. Mulford of Philadelphia, Dr. and Mrs. J. H. Raymond of Brooklyn, Dr. F. P. Denny of Brookline, Mass., and Mr. T. Jordan of the Boston Board of Health ably represented their respective states and cities.

Dr. P. Pellitier of Sherbrooke, Ont., a member of the Dominion Parliament, with his wife, soon made us in favor of "Annexation." Mr. J. P. Taggart and Joseph Biggs were first-class representatives of their respective railroads, the Baltimore and Ohio and Illinois Central lines. Mr. Biggs' stay with us in New Orleans was so pleasant that it was with regret that we left him at his home in Cincinnati on our return.

The Pullman Company assigned us the car "Akron," and with a good car and such a company aboard it is safe to say that we had a pleasant time in our journeyings of nearly four thousand miles.

Our party was soon after their arrival in New Orleans made very comfortable at the "New St. Charles," one of the best hotels in the country, where for nearly a week we lived on the best that the market afforded.

Of the social events tendered by the citizens of New Orleans, one of the most pleasant was the trip down the river to a large sugar plantation, where the process of sugar-making was shown us in its several stages from the growing cane to the finished brown sugar.

Most of our party took an eleven o'clock breakfast at Madam Begue's, which to say the least was a very unique experience and is considered the thing to do when visiting New Orleans.

During one of the days, when throughout New England the thermometer registered ten or more degrees below zero, some of the ladies of the party, through the kindness of the present owners of one of the old plantations, picked from the garden beautiful roses of different varieties. Another feature, most interesting, especially to the ladies, was the numberless palms of all sizes, growing everywhere, and other luxuriant native plants and the magnificent live oaks frequently covered with Spanish moss, thus making New Orleans truly entitled to the name "Garden City."

The French Market, The Cemeteries, The Levee, the numerous old and famous buildings, Margaret's Monument, the French quarter, all deserve special notice, but time and space forbid except mere mention. But perhaps most enduring of all were the most pleasant acquaintances and friendships formed en route

and among New Orleans' most hospitable citizens. Our day's stay at Vicksburg and the five hours visit to the battle ground and National Cemetery was also most interesting. The negro population in this city outnumbers the white more than two to one, and it being market day we had a fine opportunity of seeing both the negroes and the mules in holiday attire.

At Memphis the rain literally came down in buckets full, but being at the "Gayoso," another of the finest and newest hotels in the country, made Sunday a day of rest, in more senses than one, although most of the men and some of the ladies, braved the storm and visited, by invitation, the crematories where the garbage and dead animals of the city are disposed of in the most sanitary manner.

After leaving Memphis we might tell a story of flood and delay which prevented an inspection of Cincinnati, but our letter is already too long and we hasten to a close with the conclusion that travel is one of the best of recreations and educators and when taken in a special car and in congenial company, adds muuch to the pleasure and friendships of life and tends to increase the longevity of members of the party.

E. R. C.

Bellows Falls, Vt.

NEWS, NOTES AND ANNOUNCEMENTS.

Burlington and Chittenden County Clinical Society.—A regular meeting was held at their rooms, 162 College St., Thursday, Jan. 29, 1903, at 8.30 P. M. Following was the programme:

Pneumonia:

Etiology and Pathology—Dr. F. E. Clark.

Symptoms—Dr. W. G. Church.

Treatment—Dr. H. R. Watkins.

The papers were very interesting and instructive and were enjoyed by a large number of local medical men. Several new members were admitted. At the close of the business meeting, refreshments were served.

Method of Taking Castor Oil.—A simple method of taking castor oil, according to *Med. News*, without producing any nauseating effects, is to instruct the patient to wash out the mouth with water as hot as can be borne, and then swallow the oil, and follow this by rinsing out the mouth well with hot water. The first swallow of the water cleanses the mouth, makes the membranes hot, so that the oil does not stick and consequently slips down easily.

Medical Clinics.—The Medical Faculty of the University of Vermont have sent out the following announcements:

There are still to be held the following clinics on special subjects:

Neurology: Dr. Shirres of Montreal. Feb. 23d and 24th, Mar. 16th and 17th and April 6th and 7th.

Genito-Urinary. Dr. England of Montreal. Mar. 2d, 3d, 23d and 24th and April 13th.

Gynæcology. Dr. A. Lapthorn Smith of Montreal. Mar. 9th, 10th, 30th and 31st.

Diseases of Children. Dr. Pisek of New York City. Daily from Mar. 30 to April 10.

There are regular Medical Clinics every Monday and Wednesday, and Surgical Clinics every Thursday and Saturday, and for diseases of the eye, ear, nose and throat every Tuesday and Friday throughout the session.

The medical men of Vermont are invited to attend these clinics and send such patients as they may have who need clinical treatment.

Applications for beds in the hospital should always be made in advance to Dr. B. J. Andrews, Supt.

Dr. Lapthorn Smith of Montreal, intends to leave New York on the 25th of March by the White Star Steamer "Cedric" for a few weeks visit to Kocher's clinic at Berne, and to the International Congress at Madrid, before which he has been invited to read a gynæcological paper.

Bellevue's New Superintendent.—Dr. William Mabon, formerly of Ogdensburg, took up his new duties as superintendent of Bellevue, Harlem, Fordham and Gouverneur hospitals, January 1. After a tour of inspection of Bellevue, he expressed himself as well satisfied with the present state of affairs, and disclaimed any intention of making any radical changes in organization or personnel.

Dr. Mabon delivered a course of lectures on Mental Diseases, a few years ago, at the Med. Dept. of the University of Vermont.

According to the *Medical News* a novel method for the dissemination of antituberculosis literature has been resorted to in the Argentine Republic. A manufacturer of matches has sent out 3,500,000 boxes of matches bearing printed instructions against the propagation of tuberculosis, together with portraits of physicians who have made a special study of the disease.

Terrible Predicament.—An eminent London physician has a telephone in his bedroom. One night the bell rang, waking both him and his wife. The medico went to the 'phone, and heard, "Please come at once to Lucessia Square —Lady Brown is very ill." Handing the 'phone to his wife, with an imprecation, he said to her, "For heaven's sake say the doctor is out of town." The wife complied.

Next morning the doctor called at the Brown mansion to express his deep regret to Lord Brown that he had been absent when called. "But you were really not at home?" inquired his lordship. "Of course not," responded the doctor. "Then, my dear doctor," said Lord Brown, "I must sympathize with you in your terrible misfortune; for I distinctly heard a man's voice in your bedroom, talking to your wife."—*Med. Examiner.*

The Vermont State Tuberculosis Commission.—The Vermont State Tuberculosis Commission met February 10th with the Lamoille County Medical Society at Johnson for the purpose of discussing the tuberculosis conditions in the several towns in the county and for a general exchange of ideas on the subject. This was the first of a series of similar meetings with the medical societies in the several counties in the State. Tuesday, February 17th, the Commission met with the Windsor County Society at White River Junction and on Friday, February 27th, they will meet in Burlington with the Chittenden County Society. The members of the commission at the meetings were Dr. Don D. Grout of Waterbury, Dr. H. Edwin Lewis and Henry Ballard of Burlington, Dr. L. W. Hubbard of Lyndon, and Dr. W. N. Bryant of Ludlow, who has been appointed to the vacancy created by Dr. Conland's resignation.

The object of these meetings is to obtain opinions and ideas from the members of the State medical profession. A list of questions is prepared and submitted to the members of each county organization and when the society meets a general discussion is had. The meetings held thus far have proved to be of great interest and many valuable suggestions have been made.

The Vermont Medical Monthly.

A JOURNAL OF REVIEW, REFORM AND PROGRESS IN THE MEDICAL SCIENCES.

Burlington, Vt., February 25th, 1903.

EDITORIAL.

SOME INSURANCE PROBLEMS.

With the enormous growth of insurance in the financial and industrial world during the past quarter century, several problems have arisen that must sooner or later engage the attention of thinking people. One of these problems, and unquestionably a phase of insurance that cannot result in anything else but evil, is child insurance. To any one but a superficial observer, the question of insuring the lives of little infants is a grave and important one. To begin with, it places a monetary value on these little lives and while the cases may be rare in which these lives are actually sacrificed for their insurance, the fact that their death is followed by a payment of fifty to one hundred dollars, certainly makes the loss of their lives less a calamity. Indeed, among the class of people who have their infants and children insured, it is remarkable to note the indifference felt by parents for the serious illnesses of their children. It is no uncommon thing for an unfavorable prognosis to be followed by a careless shrug of the shoulders, and the remark, "Well, the baby is insured, anyway."

Any institution that can make parents look on their children's death as a decidedly mitigated misfortune, cannot fail to cheapen human lives, and this is not an elevating tendency. We shall not speak of the temptations that child insurance places in the way of unscrupulous persons, although this side of the question has arisen, and will continue to arise. But from the standpoint of moral principle and the elevation of humanity's highest instincts child insurance presents dangers that entirely overbalance its possible benefits.

Another form of insurance that presents a tangible evil is the cheap or so-called industrial form. In the first place it is too easy to get. Hitherto, a person to get their lives insured had to undergo a rigid examination, and their perfect health determined, before a policy would be written on their lives. This has proven a real benefit and people have seen the advantage of having sound physiques. But with the cheap form of insurance, the examinations have been cursory and superficial, made by physicians who are willing to do the work for from twenty-five cents to one dollar, and who, it is needless to say, give no better service than the fee warrants. As a result, applicants are accepted who have chronic maladies that ought to prevent them from obtaining insurance. This cannot help but make insurance less sound and substantial, and cheapen its influence for health and prosperity.

Again, the superficial inspection and examination given by the medical examiners of these companies, enables people to evade and falsify in regard to their physical condition and ancestry. What is the result? Falsely secure because of their ignorance of the fact that their misstatements will make their policy void, they pay in their money month after month, oftentimes at a sacrifice that they alone know. Then when their death occurs, the facts become known and the company has a legal excuse for refuting the claim. Such a transaction is detrimental to both parties. The

individual suffers because of the loss in premiums paid and by the deceit practiced, while the company loses in prestige and the principle of insurance falls in the eyes of the ignorant. The whole thing is lowering in its tendencies.

These are some of the evils of insurance suggested to the writer by some recent occurrences. Undoubtedly these will adjust themselves, but we feel that the benefits of insurance are too great to be allowed to be weakened in any degree by the questionable methods and systems that seem to be the outgrowth of competition and business greed. At present there is only one solution of the problem, and that is for the different States to assume a more rigid surveillance of the methods and practice of the insurance companies doing business within their borders.

Professional Courtesy, a Trade or a Profession.—Will there ever come a time when the laity will realize that medical men owe certain courtesies to each other? It certainly does not seem so. Fully four-fifths of the breaches of professional etiquette can be laid to the falsehood, iniquity and deceit of the people, to say nothing of their lack of common sense. Nearly every physician's life is warped and bothered by these factors and certainly every busy practitioner is constantly being placed in an anomalous position through these same agencies.

For instance, a physician is called to a case that has been attended by another medical man. In response to his inquiries the family assure him that the other doctor has stopped coming or cannot be reached, or has been properly notified that his services are no longer required. But in a few days after he has assumed the case, he finds that the family have lied and he has the embarrassment of having treated the nominal patient of another physician without his knowledge. Of course many will say that the last physician is reprehensible inasmuch as he could himself have communicated with his brother practitioner, or if he had been particularly friendly, could have refused to see the case except in conjunction or in consultation with the first attendant. But the statement of the family that the first doctor had stopped coming would seem to eliminate any obligation in this respect. Certainly the first doctor cannot blame the second under the circumstances, but the unkindness and deceit of the family placed both doctors in an embarrassing position.

Another instance. A physician is called in when passing a house to attend a child with convulsions. He gives the usual remedies, leaves the usual directions for the care of the child and arranges to call later in the evening. After his departure the mother, not satisfied because her child does not immediately recover, calls another physician. Either on representation of the family, or because he does not know any better, he throws out the first doctor's medicine, and assumes the care preemptorily. In this case, if the family had explained that the first physician expected to call again within an hour or two, it is hard to see how a gentleman could fail to respect the ordinary courtesy due the first physician. Therefore the failure of the family to properly explain the situation to the second physician certainly caused embarrassment for the first doctor when he called a short time later, and laid the second open to criticism he probably did not deserve.

In a town where there are many doctors and where the competition is necessarily close, there remains but two ways to avoid instances like the above. No self-respecting physician, knowing as he does the idiocyncracies of patients and the vicissitudes of practice, wishes to incur the illfeeling of his colleagues through deficient professional courtesy, nor does he wish to build up his own practice by appropriating other doctors' patients. Consequently, when called to a patient whom another physician

has been attending, a doctor should show to the family that justice and right requires that the attending physician should be notified at once, and be given an opportunity to withdraw or meet the second in consultation. Unless in case of emergency, no physician should assume a case until he is sure that the man in attendance has been properly notified, and in this day of telephones it is easy to communicate with a colleague personally. In this way the laity will be impressed with the fact that the members of the medical profession are not trying to cut each other's throats, public opinion to the contrary. A physician's private interests may suffer temporarily, but one who shows unmistakably that he neither wants nor needs any part of another man's business, will gain immeasurably in prestige and reputation.

Incidentally, we believe that the medical colleges of our land do not fulfil their whole duty when they fail to instruct their graduates in the higher principles of professional courtesy and comity Too many men enter the ranks of medicine every year whose length and breadth of ethical knowledge is greed, commercialism and self-aggrandizement. Fortunately they are in the minority, but they still do a lot of harm. During the four years that the medical colleges have the embryo doctor, more potent measures than at present in vogue should be utilized to mitigate these tendencies, which unquestionably hamper the growth of medicine and its votaries, and give the people a chance to treat us like grocers and not like professional men.

The Water-cure by an Improved Method.—The noblest acts of kindness are often rendered by those from whom they are least expected. Uncle Sam's soldier boys get credit for little else than rowdyism and drunkenness during times of peace. This is not entirely wrong and certainly not entirely right. A case in point will show that rough exteriors and boisterous tendencies are by no means incompatable with kind hearts and gentleness in our boys in blue. An old forlorn Irishman, a short time ago, bedridden and helpless, was sadly in need of care and attention. No one could be induced to do the things like changing his clothes and bathing him, that were necessary. From neglect his condition had really become disgusting, and he was actually suffering for want of some one to look after him.

This old gentleman had not always trod the path of rectitude. His antecedents were not irreproachable and his history was not free from occasional visits to the City Court for "keeping and furnishing" drinkables, no worse but probably no better than countless others in puritanical Vermont.

His home, located in a tabooed portion of the town, was frequented by many of the "gintlemin from the Fort" for bibulous reasons, according to rumor. In fact, the old fellow had been a sad dog and when he was down, had few friends whose services he could command. And so, neglected and reeking in filth, he was spinning the last few threads of his sorry life, without a friendly or charitable hand to make his last days cleaner and more comfortable, when two soldier boys from Fort Ethan Allen, almost strangers, were acquainted with his condition.

They never hesitated a moment. With all the gentleness of women they bathed and changed the old man, completely renovated his quarters, and spent every spare moment at their command for many days caring for him and making him comfortable to the last. They were nothing to him and he was not a character to inspire devotion. But he was a human being in distress and they had hearts mellow enough to appreciate his condition. This act was as unexpected as it was brave and noble and in certain respects required more courage than a bayonet charge in the face of an enemy.

It was the "water-cure" by an improved method but it leaves a recommendation for the "gintlemin from the Fort" that condones

many of their thoughtless and less creditable acts. More power to the lads who were manly enough to minister to a weak and miserable old creature when forsaken by his kith and kin.

EDITORIAL NOTES AND CLIPPINGS.

Is This Wolf-Wolf?—For years the medical journals have been trying to convince the practitioner of the widespread evil of substitution and adulteration in drugs. But the profession has turned a half credulous, half indifferent ear, as if bored at the familiar sound of "Beware of substitution," and "None genuine without this mark." They have, in some instances, hinted that it was necessary for the journals to support their advertisers, and have firmly believed that the adulterations were confined to proprietary medicines put up in labeled bottles and taken at the public's risk.

How many physicians make a practice of going behind the scenes and watching the preparation of a prescription, and how many, if they did so, would be able to tell by the form in which the crude drugs were handled whether they came originally from reputable sources, or whether they were bought by the honest or misled druggist from middlemen who successfully adulterated their wares?

From the laboratories, where the exact potency of an absolutely pure drug is determined for endorsement in the U. S. Pharmacopœia, to the druggist's counter, where supposably the same potency is being handed out on a physician's carefully written prescription, there is often so wide a variation that one wonders whether it would not be safer for us to go back to the days of herbs and simples, and to cull and brew our own remedies.

At last the Health Department of New York has brought to the attention of the medical profession, through the daily press, a forcible reminder of the widespread practice of substitution and of the adulteration of drugs. The medical profession has for years been thwarted in the greatest emergencies by the false values of the remedies furnished to their patients in their prescriptions. But the public has treated them with that tolerant, easy-ging air of good-natured understanding, as though one should say, "It *is* hard to see another man getting one's profits," and has given the warning no more thought than would be bestowed upon a patent medicine vender's earnest plea to "Take no other," and "Beware of substitutions."

Commissioner Lederle has set in operation a wholesale examination of the stuff that is commonly sold as phenacetin. His physicians and staff have purchased phenacetin powders from three hundred seventy-three drug-stores, in Manhattan and Brooklyn. The official report gives the names of all, and includes many well-known drug-stores, and department stores. *Among these samples, only fifty-eight were found to be pure phenacetin, while the greater number, three hundred fifteen, were adulterated.* The chief adulteration was found to be acetanilid, selected undoubtedly because of its cheapness, and its similar effects, in part, to phenacetin.

In the sale of an ordinary ten-grain pure phenacetin powder, the druggist makes a little over two hundred per cent. He buys the phenacetin at $1.00 per oz., and retails it in small quantities at $3.20 per oz. If his adulterant be acetanilid, it is bought at the rate of 2½ cents an ounce, leaving him his sales almost clear. This mean and petty money traffic need not, however, be laid at the door of the retail druggist alone. It is important to lay the blame, however, where it is due, for the question is one with a double moral issue. The physician does not trouble himself about the druggist's profits or his sense of honor in dollars and cents; but he has his patient's health in his hands, and when he finds, if he ever does learn, that a cheap heart depressant such as acetanilid is given in his prescription instead of the drug on whose certain action he is depend-

ing, he is justified in his honest indignation.

This is by no means a single instance. Nearly every drug in the Pharmacopœia is adulterated, and, as such, fails to give the desired action. So great has this evil become that we often confess to one another that we prescribe less and less, and confine ourselves to a few fundamental drugs, remedies which we think we obtain from reliable sources and give in cases of necessity, leaving our patients to take their favorite compounds of tonics and appetizers on their own responsibility.

If drugs could be treated sacredly, exactly and conscientiously by the druggists, and by the public, as they are in hospitals, in experimental laboratories, and as physicians themselves treat them, the practice of medicine would be a much more satisfactory profession than it is at present.

We trust that in this particular case the New York Board of Health, which does nothing by halves, will trace this scandal to its source; and further, we hope that physicians and druggists will prove as energetic as are the manufacturers of cereals and baking powders in establishing pure food laws, and will bring the enactment about pure drug laws, that will at least serve as a warning to offenders, and a caution and protection to the trusting prescribers and buyers of drugs.—*Medical News.*

MEDICAL ABSTRACTS.

Do Drugs Ever "Cure?"—In the layman's mind there is absolutely no doubt of the power of drugs to produce a "cure." To cure a disease by means of a drug or a combination of drugs, seems to him no more wonderful than to patch up a piece of broken china with a little cement. The same idea existed in every physician's mind up to seventy or eighty years ago—and is still entertained by a good many old-fashioned doctors. The study of pathology changed the prevalent notion of the "curative" power of drugs; it was seen that a dose of ammonium carbonate could have no direct effect on a consolidated pneumonic lung, nor could a dose of opium produce a retrograde metamorphosis in an inflamed peritoneum. It, therefore, became fashionable to sneer at drugs as curative agents. The *vis medicatrix naturae* does it all—without it drugs are worthless. Admitting that this is so, that the real cure is produced by Nature, do not the drugs *help* toward a cure, by helping Nature to exert her curative action, by removing obstacles, by clearing the sewer pipes, etc.?

When a man breaks his leg and a skilful surgeon puts the fragments in proper position, applies a splint, and the fragments unite without leaving the least trace of deformity—who has produced the cure? The surgeon? He has and he hasn't. Because, without Nature's reparative process, without the callus, no surgical skill would be of any avail. We have many such instances in very old people, in whom in spite of the best treatment the fragments refuse to unite. But, on the other hand, without the fragments being put in the proper position, a great deformity may result, or the fracture may remain ununited in spite of a superabundance of Nature's reparative callus. And so it is with drugs in the hands of a skilful physician. Nature produces the cure, but drugs *coax* Nature to stop her mischief, tide the patient over the danger period, and thus give Nature a *chance.—Merck's Archives.*

Infant Feeding.—Dr. C. L. Case follows this plan: A healthy cow is selected with a calf as nearly as possible the age of the baby, older rather than younger, if a choice is necessary. The cow is given dry feed, plenty of hay and bran, and no green feed for the first two months, and above all no bitter weeds. To begin with, 2 oz. of boiled milk, 2 oz. of boiled water, 1 oz. of lime water, 5 grn. of white sugar, and 1 grn. of salt are ordered every two

hours, to be put into an 8-oz. graduated nursing bottle with no tubes. The milk is increased about ½ oz. each month for each feeding, and the sugar and salt in proportion with the milk, but the other ingredients are left the same for about nine months, when the child usually begins to eat with the family. The intervals between feedings are to be increased 15 minutes each month up to six months, and night feeding done away with as much as the child will allow.—*American Medicine.*

Ichthyol Ointment in Pneumonia of Children.—Dr. Franke has had good results from the use of 10 per cent. ichthyol ointment, spreading it the breadth of two hands over the back of the patient, and applying over the dressing two or three times daily a wet pack for 1 to 1½ hours. He reports that in 48 hours the restlessness disappears, the temperature sinks considerably, the cough is painless and loose, and the appetite improves.—*Therap. der Gegenw.*, 1902, No. 8.

STRAY THOUGHTS.

A wise loving mother and a kind intelligent wife are the greatest assets of a young man's life. They provide an insurance for the future that financial fluctuation cannot weaken, and develop a capital of honesty, integrity and ambition that cannot fail to yield handsome dividends of happiness prosperity and success. But for the mothers and wives of this world, men would have little to live for, and their hearts would become deserts compared with which Sahara would be a veritable Garden of Eden.

After all what a wee little thing life is! How quickly it can be snuffed out like a burning candle. How quickly voices can hush, lips close forever, eyes grow cold and glassy, and hearts that perhaps but a moment before were beating with the regularity of clock work, suddenly stop never to go on again. Truly, it is such a short step from life to death that it is a wonder that living creatures are able to avoid taking it as long as they do.

Failures are not the worst things that can come into a man's life. Many a man who has won success owes it to some failure that taught him what path to avoid and what course to pursue. Failures should be used as stepping stones to success, and when so used provide a footing that should always carry us forward and never let us slip back.

FATE.

All men are slaves to me,
I hold the strings
That make them move like wooden things,
I care not who they be.

Like puppets in the play,
They act their parts,
My strongest hold is on their hearts,
I care not what they say.

My pow'r they seldom know,
Yet when they do,
I have no fears,—they're nearly through,
They have not far to go.

Sometimes they rail at Fate,
But what care I,
My sway will hold until they die,
Till then all men must wait.

So while I have the right
To order things,
I'll set the pace and pull the strings,
Men waste their lives to fight.

But when the curtain draws
Upon the scene,
I pause,—a greater power will intervene,
Death abrogates my laws.

H. E. L.

BOOK NOTICES.

Atlas and Epitome of Human Histology and Microscopic Anatomy.—By Privatdocent Dr. J. Sobotta, of Wurzburg. Edited, with additions, by G. Carl Huber, M. D., Junior Professor of Anatomy and Histology, and Director of the Histological Laboratory, University of Michigan, Ann Arbor. With 214 colored figures on 80 plate, 68 text-illustrations, and 248 pages of text. Philadelphia and London: W. B. Saunders & Co., 1903. Cloth, $4.50 net.

This work combines an abundance of well-chosen and most accurate illustrations with a concise text, and in such a manner as to make it both atlas and text-book. The great majority of the illustrations have been made from sections prepared from human tissues, and always from fresh and in every respect normal specimens. The colored lithographic plates have been produced with the aid of over thirty colors, and it is evident that particular care was taken to avoid distortion and assure exactness of magnification. The text is as brief as possible; clearness, however, not being sacrificed to brevity. The editor of the English translation has annotated and altered very freely certain portions of the sections on the adenoid tissues, blood and blood-forming organs, muscular tissues, special sense organs, and peripheral nerve distributions, making these parts conform to the latest advances in the study of these tissues. The work will be found useful as an atlas, text-book, and book of reference for student and practitioner. We strongly recommend it.

Atlas and Epitome of Diseases of the Mouth, Pharynx, and Nose.—By Dr. L. Grunwald, of Munich. From the Second Revised and Enlarged German Edition. Edited, with additions, by James E. Newcomb, M. D., Instructor in Laryngology, Cornell University Medical School; Attending Laryngologist to the Roosevelt Hospital, Out-Patient Department. With 102 illustrations on 42 colored lithographic plates, 41 text-cuts, and 219 pages of text. Philadelphia and London: W. B. Saunders & Co., 1903. Cloth, $3.00 net.

In designing this atlas the author has kept constantly in mind the needs of both student and practitioner, and as far as possible, typical cases of the various diseases have been selected. The illustrations are described in the text in exactly the same way as a practised examiner would demonstrate the objective findings to his class, the book thus serving as a substitute for actual clinical work. The illustrations themselves are numerous and exceedingly well executed, portraying the conditions so strikingly that their study is almost equal to examination of the actual specimens. The editor has incorporated his own valuable experience, and has also included extensive notes on the use of the active principle of the suprarenal bodies in the materia medica of rhinology and laryngology. The work, besides being an excellent atlas and epitome of the diseases of the mouth, pharynx, and nose, serves also as a text-book on the anatomy and physiology of these organs. Indeed, we wonder how the author has encompassed so much within such a limited space. We heartily commend the work as the best we have seen.

W. B. Saunders & Company desire to announce to the profession that they have established a branch of their business in New York. For this purpose they have secured a suite of rooms in the Fuller Building, centrally located and easily accessible from all parts of the city. Dr. Reed B. Granger, for many years managing editor of the *New York Medical Journal,* together with a representative who is thoroughly familiar with the methods of the Philadelphia house, will be connected with this new branch, and Mr. W. B. Saunders personally will divide his time between New York and Philadelphia.

It is the intention to apply to this New York office the same systematic business methods that have proved so successful in the conduct of the Philadelphia and London houses; and the firm confidently believes that through these three centers, aided by the many other agencies located throughout the country, and by an efficient corps of canvassers representing years of valuable experience, the demand for their publications will be greatly increased.

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[In the November (1902) issue of "Therapeutic Notes" we discussed at some length the relative merits of pulp and serum vaccine. Did you get a copy? Shall we send you one?]

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NEWER REMEDIES.

Your Pulmonary Quartette.—In a complimentary letter to The Maltine Company, a prominent New York physician makes a happy reference to Maltine with Cod Liver Oil, Maltine with Creosote, Maltine with Hypophosphites and Malto-Yerbine. He calls them "Your Pulmonary Quartette."

Timely Remedies.—Lest we forget the importance of guarding digestion in our treatment of coughs which are always present in our work more or less, but particularly so in the fall and winter seasons, it is well to bring to mind the fact that The Maltine Company have furnished to us an excellent combination, Malto-Yerbine.

This is a judicious mingling of Yerba Santa with Maltine. The Yerba Santa is an excellent expectorant, softening the most harsh and rasping cough and stimulating the secretions.

The Treatment of Influenza and Coughs.—We excerpt the following from the *Toledo Medical Compend* by David E. Bowman, M. D., Toledo, Ohio, Professor of Obstetrics, etc., Toledo Medical College: "The elimination of the toxins is too frequently overlooked in these cases. Formerly, in their efforts to relieve the distressing symptoms, the profession have used remedies which produced stomachic disturbances, arrest of secretions, constipation, etc. I find nothing better to overcome the congested condition, in these cases, than two Laxative Antikamnia and Quinine Tablets given every three hours. If needed, follow with a seidlitz powder or other saline draught the next morning, before breakfast. This will hasten peristaltic action and assist in removing, at once, the accumulated fecal matter. Heroin hydrochloride has been so largely used for coughs and respiratory affections that it needs little or no recommendation in this class of cases, but the favorable synergetic action of this drug used with antikamnia, is, I believe, not sufficiently appreciated. Antikamnia and Heroin Tablets will be found useful by every practitioner, particularly during the winter and spring months. The antikamnia not only adds potency to the respiratory stimulant and expectorant qualities of the heroin, but it prevents the slight nausea which may at times follow its administration alone."

Hypertrophied Prostate with Difficult Micturition.—For an old gentleman, seventy-four years of age, who was suffering from hypertrophied prostate with difficult micturition, I prescribed Sanmetto. The results were favorable, and after taking two bottles of Sanmetto he was so much improved as not to require the use of the catheter, which he had been compelled to use for several months previous at least once in twenty-four hours. I have since prescribed Sanmetto in five similar cases with equally good results.

E. C. Culbertson, M. D.

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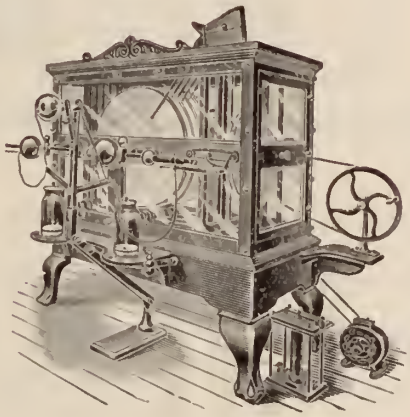

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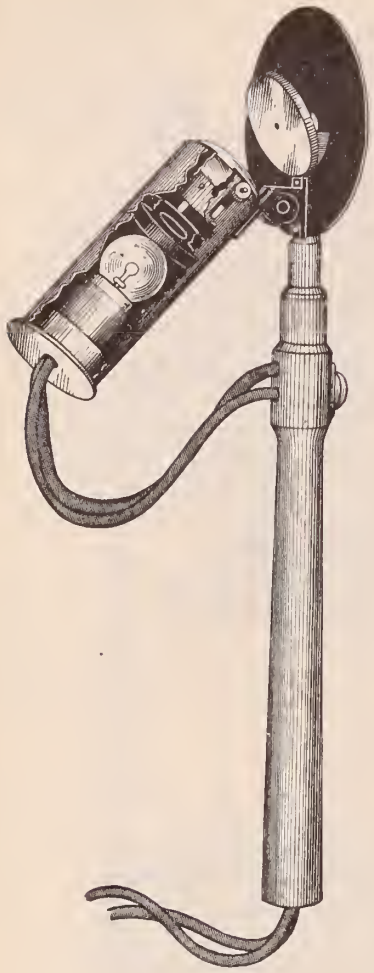

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Vermont Medical Monthly

Official Organ Vermont State Medical Society.

Vol. Ix. No. 3. Whole No. 99. | Burlington, Vt., March 25, 1903. | $1 per year. Single copies, 15 cts.

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Entered as second class matter at Burlington, Vt., Post Office.

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The Vermont Medical Monthly

Vol. IX. March 25, 1903. No. 3.

ORIGINAL ARTICLES.

THE REGULAR TREATMENT OF PNEUMONIA.*

By W. W. Browne, M. D., Blackstone, Mass.

For eighty years the fatality of pneumonia has increased but little, if any. The prevalence of pneumonia has steadily increased during the past fifty years, and last year more deaths were caused by it than from any other disease.

In the death reports of large cities, and the reports of insurance companies, pneumonia and tuberculosis in different forms largely lead the van, thus showing the virulent nature and prevalence of the two diseases. Small pox and cholera used to sweep away their thousands in every community, but vaccination and hygiene have reduced their terrors to that extent, so that now it is not so much a matter of how to escape the disease as how to escape the quarantine that goes with them.

The only curative treatment of pneumonia that one could think of would be something to counteract the poison which is the cause of the disease. Nothing of moment, however, has been done in that direction. Therefore the treatment must be simply that of a febrile disorder, a disorder which has a natural tendency to burn itself out within seven or eight days; and the object must be to maintain the patient's strength, so that the battle may be fought between the germs of the disease and the cellular elements in the patient's body. To maintain these cellular elements in their best fighting trim is what the physician has got to do. In no disease is it more important than in pneumonia to treat conditions more than the disease itself.

Fresh air is a very essential part of the treatment. Now what is the indication when called to treat a case found in the first stage? We find him with a high fever, flushed face, bounding pulse, heart going like a trip hammer, hacking cough, dull, heavy pain in chest, hurried respirations, headache, and usually bowels confined. The first indication is to empty the stomach and bowels, and get rid of all material early, which, while it helps promote engorgement, can be of no advantage if retained.

Three grains of calomel every two hours till four doses are taken, followed in two hours more by one to two heaping teaspoonfuls of Rochelle salts, largely diluted, acts admirably in such cases. To the calomel may be added 3 to 5 grains of Dover's powders, or one-half grain of ipecac with each dose until diaphoresis is produced.

If the patient has flushed face, bright eyes, talkative and appearing stronger, heart working fiercely and loud, give Norwood's tincture veratrum, a dose every hour, beginning with one drop and increase by one drop till we get to five, then decrease by one drop. When the pulse comes down, the skin is soft and patient quiet, hold it so for a time, then carefully withdraw the drug. Nothing, however, can be gained by the use of veratrum, when consolidation is complete. Many prefer the action of aconite, for the above conditions, to veratrum.

*Read at a meeting of the Æsculapian Club, at Milford, Mass., March 4, 1903.

Local applications may be of service in the early stage. If the patient has much pain, one should blister, as it relieves more rapidly than anything else, if the pain be acute, more especially if the pain be due to pleurisy.

Linseed poultices soothe the patient very much, help his cough, and do good at the early stages.

The trouble with poultices is, first, it is only once in a great while that you can get attendants to make them just as they should be; they are either too sloppy, which wet everything, or they are applied too cold, when the action seems to be "nil," or second, they are too slow in changing them, so that is exhausts the patient's nerve and strength.

Where poultices for any reason cannot be properly used, camphorated oil, with the addition of turpentine, well rubbed onto the chest and back, is of value.

It is well also to apply a cotton batting jacket.

If delirium and sleeplessness occur very early in the disease, a dose of morphine may be given by the mouth or hypodermically. Later on, though, opium and morphine should be entirely avoided, when a patient is fully under the influence of the disease. Trional is extremely beneficial if given in sufficiently large doses: thirty to forty grains, repeated in four or five hours, if necessary, or until sleep is produced. In delirious cases hyoscine, hypodermic injections have been very beneficial.

There are instances where bleeding is a benefit.

In the case of vigorous subjects, where cyanosis is present and there is obvious engorgement of the right heart, general blood-letting may with propriety be practiced. Cardiac failure and odema of the lungs, which mean toxæmia, constitute the real danger in pneumonia. Therefore one should use strychnine. Strychnine should be used in 1-30 gr. doses or, if needed, in 1-40 gr. doses hypodermically, and it should be given until there is no longer vasomotor paresis. There is no doubt that patients have been rescued when any other means would have been futile. Digitalis is of value if there is vascular relaxation and an easily compressible pulse.

Should the pulse become rapid and feeble and the second pulmonary sound weak, alcohol should be given freely, in doses sufficient to accomplish the end desired. In aged and alcoholic subjects it should be given from the start. Expectorants serve only to upset the stomach, although in some cases of tardy resolution pilocarpine may be employed, its depressant effect being carefully guarded by stimulants.

High and prolonged temperature should be controlled by cold sponging, the cold pack, cold applications to the chest, or even the bath at 70° F. By the use of the bath the temperature is reduced, the pulse becomes stronger and cerebral symptoms are markedly relieved. Oxygen is an efficient remedy for difficult breathing, in the last stage of pneumonia.

The food should be liquid, and of such a nature as to be easily absorbed and not liable to ferment, i. e. albuminous solutions and peptonized milk. Among the former, egg-water is an available form. It is prepared by squeezing the albumin of one or two eggs through a cloth and adding half a pint of water and a pinch of salt. This, or Bovinine, may be given alternately with the milk at the rate of three ounces of either every two hours. If, notwithstanding this careful feeding, flatulence occurs, peptonized milk may be replaced by koumiss or matzoon.

Complications of any form call for varied treatment to suit each case.

During convalescence, quinine, iron and hypophosphites should be given for their tonic effect.

THE HOMEOPATHIC TREATMENT OF PNEUMONIA.*

By Edgar A. Fisher, M. D., Worcester, Mass.

This meeting has its excuse for being in so admirable a spirit of inquiry that I yielded to the temptation to accept Dr. Johnson's invitation to read a paper on "The Homœopathic Treatment of an Ordinary Case of Croupous Pneumonia," although I realized that the proper presentation of my subject before such a club would require more time and skill than I had at command.

Homeopathy is a therapeutic method and the scope of my paper would properly be confined to "that part of the therapeutic sphere in which drugs are our instruments," though the homeopathic physician follows a fundamental principle emphasized by Hahnemann in an age largely concerned with the *theory* of disease, namely, that "the sole aim of the physician is to restore the sick to health." No one will deny that in the treatment of a specific and self-limiting disease like pneumonia therapy plays at best a secondary part. It may be possible when the primary congestion of the lungs has hardly begun to abort the threatened attack by the proper drug promptly administered but I do not believe, the pathological process once started, that the regular course of the disease can be materially checked, though I do believe that the symptoms may be modified and resolution encouraged.

The physician's *chief* reliance in the treatment of this dread disease must be upon good nursing and diet, and careful attention to the hygiene of the sick room: for adjuvants the jacket of rubber dam and cotton or the poultice of antiphlogistine: the judicious use of stimulants when the heart requires them (and I would specially emphasize the word judicious, for I think great harm may be done by applying the whip too soon); and the use of oxygen well diluted with air in conditions of cyanosis. In *these* matters there can be neither "Jew nor gentile, bond or free." They are the common heritage of the healing art.

The essential part of the therapeutic discovery of Hahnemann is stated in the rule, "similia similibus curantur,"—likes should be treated by likes," and on this principle the homeopathic physician selects his drugs. We prescribe for the disease as represented to the physician by the totality of its symptoms, objective, subjective, and, so far as known, pathological; but eliminate the theoretical element which has been changed with every generation of investigators. In other words, the clinical facts of the disease, as we find it, are prescribed for by administering the drug which, when given to the healthy individual, produces symptoms as similar as possible to those developed by the patient under examination, the attempt being made to individualize each case. Sir Lauder Brunton, in his "Experimental Actions of Medicine," grasps our point, when he says (part 1, page 12):

"The opposite action of large and small doses seems to be the basis of truth on which the doctrine of homeopathy has been founded. The irrational practice of giving infinitesimal doses has, of course, nothing to do with the *principle* of homeopathy. 'similia similibus curentur,' the only requisite is that mentioned by Hippocrates when he recommended mandrake in mania, viz., that the dose be smaller than would be sufficient to produce in a healthy man symptoms similar to those of the disease."

Many examples of this homeopathic action of the small dose will at once occur to you, for example, the cure of vomiting by ipecac and by apomorphia, of diarrhoea with mercury, of insomnia with caffein and phosphorus, of squamous eruptions with arsenic, of headache with nitroglycerine, the flushings at the climacteric with amylnitrate as suggested by Ringer and the treatment of constipation with opium as suggested by Brunton (Lancet, April 27,

*Read before the Æsculapian Club, at Milford, Mass., March 4, 1903.

1880). A little thought would suggest many more of a like nature. The only question in your minds will be as to how extensively this principle can be applied. For me, it is difficult to believe that these are isolated examples. I should be equally unwilling to assume, without experiment, that this action is a rule without exception. Therefore the medicines which I shall speak of to-day not only comply with the homeopathic rule in that they produce in the healthy body symptoms similar to those which we attempt to relieve in the course of an attack of pneumonia, but, in addition, they have been subjected to the clinical test by several generations of careful clinicians and have been found to give good results in many cases. We have, therefore, as much proof of their useful activity in arresting disease as of the effect of any drug not administered in physiological doses, and, indeed, you know that even in physiological doses there is uncertainty of action, as, for example, the not infrequent production of nervous insomnia from opium when sleep is desired. This is as much an age of scepticism in medicine as in theology and it is quite as difficult to answer questions of fact with positiveness in one field as in the other. Our increased knowledge of the limitations of disease and the infinite variation in its course make us unwilling to ascribe unequivocally to any drug the modification of symptoms which follow its administration, unless this same action can be repeated with certainty in a series of similar cases. In studying a drug to determine its usefulness for a homeopathic prescription every reliable source of information is drawn upon. For its gross action records of accidental poisoning in man and experiments upon animals, and its finer action by what are known as provings, *i. e.*, records of the symptoms produced in man by administering the drug in repeated non-toxic doses for varying periods. Many precautions are used to prevent the introduction of subjective symptoms, the product of the keen imagination of the prover. From the great mass of material thus secured those symptoms which are duplicated in several of the provings are considered characteristic of the drug. But they must be in accord and the congruence of symptoms is strongly insisted upon. On these indications the drug is subjected to clinical test. It is obviously impossible to combat bacteria or their toxines by the introduction of non-toxic doses of any drug into the alimentary canal. The therapeutic effort must be directed toward mitigating the symptoms produced by these agencies.

While in the popular mind the small dose is "Homeopathy," it is by no means an essential feature in the prescription. The only requisite is that the dose shall be sufficiently small not to aggravate the symptoms for which it is administered. Hughes says, "The small dose is historical, not vital." As a matter of practice, however, it has been found possible to reduce the dose much below the physiological limit and yet gain the desired result. The drugs are prepared for use by mixing thoroughly with alcohol or by prolonged trituration with sugar of milk and represent 10%, 1%, .1%, etc., of the original drug strength. They should be administered singly, thus making it possible to observe their effects with greater accuracy.

"Hahnemann lived at a time when heroic antiphlogistism was in full force, when physicians slew," as in Addison's day, "some in chariots and some on foot; when every sufferer was drained of his life-blood, poisoned with mercurials, lowered with antimonials, and raked by purgatives." It is therefore easy to understand how a new method which did away with such heroic treatment brought around the master enthusiastic followers. In no disease was the change from such empiricism to a system of prescribing based on the careful study of the drug action, and the equally careful individualization of the case,

more marked than in pneumonia, and it is not hard to believe in the records of reduced death rate made by the pupils of Hahnemann or to account for the zeal with which they espoused the cause.

NOTE—"I advise you to study Pneumonia, as all other diseases, not so much with regard to its microscopical elements, but at the bedside looking at the patient, taking notice of his state, finding out the individual degree of vitality," etc.

Sir. Dyce Duckworth—clinical lecture at St. Bartholomew, British Med. Journal, Nov. 5, 1902.

I believe it is fair to claim that the homeopathic treatment of pneumonia has been consistent and rational through many years and that its followers have escaped many popular errors in treatment from the promiscuous blood-letting of earlier days to the more recent efforts at temperature reduction by the use of the coal tar derivatives, a practice now characterized as pernicious by Osler, Hare and many others. The medicines which have been found homeopathic in uncomplicated cases of pneumonia are few in number and the indications for their use, simple.

Veratrum Viride is prescribed at the very beginning of the disease provided the physician is fortunate enough to be called early in the stage of engorgement when, although the temperature is running up, the patient is chilly, the forehead is wet with perspiration, but the physical signs of the disease are not yet distinct.

If the pulse is rapid and intermittent, it is an additional indication for the use of the drug. It is particularly applicable where the onset is vigorous, but hardly of use after the disease has progressed to a point where the diagnosis is certain. The use of the drug rests on the fact that in poisoning by it congestion of the lungs is well marked and constant in its appearance.

Bryonia Alba perhaps holds first place in the homeopathic therapeutics of pneumonia. In animals poisoned by Bryonia the serous membranes, particularly the plurae, are inflamed, and the lungs sink in water and are found full of a frothy bloody exudate. The "provings" also exhibit well-marked lung symptoms, as cough, pain in the chest, bloody expectoration, etc. The medicine is most useful where the pleura is affected and pain in the chest, particularly below the nipple, is present. Cough short and dry, with scanty expectoration yellow or bloody, respiration rapid and oppressed. Restlessness and thirst are prominent symptoms, though the patient is inclined to keep quiet as all the symptoms are aggravated by motion. The severe headache is relieved by this drug.

Phosphorus divides the honors with Bryonia and is more useful where there is less involvement of the pleura and the catarrhal symptoms are more marked. It is particularly valuable for delicate patients where the disease comes on insidiously, as in those cases which used to be called typhoid pneumonia by the practitioner. The cough is not as dry and the sputa is frothy and rusty. It is indicated in the latter part of the period of hepatization and early part of the period of resolution.

Iodine or *Bromine* may be used in the early stage on the following indications: Anxiety and oppression of the chest, burning, tearing, or stabbing pains in the chest, cough dry, dyspepsia, blood-streaked expectoration, hoarse voice.

Antimonium Tartaricum is used in the later stage of the disease when resolution has begun. The expectoration is scanty, though the lungs are full of loud, bubbling rales. The patient is cyanotic and seems in danger of suffocation from pulmonary oedema. The cough is paroxysmal with suffocative arrest of breathing or it is rattling, hollow, and the temperature is lowered. This remedy is more often useful for old people and children than for adults and in pneumonia complicating whooping cough, emphysema, or delirium tremens.

The last medicine which I shall speak of is *Sulphur.* Its administration seems to hasten resolution when it is delayed. It encourages the absorption of the exudate. It is indicated when the cough is loose and the expectoration thick, greenish or yellow. There may be dyspnoea and copious sweating from the least exertion. It is more often used late in uncomplicated cases, or when suppuration is threatened. A number of other medicines may be used for special symptoms arising in the course of the disease, but I can not fairly present them as indicated in an ordinary case of pneumonia.

Notes :—

1. Principles and Practice of Homeopathy, Richard Hughes, 1902.
2. The Organon, Sam'l Hahnemann.
3. Manual of Pharmacodynamics,
4. Jahi's Clinical Guide, Translated by Lilenthal.
5. Cyclopedia of Drug Pathogenesis, Edited by Richard Hughes.

THE ECLECTIC TREATMENT OF PNEUMONIA.*

By Pitts Edwin Howes, M. D., Boston, Mass.

Secretary Mass. Eclectic Medical Society, Censor of the Eclectic Medical College of the City of New York, Associate Editor of the Eclectic Review, etc., etc.

Mr. President, Members and Guests of the Aesculapian Club:

It affords me much pleasure to meet you today, and present for your consideration the eclectic method of treating pneumonia.

Presumably the majority in attendance are not familiar with the eclectic practice. Hence it seems judicious that I should briefly state the grounds upon which we base our system of medication.

We believe, *first,* that in the normal condition all the various functions of the body are performed in a natural manner, and afford a certain amount of pleasure to the individual; *second,* that any departure from the normal standard will produce disease, and that this disease will be more or less severe, according as the deviation is more or less intense; *third,* that the various divergencies from health will produce certain indications which are the guide to correct medication; *fourth,* that if the proper drugs are administered the result will be a tendency toward the normal condition; *fifth,* that the province of the physician is not to cure disease,but to assist Nature to recover from the effects of the disobedience of her laws; *sixth,* that when we have established the action of a remedy, under a certain condition, we have produced a result which can be depended upon at any time, no matter what the departure from health may be called.

From the foregoing statements you must realize that "Eclectic Medicine" treats pathological conditions, and not names. Hence it is absolutely impossible for me to give you a stereotyped mode of treatment for the disease under consideration.

I might have a half dozen cases of pneumonia under my care and no two of the six receive exactly the same medication, yet all would recover. Again I might prescribe the same drugs to another half dozen cases of pneumonia, and, by not correctly adapting the remedies used to the existing conditions, I would get a fatal result in every case.

Do not understand me to claim that all cases, if properly treated, will recover, for a certain proportion will be seen in which it is beyond the power of medicine to sufficiently aid Nature in restoring the equilibrium.

How then can I best present the eclectic treatment of pneumonia, so that it can be properly understood and intelligently discussed?

This is the question which I have been debating with myself since I promised to write this paper. I have concluded that to enumer-

*Read at a Meeting of the Æsculopian Club, at Milford, Mass., March 4, 1903.

ate the various drugs used in the treatment of pneumonia by our "school," and to give the indications for their employment would be the only satisfactory solution.

These remedies I will divide into five grand divisions, those influencing the circulation, the respiratory apparatus, the nervous system, the antiseptics and the stomachics.

CIRCULATORY SYSTEM.

Aconite, indications. Pulse, small and frequent. Skin, hot and dry. Dose, five to ten drops, aqua, four ounces. One drachm doses every one or two hours.

Asclepias, indications. Pulse strong, skin moist, pleuritic pain, aggravated by motion. Dose, ten to twenty drops, aqua four ounces. One drachm doses every one or two hours. This remedy is very frequently combined with aconite to good advantage.

Cactus grandiflorus, indications. Impaired heart's action, nervousness, sense of oppression in the chest, hysterical conditions. Dose, ten to twenty drops, aqua four ounces. One drachm doses every two or three hours.

Caffein, indications. Cardiac insufficiency, cerebral hyperæmia, headache. Dose, two to five grains every three hours.

Digitalis, indications. Pulse weak with faint heart sounds. Dose, ten drops to one drachm, aqua four ounces. One drachm doses every three or four hours.

Eupatorium perfoliatum, indications. Full pulse, dyspnoea, pain in the chest, skin hot and moist, frequent turbid urine. Dose gtts. v-xx, aqua iv oz.; dr. doses every one or two hours.

Rhus toxicodendron, indications. Short sharp pulse, strawberry tongue, burning pain in the chest, pinched expression of the countenance, scanty urine with dribbling. Dose, five to ten drops, aqua four ounces. One drachm doses every one or two hours.

Veratum viride, indications. Pulse full and bounding, increased arterial tension, marked throbbing of the arteries. Dose, five to ten drops, aqua four ounces. One drachm doses every one or two hours.

Nitro-glycerine. Use when there is extreme weakness of the heart's action and you need a quick stimulant. Dose, 1-100 gr. every hour, hypodermically by preference, till the heart improves.

RESPIRATORY SYSTEM.

Ammonium carbonate, indications. Severe cough in the aged, with scanty viscid expectoration; diminished cutaneous circulation, skin pallid and cold, tendency to collapse and syncope. Dose, 1-10 to ½ gr. every hour.

Ammonium muriate, indications. Lack of secretion, subdued cough, sense of heat in the throat, redness of surface easily effaced by pressure. Dose, one drachm, aqua four ounces. One dram doses every two hours.

Bryonia Alba, indications. Flushed right cheek, pleuritic pain increased by coughing, hacking cough. Dose, ten to twenty drops, aqua four ounces. One drachm doses every one or two hours.

Ipecacuanha, indications. Weakness, debility, cough, oppressed breathing, diminished expectoration, elongated and pointed tongue. Dose, five to ten drops, aqua four ounces. One drachm doses every one or two hours.

Lobelia inflata, indications. Sense of fullness and oppression in the præcordial region, difficult respiration, full and oppressed pulse, broad and flabby tongue, cough loose with tenacious mucus. Dose, ten to twenty drops, aqua four ounces. One drachm doses every half hour or hour.

Macrotys racemosa, indications. Hard cough, with pain in the back and limbs; a feeling of soreness as if pounded. Dose, ten to twenty drops, aqua four ounces. One drachm doses every one or two hours.

Sanguinaria canadensis, indications. Irritating and tickling cough, scanty secretion, sputa streaked with blood, burning sensations in the

throat and nose. Dose, ten to twenty drops, aqua four ounces. One drachm doses every one or two hours.

Sticta pulmonalis, indications. Cough with pain in back and shoulders, extending to the occiput. Dose, ten to twenty drops, aqua four ounces. One drachm doses every hour.

NERVOUS SYSTEM.

Belladonna, indications. Dullness, drowsiness, eyes dull, pupils dilated, blueness of face and extremities, cerebral congestion. Dose, five to ten drops, aqua four ounces. One drachm doses every hour.

Gelsemium, indications. Flushed face, bright eyes, contracted pupils, cerebral irritation. Dose, ten to twenty drops, aqua four ounces. One drachm doses every hour.

Jaborandi, indications. Marked dryness of the skin, suppressed urine, pain in the back and limbs. Dose, one to two drachms, aqua four ounces. One drachm doses every one or two hours until perspiration appears.

Stimulants. The various alcoholic stimulants find a place in the treatment of the aged, and those who—from any cause—are rendered so prematurely.

Strychnine. Doses of 1-100 to 1-30 grs. of strychnine will frequently aid in sustaining the strength of your patient, during a period of great debility.

Foods. The stomach should be kept in such a condition that it will properly digest the more easily assimilated articles of food. To this end close attention should be paid to the correct administration of the antiseptics and stomachics.

ANTISEPTICS.

Alkalies. Soda bicarbonate, indications. Tongue broad and pallid, its coating pasty and white or yellowish white; mucous membranes are uniformly pallid. Dose five to ten grs. every two hours.

Soda Sulphite, indications. Broad pallid tongue, with a thick, dirty, pasty white coat; pallid mucous membrane. Dose, five to ten grs. every three hours.

Acids. Muriatic acid, indications. Deep red tongue and mucous membranes, dry brown cracked coat on the tongue, sordes on the teeth, pungent heat of the skin. Dose, one drachm, aqua four ounces. One drachm doses every two or three hours.

Baptisia, indications. Tongue and mucous membrane full and purplish in color, papillae of the tongue enlarged, moist pasty fur on the tongue, breath sweet, sickening and offensive. Dose, ten to twenty drops, aqua four ounces. One drachm doses every two hours.

Carbo-Veg., indications. Pallid skin, feeble circulation with hemorrhage, pallid flabby tongue with soft, moist coat, lifting in patches; frequent, bad smelling, hemorrhagic, alvine discharges. Dose, 1 to 10 grs. (3 x trit.) every two hours.

Echinacea, indications. Tendency to systemic poisoning, profuse ill-smelling discharges, breath offensive, dusky colored mucous membranes, tendency to gangrene. Dose, ten drops to one drachm, aqua four ounces. One drachm doses every two or three hours.

STOMACHICS.

Nux Vomica, indications. Broad pallid tongue, face sallow, yellow ring around the mouth, paroxysmal abdominal pain pointing to the umbilicus. Dose, five to ten drops, aqua four ounces. One drachm doses every one or two hours.

Hydrastis canadensis, indications. Profuse gastric secretion, perverted appetite, enfeebled circulation. Dose, one drachm, aqua four ounces. One drachm doses every two, three or four hours.

Capsicum, indications. Distended abdomen, pain increased by movement, thirst, cold extremities, small, feeble pulse. Dose five to

twenty drops, aqua four ounces. One drachm doses every half hour or hour.

From these remedies are chosen largely our treatment for pneumonia. Many times there are strong indications for two or more of them at the same time. We then combine them in one glass containing the necessary four ounces of water, or else alternate, giving first one and then the other each hour.

Many physicians think that they must use external applications in the treatment of pneumonia. That they are useful cannot be denied, but, unless they are used with the addition of common sense, the result will not be as favorable as could be wished.

The Compound Powder of Lobelia has long been a favorite with eclectic physicians, and there is this to be said in its favor—it cannot do any harm. The formula for its preparation is as follows: Pulv. Lobelia, six drachms, Pulv. Sanguinaria, Pulv. Symplocarpus, a. a. three drachms, Pulv. Ipecac, four drachms, Pulv. Capsicum, one drachm. Mix. To apply it take a piece of flannel, the size of the affected part, spread a thin coating of lard on the cloth, then dust thickly with the powder and place in contact with the skin. This may be re-applied once or twice a day. A single trial will convince the most skeptical.

The eclectic treatment of pneumonia would not be complete if I did not speak of our method of differentiating between the forms of the same disease, and also a few words regarding the remedies which we prescribe.

The student of eclectic medicine is early taught that there may be three different kinds of any given disease, and that his success, in their treatment, lies largely in his power to ascertain which of them he has to conquer. To these three varieties have been given the expressive names, *excess, defect* and *perversion*. If you will stop and think for a moment you will see that, if disease is a departure from health, it must be in one of these three ways.

In acute diseases, such as we are considering today, we must—almost invariably—decide between the first two of these manifestations. If our patient is above par, he can stand and demands a depressing treatment; if, on the other hand, we are treating a case that is undeniably below par, and we resort to any drug that lowers the vitality, we are sure to need the undertaker. Hence, whenever you are called to treat a case of pneumonia—or any other disease—carefully decide in which class that patient belongs and your treatment will be far more effective.

From the birth of eclectic medicine its adherents have devoted the larger part of their time in evolving and developing the powers of the drugs which they prescribe. They can point with a commendable degree of pride to what they have achieved along these lines. Indeed the Eclectic Materia Medica is the one grand reason for their existence today, and the supreme motive for their continuance in the investigation of their chosen field.

Close along aside the physician stands the eclectic pharmacists who have sought to aid him in perfecting the remedies which he uses. Their success has been unrivaled. The names of Lloyd and Merrill are known, not only among eclectic physicians but by those of other schools who desire the best which pharmaceutical skill can produce.

The remedies whose indications I have given in another part of this paper, are those known as "specific medicines," and represent, in each drop, a grain of the crude material. This fact should not be forgotten, as tinctures made from fluid extracts will not give the results which might be expected; and sometimes the effect is *"nil."*

Take Lobelia or Gelsemium, for instance. The best preparation of Lobelia—the one which will not fail you—is the tincture made from the seed, and unless you have a tincture of Gelsemium made from the green root, you are doomed to disappointment.

Eclectic physicians are firm believers in the efficacy of medicine to eradicate those causes which produce disease. This is because they are working with accurately tested weapons.

THE ALKALOIDAL TREATMENT OF PNEUMONIA.*

By Wm. L. Johnson, M. D., Uxbridge, Mass.

"Pneumonia is the most fatal and widespread acute disease with which we have to contend; from which no age, race, sex, social or personal condition or locality are exempt—from which no previous attack or known serum immunizes, and no medicine aborts. It is a self limited disease characterized by three distinctive stages, congestion, consolidation and resolution—all of which are constant in every type of the disease."*Dr. Church in Vt. Medical Monthly.*

If this is the orthodox idea in relation to pneumonia and I have no reason to doubt its accuracy, alkaloidal medication may be defined as a *protest*, a protest both as to the results obtained, and to the complacent waiting for the various symptoms and stages. We believe that pneumonia *can* be aborted, that it is being done daily by scores of alkaloidal practitioners. We believe that it does not follow a regular course, that it can be so largely modified, by appropriate medication, that all and indeed many of the expected symptoms and conditions do not appear. Alkaloidal medication strikes at the root of the trouble, endeavors to foresee and prevent the changes that naturally appear in a typical case of pneumonia, and does not wait for the symptoms to develop and the results to be manifest. A typical case of pneumonia presents fever, pain in the side, dyspnoea, short, hacking cough and the general symptoms of severe systemic disturbances. How are these met? For fever we use aconitine, 1-134 grain, one granule every 15 minutes, half hourly or hourly as indicated, until results are obtained. The results are lowering of pulse rate, reduction of temperature, sweating and lessened pain. Combined with this we use strychnine, 1-134 gr. and Digitalin, 1-67 grain, for its tonic action and supporting the heart. The other important remedies are Emetine, 1-67 gr., and Codeine, 1-67 to 1-12 gr. hourly to relax spasm, control nervous symptoms, quiet and loosen the cough. These can be used together or separately as desired and are to be continued as the occasion demands throughout the course of the disease. As the fever subsides and the cough becomes looser, Calcium Sulphide 1/8 gr. every two hours is such a valuable and important remedy that it should always be used and its action will not disappoint the careful user. After the acute symptoms have subsided glonoin 1-250 gr. is a most valuable remedy, sustaining the vitality wonderfully, prompt and reliable in its action. These are our standard remedies for this disease. They offer a definite amount of a single distinct alkaloid to counteract a definite disease with distinct structural lesions. Their action must be carefully watched, must be changed or modified by the course of the disease, and they produce results at once marked, rapid and permanent. In addition to the remedies indicated, careful attention should be given other conditions. We should insist upon *pure air* at all times, especially in our modern super-heated rooms. The recumbent position is advisable. Liquid diet should be insisted upon. Pure water allowed in abundance. The routine practice of many physicians of giving a teaspoonful of Seidlitz salt in a glass of water every morning is to be highly commended, as in most all acute diseases. External applications are not to be despised. Every physician uses them in one form or another. I wish to endorse most enthusiastically the use of antiphlogistine as an external application. It takes

*Read at a meeting of the Æsculapian Club. at Milford, Mass., March 4, 1903.

the place of poultices and plasters. It is clean, neat, soothing and effective. The more it is used the better it is liked, and it is worthy of a trial in all cases. Alkaloidal treatment of pneumonia finds no place for alcohol in any form or in any condition. It can be of no service in any stage of the disease; it can do infinite harm in all conditions. It is a treacherous ally, uncertain and unreliable, only mentioned to be condemned.

SPECIAL THERAPEUTIC ARTICLE

A REPORT OF TWO CASES OF SEPTICAEMIA, SUCCESSFULLY TREATED WITH $H_2 O_2$ MEDICINAL.

By E. J. Melville, M. D., Bakersfield, Vt.

Case I. Feb. 6, 1894, was called to see Homer B., aged 14, who had been ill with a swelling in right groin for three weeks. Had been treated with hot applications, etc., but during that time abscess continued to grow, and at the time that I first saw him fluctuation could easily be made out. Temperature 102.5°F. Pulse 120. Great emaciation. Constant vomiting. Daily chills followed by copious sweating, denoting pus absorption. Diagnosed appendicular abscess and advised operation. This was done same day under local anesthesia.

Much pus escaped, and several small portions of fecal matter, denoting an opening into the gut.

Temperature remained high, and sweats continued for three days following operation, indicating the presence of pus. I then began the use of Marchand's H2 O2 medicinal, (15 vol.) so as to destroy the pus and morbid element which were still there. I injected 4 oz. of H2 O2 with a glass syringe slowly, while patient was in the Trendelenberg position, and allowed it to remain about fifteen minutes. The boy was then lowered and laid upon his right side, when large quantities of pus, broken down tissue and gas flowed from wound. By gentle compression and massage of abdomen, much more was obtained. Large quantities of sterilized gauze were packed over the opening in right side.

The flushing out with H2 O2, etc., was repeated every twelve hours.

The improvement was prompt. Temperature reached normal, and remained so after 48 hours.

Wound was now washed out with the H2 O2 daily for four weeks, after which time the abdominal wound and fæcal fistula were entirely healed. Patient has since developed into a full-grown laboring man, and has had no hernia nor any outward symptoms of his severe illness.

Case II. March 2, 1897, was called to see George T., a farmer, aged 38 years, who had been in the care of a Christian scientist for four weeks for a large swelling in right side. The treatment consisted in endeavoring to persuade the man that he was not ill, and insisting that he take active exercise. Found patient in recumbent position with knees flexed upon addomen, and suffering intense pain over right side of abdomen, which was filled with a soft fluctuating mass. Temperature 103.8°F. Pulse 130. Opened abdomen under local anesthesia and evacuated three quarts of foul smelling pus.

Used 4 oz. H2 O2 full strength, slightly warmed, after pus had ceased to flow, and repeated procedure every twelve hours.

This caused cessation of all untoward symptoms for eight days, when chills and fever returned.

Another swelling was then noticed in right lumbar region, which, upon opening, gave one quart of pus.

Flushed this second abscess in same way. The temperature soon reached normal, and patient made an uneventful recovery with exception of swelling of inguinal glands in left groin, which yielded in three days to hot fomentations.

For conclusion I might say, that in the above cases I used no medicines internally, and nothing externally but clean linen, plain gauze and H_2O_2 (Marchand's).

The operations performed were simply opening abscesses, no drainage tubes, no flushing with salt solution or water, and no packing of abscesses.

Though I used the H_2O_2 in large quantities, and made no especial effort to see that all the solution returned, and though it was used over a period of several weeks, no untoward symptoms developed from its use.

The above gratifying results induced me to use Hydrozone (which yields 30 times its own volume of nascent oxygen instead of 15 volumes) in other cases where a large amount of pus was present, with such good results that I am now giving the preference to this very strong solution.

CLINICAL SOCIETY OF THE NEW YORK POLYCLINIC MEDICAL SCHOOL AND HOSPITAL.

Meeting Held January 4, 1903.

The President, Dr. Alexander Lyle, in the Chair.

TRACHOMA.

Dr. Earl Connor read a short paper on trachoma. He said in part: Under "trachoma" are grouped a variety of conditions, apparently dissimilar, whose chief characteristic is hypertrophy of tissue. Clinically, we can safely accept the teaching of Prof. Born as to the differential diagnosis. First, there are cases which may be classed under the head a lymphoid hypertrophy or follicular or granular conjunctivitis. The condition is one of slight consequence to the health of the eye, as it may exist for weeks or months, until absorption takes place, and the mucous membrane returns to its normal condition. Cases in which lymphoid hypertrophy and ulceration coexist, the so-called "mixed" cases, lead to confusion. These are the ones that are subjected to operation and promptly cured; but they get well under the use of simple astringents and by the correction of the strumous condition which underlies it. The cervical glands are nearly always hypertrophied.

True trachoma is characterized by minute ulcers on the epithelial surfaces of the conjunctivae and cornea, with more or less profuse cell infiltration. In the lymphoid cases, there are no changes in the structure of the lids or cornea. In the ulcerous type the changes are more or less extensive and progressive, and it is not a self-limited process. The infiltration and cicatrization continues until a state of atrophy of the conjunctiva is reached, and a more or less dense opacity of the cornea results.

Sequelae: It is only the patients who have the lightest attack, or those who come under treatment early, who escape more or less serious impairment of the eyes. Distortion of the eyelids, with faulty disposition of the cilia is common. In extreme cases the cilia are brought into constant contact with the cornea, causing pain and increased reduction of the poor vision by cell causing pain and increased reduction of the poor vision by cell infiltration. The contraction of the cicitricial tissues causes atrophy of the mucous glands and, in the final stages, reduces the conjunctiva to a dry, cuticular membrane.

Corneal opacities are the after-effects of both ulcers of the cornea and of pannus. A recent pannus, it is true, may disappear completely by a process of reabsorption, so that the cornea reacquires its normal transparency, but often, further changes take place in the pannus, which render its disappearance impossible. Transformation into connective tissue occurs if the pannus is of long duration. Such a cornea never becomes perfectly clear again. This is true of cases in which the pannus is complicated by ulcers; the regions which are oc-

cupied by the latter likewise becomes permanently opaque. Trachoma is a disease which is distinguished by its duration, in many cases rendering those who are attacked by it wholly or half blind. Add to this the fact that because of its infectious nature it is exceedingly apt to spread, and one can understand why in those regions in which it is endemic, it is a veritable scourge.

Treatment: In the acute stages the application of silver nitrate until the secretion is lessened, and the sulphate of copper (blue stone) as the condition demands more or less stimulation, will give the best results.

Dr. W. E. Lambert, opening the discussion, said that there is a great deal of uncertainty regarding the pathology of trachoma, as the bacillus has not yet been discovered. There is little doubt, however, that it is contagious. The so-called various forms of trachoma are simply different stages of the disease. He differed with Dr. Connor as to treatment, stating that he was convinced by considerable experience that in all cases in which granulations are present, the operation of expression gives the quickest and best results.

RENAL CALCULUS.

Dr. J. A. Bodine showed a renal calculus which he had removed from the pelvis of the kidney of a patient 55 years old. For the past nine years, the man had suffered from a dull, aching pain in the right loin. During the first two years this pain was characterized occasionally by acute exacerbations, which were so severe as to necessitate rest in bed and opiates for relief. During the past five or six years, however, these exacerbations lessened in severity and duration. He found that by lying down and raising his feet above the level of his head, the pain would disappear. His urine at no time showed kidney detritis or abnormality of any kind. A radiograph was taken, and showed accurately the presence of the stone. Its removal was very easy, and if, the speaker said, in all kidney work, the placing of the patient in a prone position, over an air cushion, were taken advantage of, surgery of the kidney would be greatly facilitated. In this case when the kidney was withdrawn through the wound, the stone was felt lying in the pelvis. An incision was made through the parenchyma of the kidney along its convex surface, sufficiently large to permit the introduction of a finger into the pelvis over the stone. Incision into the pelvis of the kidney offers greater liability of persistent urinary fistula, and unless such incision can immediately be sewn up, it is better to make the incision through the renal substance. This case demonstrated the fact that the primary renal calculus may remain for years in the pelvis of the kidney without exciting inflammatory changes in the renal tissue or causing abnormalities in the urine. The change in the acuteness of the exacerbations of pain was another proof that in primary stone in the pelvis of the kidney the danger and pain are in inverse ratio to the size of the stone.

GLASS REMOVED FROM THE EYEBALL.

Dr. W. E. Lambert showed a piece of glass which he had removed from the lens of a patient, preserving the eyeball in a practically normal condition.

FATAL THROAT COMPLICATION IN THE CONVALESCENCE OF TYPHOID FEVER.

Dr. F. J. Quinlan said that he had been called to the New York Hospital on the morning of January 5th, to see a physician convalescing from typhoid fever, then in his ninth week. Previous day his temperature had been normal. The night previous, following a slight cough, he developed laryngeal symptoms, such as hoarseness, which abated after awhile, but increased again so much that dyspnea was alarming. The patient was in a very bad condition, almost unconscious and cyanotic, and it was at once decided not to intubate, but to perform a tracheotomy. This

proved of only temporary benefit, as he died a short time afterwards. The speaker said that he had seen five such cases during the past five years. It seemed to be a vasomotor disturbance of the mucous membrane. All the patients were adults.

DIAGNOSTIC AND PROGNOSTIC DATA IN NERVOUS AND MENTAL DISEASES,

the paper of the evening, was read by Dr. W. B. Pritchard. He said in part:

Diagnosis in neurology and in mental disease demands consideration from two standpoints: general and specific. The issues in surgery are direct and relatively narrow, as in ophthalmology, dermatology, etc. The most intimate and essential relationship exists between nervous diseases and all other diseases. An old history of renal colic in a neurasthenic may prove the guiding factor in treatment. Auto-intoxication from a stomachic or intestinal deficiency is often the causative factor of a neurosis or a psychosis. The dependence of all bodily functions upon the integrity of the related nervous supply and action is conspicuously obvious. Hence the neurologist must be an evolutional development from the general practitioner. By collateral territory requiring consideration, I mean such factors as race, environment, temperament, occupation, age, sex, social and educational status, heredity, etc. Detailed study of the temperament is of special importance, and should always be made exhaustive, since the personal equation depends upon it, and an exact knowledge of the personal equation is often the determining factor in results. Neglect of this equation prevents a sympathetic understanding, lessens your patient's capital in confidence, and by so much, diminishes your chances of successful results from treatment.

Environment is sometimes a significant factor. Neurasthenia is much more common among residents of the city than the country. This is true also of chorea, and since syphilis is a disease of the city, its sequential nervous manifestations are much more frequent in metropolitan practice. Age, sex and occupation are of especial etiological interest. Chorea, poliemyelitis and to a less degree perhaps, epilepsy, and all diseases of childhood. Posterior selerosis and its cerebral equivalent, paretic dementia, are diseases of adult life. Women tend to the minor, men to the major neuroses. Organic disease of the nervous centres is more common in males than in females. Neurasthenia and kindred affections are so peculiar to the cultured, educated classes as to appear almost a penalty. It is a waste of time to hunt for neurasthenia, except the traumatic form, in the uneducated laborer; the diagnosis would make a paradox.

The prognosis in nervous diseases and the insanities is far better than is generally supposed. I believe the proportion of recoveries is as great as in almost any other specialty. Certain forms of nervous disease, are, however, hopeless. I have yet to know personally of recovery in general paresis, Landry's Palsy or multiple sclerosis. Decided benefit may be obtained from treatment in tabes, in paralysis agitans and in epilepsy. The prognosis in neuritis and in neuralgia is nearly always favorable, although tic douloureux is often viciously intractable and sciatica obstinate. Excluding the tuberculous variety, more than 50% of recoveries occur in meningitis. The most discouraging cases of myelitis, especially when traumatic, may turn out well, and many hemiplegias, especially if syphilitic, recover. A syphilitic etiology favorably modified the prognosis in mental and nervous diseases except in tabes, general paresis and epilepsy. Among the insanities, all of the non-organic type are recoverable, and the majority give excellent and prompt results from treatment. A vicious heredity always makes worse the prognosis. The more anomalous the type in epilepsy, chorea and neuroses generally, the better, as a

rule, the prognosis. Etiology is relatively unimportant in its bearing upon prognosis in many of the neuroses. Removal of the cause, to be effective in promoting cure, must be prompt, so prompt, indeed, as to almost precede a diagnosis. If allowed to continue, a vicious habit is induced, which persists in spite of the removal of the cause. This is an important fact to be borne in mind in estimating the prognosis in traumatic epilepsy, in reflex chorea and other neuroses, in various neuralgiae and in certain monoparesis.

Dr. J. P. Tuttle, in opening the discussion, said that he wished to emphasize the influence of the digestive and intestinal tracts upon neuroses and psychoses. From time to time he had seen patients with delusions, manias, melancholia, etc., and his part of the work had been treatment of their intestinal conditions. Three cases of unconsciousness, followed by delusions, were due to fecal impaction, and the patients recovered after the putrefactive matter had been removed. He also had seen two cases in which the melancholia had been completely removed by opening up and draining the gall bladder. Black-bile is generally due to an infection of the gall bladder, and absorption of its toxic principles, and has something to do with making the patient "blue." He had seen a patient who had suffered from insomnia for two weeks, apparently without reason. His bowels had not moved satisfactorily for three weeks. He had had movements, but there was always an inclination to have further passage. Examination with the sigmoidoscope showed a mass which could not pass the sigmond and rectum. Introductions of a 15% solution of peroxide of hydrogen removed the mass. The next night the patient slept perfectly, and his insomnia has apparently passed away.

Dr. D. S. Dougherty read the following report of a case of

SYSTEMIC INFECTION THROUGH THE TONSIL.

Patient, a girl, 20 years of age, previous good health; family history, good; occupation, a fur worker. First seen May 4, 1901, complaining of sore throat, headache, pain in the muscles of limbs and back, and feeling of general malaise. Temperature normal. Examination of throat showed mucous membrane of fauces and pharynx congested, right tonsil and peritonsillar tissues slightly swollen and odematous, having a darker hue than the surrounding tissues. Throat externally exceedingly painful to touch. Diagnosed as phlemagsia tonsillitis, with probable beginning paritonsillar abscess. Painted it with a 20% solution of nitrate of silver, and gave one grain of calomel every hour for six hours, followed by a saline and 5 grains of salycilate of soda.

May 6th. Temperature normal; pulse 80. Felt much better. General condition of throat much better, but right side still slightly swollen and inflamed. May 9th. Severe headache and pain in muscles, but especially in back of neck. Temperature 100.3 F., pulse, 120. Throat much the same, except that the peritonsillar tissue was of darker hue and more swollen. Suspecting pus, a puncture was made, but could find none, even on deep exploration. During the next two days the throat symptoms subsided, but the patient still complained of pain, headache, slight nausea and vertigo on lifting head. Temperature ranged from 99 to 100 degrees F. Took a couple slides of mucoserous exudation from tonsil. Took blood for Widal test.

May 13th. Pulse ranged from 120 to 180; temperature 100 to 103 degrees F. Patient developed positive coma, muttering delirium and spastic condition of muscles of neck and back. Respiration was short and rapid, pulse feeble and jerky. Seen by Dr. A. R. Robinson, who confirmed the diagnosis of leptomeningitis. Was now administering bromides and

morphine phyodermatically; ice bags and sponge baths.

Patient continued in this way until May 15th, with intervals of consciousness, when she complained constantly of photophobia and headache, and she developed a bad cough. Examination showed bronchial breathing over both lungs. Pulse 140, temperature 100 degrees F. Began small doses of strychnin sulphate.

May 17th. Attention was called to white swelling on shoulder, which on palpation proved to be a large abscess in joint. This day administered antistreptococcic serum of Board of Health. Temperature fell slightly, and patient seemed to recover consciousness, but again relapsed into coma.

May 18th. About a quart of pus evacuated by Dr. J. A. Bodine. Second dose of serum without results.

May 19th. Evacuated abscess in right hip, and on May 21st in left hip. These abscesses were thoroughly drained, and washed daily with normal salt solution. Rectal enemata of normal salt solution were administered every four hours. Breath became fetid.

Until May 29th the patient continued in coma, with temperature from 100 to 103 degrees F.; pulse from 140 to 160, and respiration from 30 to 40, with periods of muttering delirium. On May 29th, physical signs of pulmonary edema; patient suddenly seized with a violent struggle to cough, evacuated through the mouth about half a pint of pus, and died.

NEWS, NOTES AND ANNOUNCEMENTS.

An American Congress on Venereal Diseases.—In pursuance of a resolution adopted at the Saratoga meeting of the American Medical Association a joint committee from various interested sections of the American Medical Association has been appointed by the president of the association to consider the subject of the prophylaxis of venereal diseases and to present to the American Medical Association a plan for a national meeting, similar to the International Conference for the Prophylaxis of Venereal Diseases, which meets again this year in Brussels, under the auspices of the Government of Belgium. The Committee on Prophylaxis of Venereal Diseases consists of Dr. Henry D. Holton, chairman, Brattleboro, Vt.; Dr. Ludwig Weiss, secretary, 77 East Ninety-first St., New York; Dr. George M. Kober, 1600 T Street, Washington, D. C.; Dr. W. H. Sanders, Montgomery, Ala.; Dr. L. Duncan Bulkley, 531 Madison Avenue, New York City; Dr. Frank H. Montgomery, 100 State Street, Chicago, Ill. The peculiar social, racial and political conditions of our country are so different from those obtaining in Europe that they necessitate an expression of solely American ideas on this mooted question, from both a socio-economic and a sanitary point of view. The committee desires the support of the medical profession and solicits expressions of opinion, and would be glad of personal correspondence from those supporting the movement and who will contribute by papers, etc., to make it a success in case the House of Delegates should favor the holding of such a Congress.

Death of Dr. Vincent of Orwell.—Dr. W. H. Vincent, a prominent physician in Orwell, died of pneumonia at his home March 6, aged 45 years. Dr. Vincent had been ill for about two weeks, but failed rapidly the last few days of his life. He had practiced in Orwell for the last 20 years, and will be greatly missed. He was a member of the legislature of 1902. He is survived by three small children. Mrs. Vincent died about a mouth ago. The oldest child is ten years old and the youngest is two months old. The funeral was held Sunday afternoon, March 8th, at 2 o'clock, just six weeks from the date on which Mrs. Vincent was buried.

California Would Bar Out Consumptives.—The special committee on tuberculosis appointed at the last session of the legislature has decided against the proposition for the establishment of a state hospital for the care of tuberculous patients. It also decided to recommend in its report to the legislature the adoption and rigid enforcement of more stringent laws governing the admission to California of persons afflicted with tuberculosis.—*Jour. A. M. A.*

The Aesculapian Club.—A meeting of the Aesculapian Club was held at the Hotel William, Milford, Mass., Wednesday, March 4, 1903, at 3 o'clock in the afternoon.

The subject considered at this meeting was a comparative study of the treatment of pneumonia.

Four papers were read (see this issue) presenting the subject from the standpoint of the different schools and systems of practice, as follows:

The Regular Treatment of Pneumonia, by W. W. Browne, M. D., of Blackstone.

The Homeopathic Treatment of Pneumonia, by Edgar L. Fisher, M. D., of Worcester.

The Eclectic Treatment of Pneumonia, by Pitts Edwin Howes, M. D., of Boston.

The Dosimetric Treatment of Pneumonia, by Wm. L. Johnson, M. D., of Uxbridge.

The papers were unusually interesting and their reading was followed by a free discussion opened by Dr. J. M. French of Milford, which was enjoyed by all present.

Dr. N. C. B. Haviland presided. The meeting was a unique affair and proved a great success from every standpoint.

An old Scotchman, not feeling very well, called upon a doctor to ask for advice as to his diet and daily habits. The doctor advised him to give us spirits altogether, and added some general injunctions as to the nature of the food. When the Scotchman rose to go, the doctor turned to him and said: "I will trouble you for half a crown. That is my charge for giving advice." "Oh, maybe, maybe," answered the patient, "but I'm nae gaun to tak' it!"—*Alkaloidal Clinic.*

Eucalyptus in Diabetes.—Faulds, in *Glasgow Med. Jour.*, has employed with success an infusion of eucalyptus in the treatment of diabetes as follows:

R. Eucalyptus flores (dried) gr. iv 16
Aqua dr. vi 180.

M. Fiat infusum. Sig.: One such draught to be taken twice daily.

He states that he obtained good results in fifteen out of sixteen cases. In one case, a girl of 18, in which there were sixty grains of sugar to the ounce of urine passed, after four days' treatment only one grain to the ounce was passed, and on the sixth day none. He, however, thinks it of service only in those cases due to gout, overindulgence in food, or cold. It does not seem to be of service in those cases dependent on vasomotor disturbance affecting the blood supply to the hepatic cells as no improvement was shown in those cases. Eucalyptus oil or eucalyptol will not produce the same results as the infusion.—*Jour of the A. M. A.*

Differentiation of the Typhoid Colon and Dysentery Bacilli.—Martin Klopstock (*Berliner klinische Wochenschrift,* Aug. 25, 1902) has combined the two media recommended by Barsiekow in an endeavor to evolve a medium which would give a satisfactory differentiation between typhoid, colon, and dysentery bacilli. For the combined media, one per cent of lactose is added to the neutroseNaCl solution, which contains one per cent of glucose. In this medium, after twenty-four hours incubation, the dysentery bacillus produces acid, but no coagulation; the typhoid bacillus produces acid, clouding, but no coagulation; the colon bacillus produces acid and complete coagulation.—*Med. Record,* September, 1902.

The Vermont Medical Monthly.

A JOURNAL OF REVIEW, REFORM AND PROGRESS IN THE MEDICAL SCIENCES.

H. Edwin Lewis, M. D., *Editor.* Frank C. Lewis, M. D., *Business Manager.*

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F. S. Hutchinson, M. D. *Enosburg Falls, Vt.*

Burlington, Vt., March 25th, 1903.

EDITORIAL.

PREMATURE ANNOUNCEMENT OF MEDICAL DISCOVERIES.

The recent announcement by the New York Press of a new method of treating septicemia, particularly puerperal, was certainly unfortunate. It is to be regretted that the recovery of one case through the intravenous injection of formalin should inspire such glowing accounts and give rise to such sweeping deductions. The premature character of the conclusions that have been jumped at, do not redound to the dignity and solidity of scientific medicine. Indeed it smacks of charlatanism and self-elevation quite as strongly as many of the bombastic statements that come from those whose acts and methods have already placed them outside the pale of honest, conservative medicine, and from whom nothing else is expected.

It is time that those of the medical profession who respect the substantial, conservative tenets of scientific medicine, placed themselves squarely before their fellows in regard to premature announcements. If medical science is to grow more exact and less open to the criticism of empiricism and indefiniteness, the attitude of the profession must be such as to discourage newspaper notoriety in regard to medical research.

If this evil was not so evident in the "high places" of medical affairs the bad tendencies and results would not be so real and far reaching. But when those who are looked up to as leaders in the ethics and honor of medicine, in the highest sense, permit illustrated newspaper reports of themselves and their operations (as has recently happened), or when the newspapers are first allowed to chronicle so-called discoveries, like the recent identification of *Shiga's bacillus* at Baltimore, or the injection of formalin in septicemia, in New York, it can well be said, "O tempora! O mores."

Publicity is a good thing. No one with a grain of sense wishes to surround medical science with the mysticism and obscurity that was well nigh characteristic a few generations ago. But a fact or a discovery to mean the most to the discoverer as well as to the science it bears relation to, should be so well substantiated by logic or facts, that it cannot be contradicted. The world has theories enough, and in this matter-of-fact age, true progress demands the substantiation or refutation that can only be given by facts. Science as we know it to-day, does not accept a part for the whole, and methods to win recognition must be so thorough, so painstaking and so complete, that the woof of facts woven, must have no flaws in its fabric. Ample observation, thorough experimentation, conservative deduction; these three provide the measure for all scientific discoveries, and no fact or discovery should be given to the world as such until it measures up to these standards.

This principle is not fogyism, nor an evidence of unprogressiveness. It is for the elevation of medical science, from the realm of inaccuracy and unsoundness to the higher plane of exactness and logic. Men who do

not live and practice on these tenets, obstruct progress; those who do, no matter how liable to the charge of fogyism and conservatism, are the real army who go slow but establish a base that can always go forward and never has to retreat.

The Treatment of Pneumonia.—We deem ourselves extremely fortunate in being able to present to our readers in this issue four excellent papers on the treatment of pneumonia by the methods in vogue by practitioners of the different schools. Pneumonia is such a problem from a therapeutic standpoint, that we cannot learn too much about the various forms of treatment. We may not be in harmony with any of the ideas presented, but they will all certainly be found interesting and instructive.

It is a sad fact that pneumonia is rapidly increasing and every year becoming a more prominent factor in our death rate. All forms of treatment that we have to-day are inefficient, or we would have but one! But it is well to know what the various treatments are, for from them all we may be able to build up one that may prove more satisfactory in individual hands than any heretofore used. No fact from whatsoever source is so insignificant that it should not be fully weighed and tested. It is the small things that have always led to the larger discoveries in medicine and it may be this way in regard to pneumonia. Certainly the "New Captain of the Men of Death" is so ruthless a warrior, that no point of offense or defense should be overlooked.

The Care of Drug Habitues.—It must be apparent to every physician that the number of people addicted to drugs is rapidly increasing. Dr. A. P. Grinnell, in a recent valuable paper, showed that even in temperate Vermont there is an enormous consumption of dangerous drugs like morphine, various forms of opium and cocaine, entirely independent of what is properly used by physicians. It is hard to account for the increase of drug fiends. Increased familiarity with the action of drugs and decrease in their cost are probably prime causes. But in considering the subject the question is not so much why, as what are we going to do about it? Every physician who has to wrestle with the problem of drug addiction as he finds it in his practice, and all of us do, must feel that the situation is a grave one.

It is out of the question to expect home treatment to bring about a cure of these unfortunates. In spite of the best of care and supervision, the patient will find opportunities to get his drug, and no one can deny that proper discipline and control are impossible under such conditions. Institutional treatment alone offers the certainty of early success that is so desirable, for every time a patient lapses, his ultimate cure is made more uncertain.

Not all institutions are of the same value. Some are "fakes" pure and simple, and simply designed to defraud an unfortunate class. But there are a number of first class institutions in the United States, under the control of medical men who have made a special study of the subject and are competent to treat such cases. The Oppenheimer Institute of New York, is one of the best institutions of its class, and appeals particularly to the medical profession because of the physicians connected with it. Most excellent reports are current of the work being done by this institution and the success they obtain in the most intractable cases is little short of marvelous. It deserves every commendation if only half of the good things we hear are true.

A few good institutions of this class spread over the country and more stringent laws relative to the sale of dangerous drugs only on the prescription of legally qualified physicians, offer

the greatest hope in mitigating the growing evil of drug addiction. The subject is certainly worth thinking about.

MEDICAL ABSTRACTS.

Tissue Changes Induced by the X-ray. —A paper giving the results of investigations concerning these changes was read by Dr. A. G. Ellis. Four cases were reported, in three of which microscopical studies were made both before and after exposure to the X-ray. The most interesting changes were noted in a scirrhous carcinoma of the breast, a portion of which had been given eight 10-minute exposures at intervals of two days, the remainder being covered by a lead shield. Softening of the exposed portion was noted after the fifth exposure. The entire breast was removed by operation and two portions studied. The softening was found to be due to a cavity 1.5 by 1 cm. in dimensions, this containing a fluid showing many large cells, the protoplasm of which was almost entirely filled by fat granules. Surrounding the cavity were necrotic portions of the tumor, the epithelial cells being granular and broken with destroyed outline and fragmented or entirely degenerated nuclei. The same degeneration in varying degrees was noted in the other case, two squamous epitheliomas and an endothelioma. But little change was noted in one of the epitheliomas which contained a very large number of "pearls." A summary of the cases showed: (1) Necrosis of cells and trabeculæ of varying degree; (2) increase of elastic tissue in the three cases examined both before and after exposure; (3) a tendency to occlusion of vessels by deposits on their inner surfaces. This was marked in some instances, slight in others; (4) practically entire absence of infiltration by polymorphonuclear leucocytes. In regard to the claim of Beck and others that the changes in X-rayed tissue are due to obliterative changes in blood vessels, the statement was made that while these changes probably occur they are not in proportion to the necrosis. This suggests the probability of their being results of the same influence instead of cause and effect. The presence of immense numbers of cocci and bacilli in one of the cases after 20 exposures would argue against the bactericidal power of the X-ray. Unsatisfactory clinical results and slight microscopic changes in the epithelioma containing numerous "pearls" emphasizes the importance of cutting or curetting away diseased tissue whenever possible before X-ray treatment is begun.—*Med. News,* Nov. 22, 1902.

Pneumonia.—Dr. H. G. Carrington (*Med. Council,* Feb. 1903) says the following in concluding an article on Pneumonia: "But, after all, it is the particular case which should determine our treatment, and not some theory. If your patient is suffering from a weak heart, give him heart tonics and stimulants; if he is vigorous and full of blood, depletion is the remedy for him; if the typhoid condition prevails, stimulants to hold him up until Nature has done her part in removing the obstruction to breathing. Above all things abhor a fad, as Nature is opposed to a vacuum. It is but a poor commentary on the intelligence of the medical profession to recall the fashions which have prevailed in medicine, not only in the long-distant past, but in the more recent times, when men are supposed to be better educated and more enlightened than in the dark past. We must remember, however, that in that past some of the most distinguished members of the profession lived and left legacies of wisdom for all succeeding time. Many of us, I fancy, would rather have Sydenham for our doctor than some of the newly-equipped, up-to-date young graduates, who know all the microbes by name and at sight."

Creosote and Creosotal in Pneumonia.—Last March, Dr. I. L. Van Zandt, of Fort Worth, Texas, (*Medical Record,* October 11, 1902,) sent out a number of circulars to many medical journals and to a few individuals, asking the following questions of those who had used creosote or carbonate of creosote (creosotal) in the treatment of pneumonia: (1) Do you believe creosote ever aborts pneumonia? (2) Do you believe the majority of cases are mitigated by it? (3) Have you ever found cases which, having plenty of time, were entirely influenced by it?

In response he had over seventy letters and cards and five verbal statements, a large proportion of which he tabulated. To the first question 37 physicians, reporting 762 cases, said "yes;" 15, reporting 187, said "no;" and 19, reporting 177, failed to answer. Therefore, of those reporting, a little over two-thirds admitted the abortive effects of creosote. To the second question, 57, reporting 1,022 cases, answered "yes;" 2, reporting 10 cases, said "no," and the remainder failed to answer. To the third, 23 said "yes;" 31, "no;" and 16 failed to answer.

Of 1,130 cases reported, 56 were fatal, 24 of them being accounted for as follows: 12 were complicated, 9 others were over the age of 67 (in some instances complicated), 3 were alcoholic (of which two were complicated); 1 was far advanced when treatment was begun, and 1 used "creosote products." The mortality in this series is a little over 5 per cent; and, as the recognized death-rate is 25 per cent, the author claims that the treatment saved 226 lives.

Van Zandt refers particularly to Prof. W. H. Thomson's report of cases treated with carbonate of creosote in the Roosevelt Hospital. The loss here was 1 in 13, or about 5.5 per cent. A condensed report for five years from this institution gives an average death-rate of 35.6 per cent.

These figures confirm the conclusions of his former article, that a large per cent of pneumonia is cut short or aborted; almost all the rest mitigated, and the remainder or a very small per cent not affected by the remedy. He thinks the use of creosote or carbonate of creosote in the treatment of pulmonary affections is one of the greatest life-saving discoveries of the 19th century.—*Buffalo Med. Journal.*

STRAY THOUGHTS.

Be Patient with the Boys.—I have a profound respect for boys. Grimy, ragged, tousled boys in the street often attract me strangely. A boy is a man in the cocoon—you do not know what it is going to become—his life is big with possibilities. He may make or unmake kings, change boundary lines between states, write books that will mold characters, or invent machines that will revolutionize the commerce of the world. Every man was a boy—it seems strange, but it is really so. Wouldn't you like to turn Time backwards, and see Abraham Lincoln at twelve, when he had never worn a pair of boots—the lank, lean, yellow, hungry boy, hungry for love, hungry for learning, tramping off through the woods for twenty miles to borrow a book, and spelling it out, crouching before the glare of the burning logs?

Then there was the Corsican boy, one of a goodly brood, who weighed only fifty pounds when ten years old, who was thin and pale and perverse, and had tantrums, and had to be sent supperless to bed or locked in a dark closet because he wouldn't "mind!" Who would have thought that he would have mastered every phase of warfare at twenty-six, and when the exchequer of France was in dire confusion, would say, "The finances? I will arrange them."

Distinctly and vividly I remember a squat, freckled boy who was born in the "Patch," and used to pick up coal along railroad tracks in Buffalo. A few months ago I had a motion to make before the Court of Appeals at Rochester. That boy from the "Patch" was the judge who wrote the opinion granting my petition.

Yesterday I rode horseback past a field where a boy was plowing. The lad's hair stuck out through the top of his hat, one sus-

pender held his trousers in place, his form was bony and awkward, his bare legs and arms were brown and scratched and brier-scarred. He turned his horses just as I passed by, and from under the flapping brim of his hat he cast a quick glance out of dark, half-bashful eyes, and modestly returned my salute. When his back was turned, I took off my hat and sent a God-bless-you down the furrow after him.

Who knows? I may yet go to that boy to borrow money, or to hear him preach, or beg him to defend me in a lawsuit; or he may stand with pulse unmoved, bare of arm, in white apron, ready to do his duty, while the cone is placed over my face, and night and death comes creeping into my veins.

Be patient with the boys—you are dealing with soul-stuff—Destiny waits just around the corner.

Be patient with the boys!—*Elbert Hubbard, in the Philistine.*

A DOCTOR'S PRAYER.

To live to learn;
And find each close of day,
Myself a little nearer truth,
A little farther on my way.

A little life,
But give me, God, the pow'r
To conquer self and all the doubts
That rise from hour to hour.

And give me strength,
When problems try my soul,
To know the right and do the right
With honesty my goal.

Nor let me fail
To do the best I can
To overcome earth's greatest curse,
The base ingratitude of man.

H. E. L.

A NOBLE LIFE.

A noble life is not a blaze
Of sudden glory won,
But just an adding up of days
In which good work is done.
—*Frank H. Sweet in Independent.*

BOOK REVIEWS.

The 1903 Standard Medical Directory.—That the publication of a high-class Medical Directory—correct, comprehensive, attractive and influential—is appreciated by the profession is proven by the cordial reception given the 1902 Edition of the Standard Medical Directory of North America and the promising auspices attending the 1903 edition now in active preparation with the aid, so the publishers state from actual computation, of nearly twenty-five thousand correspondents representing every State, province, county, city and town of any size in North America. The new volume will consist of about 1300 pages comprising complete Directories respectively of the Physicians of all North America, colleges, societies, hospitals, sanitariums, mineral springs, publications and in fact everything related to medicine. The new features (including an Alphabetical Index of Physicians with Post Office Addresses and Rosters of Practitioners of the Specialties) will, it is stated, add about one-third to the volume of the work.

Book on the Physician Himself and Things That Concern His Reputation and Success, by D. W. Cathell, M. D.—The Twentieth Century Edition. Being the Eleventh Edition Revised and Enlarged by the Author and his Son, William T. Cathell, A. M., M. D. Pages 411, Royal-Octavo, Extra cloth, $2.50 net, delivered. Philadelphia, F. A. Davis Company, Publishers, 1914-16 Cherry Street.

A book that should be in the hands of every physician on entering the practice of medicine for its perusal cannot help but make him a broader, better and more useful man and citizen. It will also make him familiar with the countless things that go to make a successful physician. Ordinarily a young doctor enters upon his career with a sublime ignorance of the amenities of his profession. As a consequence his lot during the first few years of his

professional life is not an easy one. But with a book like this to familiarize him with medical usages, there is no excuse for such ignorance, and what this entails.

We commend the book highly for its interesting text, its high literary value, and above all, for its practical usefulness.

CORRESPONDENCE.

Editor Vermont Medical Monthly:

Dear Sir:—Three times during the last half century medical manifestoes have been issued giving the opinion of physicians on alcohol. The first was issued in 1839, and was signed by 86 persons. The second in 1847, and was signed by 2,000 physicians, and the third appeared in 1871, with the signatures of over 4,000 physicians, including the names of many leading physicians in all parts of the world. A fourth declaration of opinions is now being circulated for signatures, and reads as follows:

The following statements have been agreed upon by the Council of the British Medical Temperance Association, the American Medical Temperance Association, the Society of Medical Abstainers in Germany, and leading physicians in England and on the continent. The purpose of this is to have a general agreement of opinions of all prominent physicians in civilized countries concerning the dangers from alcohol, and in this way give support to the efforts made to check and prevent the evils from this source.

In view of the terrible evils which have resulted from the consumption of alcohol, evils which in many parts of the world are rapidly increasing, we, members of the medical profession, feel it to be our duty, as being in some sense the guardians of the public health, to speak plainly of the nature of alcohol, and of the injury to the individual and the danger to the community which arise from the prevalent use of intoxicating liquors as beverages.

We think it ought to be known by all that:

1. Experiments have demonstrated that even a small quantity of alcoholic liquor, either immediately or after a short time, prevents perfect mental action, and interferes with the function of the cells and tissues of the body, impairing self-control by producing progressive paralysis of the judgment and of the will, and having other markedly injurious effects. Hence alcohol must be regarded as a poison, and ought not to be classed among foods.

2. Observation establishes the fact that a moderate use of alcoholic liquors, continued over a number of years, produces a gradual deterioration of the tissues of the body, and hastens the changes which old age brings, thus increasing the average liability to disease (especially to infectious disease), and shortening the duration of life.

3. Total abstainers, other conditions being similar, can perform more work, possess greater powers of endurance, have on the average less sickness, and recover more quickly than non-abstainers, especially from infectious diseases, while they altogether escape diseases specially caused by alcohol.

4. All the bodily functions of a man, as of every other animal,are best performed in the absence of alcohol, and any supposed experience to the contrary is founded on delusion, a result of the action of alcohol on the nerve centers.

5. Further, alcohol tends to produce in the offspring of drinkers an unstable nervous system, lowering them mentally, morally, and physically. Thus deterioration of the race threatens us, and this is likely to be greatly accelerated by the alarming increase of drinking among women, who have hitherto been little addicted to this vice. Since the mothers of the coming generation are thus involved the importance and danger of this increase cannot be exaggerated.

Seeing, then, that the common use of alcoholic beverages is always and everywhere followed, sooner or later, by moral, physical and social results of a most serious and threatening character, and that it is the cause, direct or indirect, of a very large proportion of the poverty, suffering, vice, crime, lunacy, disease, and death, not only in the case of those who take such beverages, but in the case of others who are unavoidably associated with them, we feel warranted, nay, compelled to urge the general adoption of total abstinence from all intoxicating liquors as beverages as the surest, simplest, and quickest method of removing the evils which necessarily result from their use. Such a course is not only universally safe, but is also natural.

We believe that such an era of health, happiness, and prosperity would be inaugurated thereby that many of the social problems of the present age would be solved.

This declaration has already received the signatures of over 1,000 physicians in all parts of the country. I have been appointed chairman to present this manifesto to American physicians for their endorsement. I should be very glad to receive the name, title and address of any physician who is willing to aid by his signature to correct public sentiment and assist in the prevention of one of the great evils of the age. This is purely a scientific effort for the purpose of having a general consensus of opinion of the leading physicians of the world, and it is assumed that American physicians are equally enthusiastic and prompt to lend their signatures to this statement as in the wine-drinking countries of Europe. A postal card with address and title is earnestly solicited from every medical man who would like to be represented in this great movement for a clearer comprehension of the subject. Address

T. D. Crothers, M. D.,
Hartford, Conn.

NEWER REMEDIES.

Antiphlogistine *vs.* Pneumonia.—How does Antiphlogistine abort pneumonia, and further, how does Antiphlogistine resolve pneumonic consolidation? hese queries are very often made by acute observers who have attended case after case of pneumonia with favorable termination under the influence of Antiphlogistine.

The action of Antiphlogistine is dependent upon well-defined physiological laws,—that a most important reflex association exists between the vessels of the skin and the underlying tissue; that, when the superficial blood-vessels dilate, the deep-seated ones contract. Continuous stimulation of the cutaneous reflex maintains continued relief by persistent contraction of vessels in the inflamed area of lung tissue. Such governing action prohibits extension of the products of inflammation through infiltration by effecting rapid absorption and elimination of toxines. The infected area becomes self-limited as the adjacent blood-vessels supply well-aerated blood to compensate for the surcharged venous blood due to pulmonic consolidation. Under reflex control Antiphlogistine resolves hepatization of lung tissue and through osmosis and dialysis assists the superficial blood-vessels and lymph spaces to drain the hyperaemic parts by direct capillarity. Lessened blood-pressure prevents administration of whipping medication to the over-burdened heart.

Quick and Sure and Time Tried.—No doubt many of our doctor friends will recognize in the following, from Charles B. Forsyth, M. D., (Bellevue Hospital Medical College, New York City), dated Alexandria Bay, N. Y., January 6th, 1903—an expression which will, in many instances, recall their own experience. He says: "I can say no more than

that I have used Antikamnia Tablets since I began practicing medicine. Several times I have switched to other preparations, but I invariably come back to Antikamnia Tablets, when I want quick and sure results."

The Antikamnia Chemical Company, St. Louis, Mo., is an old and responsible concern, and any of their medicinal specialties may be depended upon, to be just as represented. The latest additions to their list of preparations are "Antikamnia and Heroin Tablets" and "Laxative Antikamnia and Quinine Tablets." Send to them for samples, mentioning VERMONT MEDICAL MONTHLY.

A TRIED AND VALUED FRIEND.—One of the leading practitioners in Nebraska writes: "My experience with Maltine dates over fifteen years, and I have ever found it a tried and valued friend. In the large group of diseases where malnutrition is a most conspicuous feature, Maltine plain or combined is the *sine qua non* of treatment.

I cannot speak too highly of Maltine with Cod Liver Oil. Your vacuum prevents rancidity and removes the odor and taste of the oil, which, with its reliability, make it the peer of any oil preparation on the market."

OBSTETRICAL PRACTICE.—In contrasting modern obstetrical practice with the methods formerly in vogue, one cannot fail to be impressed with the greater care bestowed upon the parturient woman. This is shown by the scrupulous cleanliness and antiseptic precautions recommended in every modern text-book, as well as the earnest efforts made to relieve the pangs of childbirth. The latter point is one of great importance, since it is probable that women of the present generation, owing to various causes, and especially to a less robust physique and a more sensitive nervous system, are less liable to endure the pains connected with parturition. It is on this account that the labor pains are in many instances less effective and more intensely felt. Under these circumstances, Hayden's Viburnum Compound becomes a real blessing to many parturient women. During the first stage it exerts a soothing effect, relieving nervousness and restlessness when given in doses of one dessertspoonful, followed every half hour by a teaspoonful. In the second stage its action is that of a uterine tonic, increasing the efficiency of the pains, and here it may be given in teaspoonful doses whenever required for that purpose. In the third stage it satisfactorily replaces ergot, being equally efficient and devoid of its unpleasant sequelae. One of the striking differences in the effects of ergot and Hayden's Viburnum Compound during the period of parturition is that while the former produces a continuous contraction of the uterus with scarcely any intervals between the pains, Hayden's Viburnum Compound simply reinforces the strength of the uterine contractions without otherwise changing their character. This enables it to be employed when ergot would be dangerous both to the mother and child.

Extract from an article entitled "The Heart in Typhoid and Malarial Fevers," by Dr. S. Aug. Freund, Berlin, Germany, in November Number of *Medical Brief*.

Have I a case of fever? Then I do not lose sight of the enteric disorder; and yet with my thoughts upon that, I still remember that there is a heart that is liable, at any hour, to complicate matters. That heart calls for the bromidia. It prevents the irritation, the poisoning. It cures the irritation, the poisoning. I can not dispense with it. How did I learn this? Partly (as I have outlined) by experiment, and partly by surgical experience. What do I mean by surgical experience? This. It is after the shock, after the operation may be, after the fever invades. What is that which we say? "All will go well, unless heart failure should

ensue." We all know that expression. It is heard every day. But since I began to employ bromidia for the pain, this has been eliminated. I never dread "heart failure" when I administer bromidia in my surgical cases. This is tantamount to saying that I never dread and never fear it, as in all surgical cases, without an exception, I give bromidia. Having had such results there, there should be no need to ask where the principal lesson was learned in this matter of the fevers. I would not treat a surgical case and omit bromidia. I would not treat typhoid or typho-malarial fever, and omit bromidia.

Sanmetto in Urethritis and Enuresis. —Having had elegant results from the use of Sanmetto in genito-urinary diseases for quite a time, I am more fully convinced of its curative properties since having had a boy, aged twelve, call at my office, who had been suffering from obstinate case of urethritis with enuresis. He stated that he had consulted two or three doctors, with no relief, and if he could be cured, cure him, and if not, not to give him anything. So I put him on the following:

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every four hours, with rest in bed and proper diet, and in ten days he was well and had no symptoms of either of the above troubles. Henceforth I shall know where to get a specific for such cases. I have always had good results from Sanmetto.

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I have used almost everything that has been recommended for Neurasthenia, and can say that Neurilla excels all others, and gives more satisfactory results. I shall continue to prescribe it in cases where it is indicated.

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The same spirit of conservatism that opposed the introduction of modern weapons in warfare, of rifled guns, breechloaders and smokeless cannon; and of modern methods of shipbuilding, the introduction of steam, the propeller, the compound engine, iron armor, etc., is still to be found combating the replacement of old-fashioned drugs by the alkaloids, in ready-to-use granule and tablet forms. Nevertheless the latter will prevail, because they are best, as shown by the following characteristics:

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6. Their ease of administration and the absence of unpleasant and irritating effects.

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9. They do not deteriorate with age or in any climate, are easy to use, pleasant, safe and sure.

10. They give effects impossible to obtain from the old preparations.

11. Anyone of ordinary intelligence can be taught how to give them and when to stop. Trained nurses while always desirable are not absolutely essential.

Everone of these statements can be verified by argument or by demonstration. The only question remaining is, whether one is to be ranked on the side of mossy conservatism or of intelligent progress.

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STYPTICIN IN UTERINE DISEASES.—Dr. Hirsch has studied the effect of stypticin (cotarnine hydrochlorate) in uterine diseases, and advises his patients to take the remedy four times daily for four days before the date of the expected menstruation, and for four days during this period. The effect of the remedy increases from month to month, but it must not be discontinued as soon as the patient improves. If continued for some time, the hemorrhages grow less and less abundant. The drug may also be successfully used in dysmenorrhea, as it has some of the properties of hydrastis, while it is far less disagreeable to take. It possesses the advantage over ergotin in that it acts well when given by mouth, whereas ergotin is administered as a rule subcutaneously or by rectum. Stypticin has, in addition, a soothing effect, especially in cases of dysmenorrhea.—*Med. Council.*

LEMON JUICE VS. THE TYPHOID BACILLUS.—The announcement of Dr. Asa Ferguson's discovery that lemon juice has the power to destroy the typhoid bacillus seems to have created quite a little stir in some circles. The matter was at once put to test by the Health Department of Chicago, with apparently fully corroborative results. Bouillon was inoculated with the typhoid bacillus, put in an incubator at 90° for twelve hours, at the end of which period some lemon juice was added; plates inoculated with this boullion showed no growth at the end of twenty-four hours. Plates inoculated with bouillon to which no lemon juice had been added showed abundant growth, under the same conditions.

While it behooves us to remain on guard and not become prematurely enthusiastic, we must also remember that there is nothing preposterous in Dr. Ferguson's statement. There are many bacterial diseases in which acids play a useful part. Many physicians, for instance, claim a curative action for sulphuric acid in Asiatic cholera and in dysentery.—*Merck's Archives.*

ON THE TREATMENT OF ULCER OF THE Stomach with Olive Oil.—K. Walko (*Cent. fur innere Med.*, Nov. 8, 1902), states that he has had most excellent results from the use of olive oil in gastric ulcer. The oil has a tendency to reduce the acidity of the gastric juice, it quiets irritation and it makes the bowels more regular. It also acts as a protective for the ulcer. With fresh ulcer, Walko gives the oil by the dessertspoonful and then lets the patient wash out his mouth with any pleasant mouth-wash. The dose is gradually increased to 50 cc. If the patient has much nausea from this, the author gives from 100 cc to 200 cc, in fine emulsion, through the stomach-tube. The treatment would, he thinks, be just as useful in duodenal as in gastric ulcer. He reports a series of cases that demonstrate the effects of the treatment.

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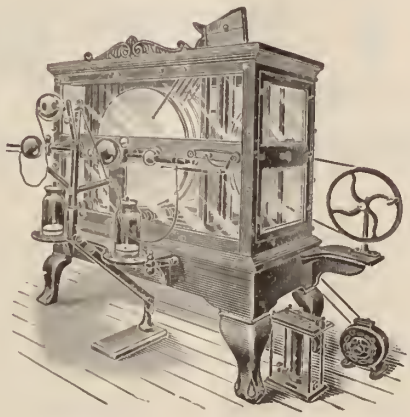

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The Vermont Medical Monthly

Vol. IX. April 25, 1903. No. 4.

ORIGINAL ARTICLES.

ARTIFICIAL INFANT FEEDING.

A Lecture Delivered Before the Students of the Medical Department, University of Vermont.

By Godfrey R. Pisek, M. D...Professor of Children's Diseases.

Artificial infant feeding is a subject about which much confusion exists. Many widely differing theories and schemes of feeding have been brought forward, each claiming to be scientific because imitating nature. The real cause of this confusion is the difficulty in interpretating nature. In addition to the schemes for scientific feeding there are a great many proprietary infant foods on the market which are claimed to be as good or better than breast milk by their manufacturers. As you will be called upon to pass judgement on all methods of feeding when you are in practice, I shall try to give you a general idea of the state of the entire subject of artificial infant feeding. You will then be able to keep up with any advances that may be made and also be able to answer intelligently many of the innumerable questions that will be asked you by mothers.

HISTORICAL.

We will take up first the History of Infant Feeding.

When a mother could not nurse her baby it was only natural that she should use cow's milk or the milk of some other animal, but in many of the cases the infant could not digest it even if diluted. Then there appeared a great many artificial infant foods made principally from cereals; later on condensed milk appeared and was quite generally used. It was then thought that as the curds of cow's milk caused the trouble, if they were peptonized or digested the cause of the trouble would be removed. While all these substitutes for breast milk seemed to succeed for a while, in the long run they proved to be unsatisfactory. Then it was discovered that cow's milk contained innumerable bacteria while breast milk was nearly free of bacteria, and sterilization of milk (heating to 212° F.) was generally advocated and adopted. This was a great advance, but it has been shown recently that infants can and do take food with hundreds of thousands of bacteria to the c. c., without apparent inconvenience. Sterilized milk was not entirely satisfactory owing to its cooked taste and as it was found that the bacteria could be killed at a much lower temperature than 212° F., pasteurization or heating milk from 150°-167° F., was introduced. At the present time there are some teachers who are decrying sterilization and pasteurization of milk, claiming that only fresh milk that contains few bacteria should be used, and as stated before it has recently been found that many infants are not inconvenienced by large numbers of bacteria in their food, it would seem that heatin milk is unnecessary. However, a baby may not do well on unheated food and yet do well on the same food after it has been heated, so the heating of the food may do something to the milk besides killing the bacteria.

In comparing analyses of human milk and cow's milk it was found that they both contained fat, proteids, sugar, mineral matter and water, but in different proportions, there being more proteid and mineral matter in cow's milk

than in human milk, the other ingredients being about the same in each. It was also noticed that breast milk turned red litmus paper *blue,* while cow's milk was either neutral or slightly acid to litmus. On the basis of these observations milk was diluted with water to reduce the quantity of proteid. This reduced the quantities of fat and sugar to below those found in human milk; to remedy this disproportion thin cream or milk, extra rich in fat was diluted and sugar was then added to the diluted milk, to make the composition of the diluted cow's milk approximate that of breast milk. It still lacked something to make it turn red litmus paper blue, so a small quantity of lime water was added for this purpose. So called "Humanized Milk" was the result.

This was an improvement on the use of plain or diluted cow's milk, but was not by any means entirely satisfactory. It was then observed that human milk varied in composition and the idea was brought out that each infant received from the breast a particular milk and that successful feeding lay in adjusting the quantities or percentages of fat, proteids, sugar, mineral matter and water in the food to suit the infant's digestion. Thus arose percentage feeding. The food had to be put up at milk laboratories or prescriptions and at a great expense to the family. This method was heralded abroad as the acme of perfection of infant feeding. However, this teaching has been vigorously combated by many. Improved methods of chemical analysis showed the composition of both human and cow's milk to be different from what had been supposed, so of course the data that had been previously obtained could not now be called accurate. It was shown that milk contained many kinds of proteids and that these proteids were peculiar to each kind of milk. Under the pressure of these objections an attempt was made by the advocates of percentage feeding to adjust the quantities of the different forms of proteid of milk, supposed to be two, casein and albumin, as well as those of fat, sugar and water. Very recently it has been shown that there are at least *five* forms of proteid in milk, so that a new problem of imitating nature arises. *The weak point of this chemical system of feeding is that every advance in our knowledge of the chemistry of milk shows that the whole scheme must be recast, for it is based on an imperfect knowledge of the chemistry of milk.*

On the other hand there are teachers who have persistently insisted that the difficulty of feeding cow's milk to infants lies in the fact that it was not intended by nature for infants, but for calves, and that although milk of *some* kind is needed for an infant, it must be adapted to the infant's digestive tract by mechanical and not by chemical means.

These teachers have advocated diluting the milk with various gruels made from cereals, and the strongest advocates of the chemical basis of feeding have recently admitted that there is no other method of rendering cow's milk so digestible as diluting it with gruels. They still claim however that nature is not being followed as no breast secretes gruels, while the gruel feeders ask to be shown the human breast that secretes cow's milk and lime water. The gruel feeders insist that human milk can not be made artificially and that the problem of infant feeding consists of more than simply supplying fat, proteids, sugar, mineral matter and water in certain proportions. The development of the digestive tract as well is to be considered, and it is now known that the milk of every species of animal develops the digestive tract in addition to furnishing nourishment.

Now when you get into practice all these theories will confront you as they have all been brought out within a few years. I will not tell you what I think of the merits of each theory; the subject will be clearer in your minds if you see for yourselves the principal ingre-

dients of human and cow's milk, their reaction and peculiarities. Therefore I intend to give you some demonstrations and illustrate as I go along.

CHEMISTRY OF MILK.

Acidity.—We have human milk and cow's milk. A strip of red litmus paper is colored faintly blue by the human milk, but it is not changed by the cow's milk. A strip of blue litmus paper is not altered by either. We will now add to 10 C. C., of each milk 1 drop of a 1% solution of phenolphthalein in 50% alcohol. No change in color takes place. We will now add lime water to both until a pink color appears; more is required to produce the change in cow's milk than in human milk, although considerable quantities are required by each. Phenolphthalein as you know is the most sensitive indicator for alkalies known. To litmus, human milk was alkaline and cow's milk neutral, while to phenolphthalein both were decidedly acid. If we dip a strip of red litmus paper into a solution of bicarbonate of soda, we find it turns blue, if we add a drop of phenolphthalein solution no color appears, it is not alkaline. You all know that bicarbonate of soda is an acid salt, yet it is alkaline to litmus. As human milk is alkaline to litmus but acid to phenolphthalein chemists who have studied milk have come to the conclusion that this reaction of fresh milk belongs more to the chemistry of color-indicators than to the chemistry of milk. Of course, when milk has soured, it will turn blue litmus paper red.

Fat.—We will now take with this pipette 17.6 C. C., each of human and cow's milk which weigh 18 grams and place them in these special bottles, add an equal quantity of strong sulphuric acid and mix. The sulphuric acid dissolves everything but the fat and part of the mineral matter. Now centrifuge and add hot water nearly to the top of the graduated neck of the bottle. The melted butter, or fat rises into the neck and the quantity can be read off as percentage by weight. This is known as the Babcock milk test.

Proteids.—We will now add one part of cow's milk to two parts of water and mix. To an ounce or two of this diluted milk we will cautiously add diluted acetic acid until a thick flocculent precipitate forms and settles, which consists of the casein and fat. This curding is what takes place when milk sours. We will now decant the clear liquid and filter it. It is bright and clear. Now we will boil it. A flocculent precipitate forms. This is *albumin.* Filter again. Filtrate is bright. Now we will add sodium chloride nearly to saturation and a 10% solution of tannic acid; a thick flocculent precipitate forms which consists of *albumoses and peptones.*

We will repeat these tests with human milk.

Now we will add to fresh portions of human and cow's milk a few drops of syrup of lime. The milk swells up and becomes viscid and ropy when stirred. Mucin has the distinctive property of swelling up with lime; therefore mucin is shown to be present in milk.

Sugar.—To the filtrate after removing the albumin of cow's milk we add a Fehling's sugar test solution which is reduced. Sugar is present.

Mineral Matter.—If a specimen of milk is evaporated to dryness and ignited a certain amount of ash or mineral matter remains. In what state it exists in the milk is not known.

In attempting to separate the proteids of human milk we find it is not an easy matter and you see that they do not behave with the reagents as do the proteids of cow's milk. They are only partly and with difficulty precipitated by acetic acid and boiling, but are thrown down by sodium chloride and tannic acid.

You have seen how great are the differences between the behavior of the proteids of the two milks. The sugars are also different. It would be difficult to understand how any one

who had *seen* these differences could expect to make cow's milk interchangeable with human milk. The trouble has been that the methods of analysis of milk have been and are very crude. Instead of actually separating the ingredients of milk they have been determined by adding together the weights of those ingredients actually determined and obtaining the weight of the others by subtracting from the total weight. Proteids have not been separated as just shown you, but the nitrogen contained in the milk has been estimated and the quantity of proteids calculated from this by multiplying by 6.25. By this method the differences between the proteids of human and cow's milk were not discovered. On such imperfect knowledge was the chemical scheme of feeding based.

In many of the most recent text books you will find it stated that the difference between the proteids of human and cow's milk is, that the proportions of casein and lactalbumin are different.

You have seen separated from cow's milk, casein, albumin, albumoses and peptones, and mucin, and I may state that there are other ingredients of milk which are classed *with* proteids that would take too long for me to separate for you. You have also seen that the proteids of human milk did not behave like the proteids of cow's milk with the reagents. This should suggest to you that the proteids of the two milks are unlike. It has been recently demonstrated that if the milk of any species of animal is injected into a rabbit a serum can be obtained from the rabbit that will precipitate the proteids of that milk, but that will not precipitate the milk of any other species of animal. If the blood of any species of animal is injected into a rabbit a serum is produced that will precipitate that blood and no other. These sera are specific and unfailing tests for milk and blood and are thought to prove that the blood and milk of each species of animal are distinct from those of every other species.

CURDING OF MILK.

We will now add to a specimen of cow's milk diluted with an equal quantity of water and warmed to body temperature a few drops of rennet, (a ferment found in the stomach of a calf). The milk becomes a solid jelly or junket. It begins to shrink and clear yellowish green fluid exudes. This is called *whey* and contains the albumin, albumoses, peptones, sugar and the large part of the mineral matter of the milk. The curd or junket consists of the fat, and casein which has been acted upon by the rennet.

We will now add to a fresh specimen of milk, rennet and diluted H Cl, and warm to body temperature. I wish you to notice how the curd shrinks and becomes *fibrous* under the action of the acid as I shall refer to this later.

We will add rennet and acid to boiled or sterilized milk. The curd formed is not as dense as that formed in unheated milk. You see heating the milk alters the milk so that the curd does not form so promptly. We will now add an equal quantity of lime water and add a few grains of bicarbonate of soda to two fresh specimens of milk and then add rennet. No curds form. The lime water and bicarbonate of soda prevent the action of the rennet.

Now we will add to breast milk rennet and a few drops of diluted H Cl; a curd forms, but it is broken into small pieces and does not become fibrous. It must be plain to you by this time that there are *great and radical differences between human and cow's milk.* You will naturally ask what was nature's object in making these differences? It is right here that chemistry fails to give much help, and that we must appeal to physiology.

PHYSIOLOGY OF MILK.

As you well know all young animals are developed from a single fertilized ovum which by

a process of cell division grows and develops into the various organs of the body. All the nourishment before birth is received through the placenta; nourishment and development proceed side by side *before* birth. The fetal circulation is established long before birth; other functions are not developed until after birth. You have noticed a puppy or kitten does not open its eyes until some days after birth and is quite helpless, while a calf can see, hear, smell and run around within an hour after birth; both receive nourishment for some time after birth from the mother. There is great and rapid development in the puppy and kitten after birth, but it is some time before they are as well developed as the calf was at birth. Here development and nutrition go hand in hand *after* birth. When the teeth appear there is a complete digestive tract and the young animals commence to eat the same kind of food the parents eats. Before teeth appear this food causes great disturbance which shows that the digestive tract is undeveloped. During the nursing period the digestive tract is developing and maternal milk plays a part in this development that has hitherto been unsuspected.

For a long time it has been known that milk of different species of animals formed different kinds of curds, but the significance of this observation has only recently been appreciated. Mare's or ass's milk will not form a solid curd. Cow's milk forms solid curds, yet these animals eat the same kind of food. In the mare or ass digestion takes place principally in the intestine; in the cow principally in the stomach. The food quickly leaves a horse's stomach and mare's milk readily passes into the intestine. Cow's food slowly leaves the stomach and is a wet fibrous mass. In this connection I wish to call your minds to the fact that cow's milk formed a mass of fibres under the action of the rennet diluted H Cl. In human beings digestion is principally intestinal and the stomach receives from the mouth finely divided food. Human milk forms finely divided curds that are the forerunner of chewed food.

DEVELOPMENT OF DIGESTIVE PROCESS.

The first secretion of the mammary glands is called colostrum which can be readily absorbed; it will not curdle with rennet and the stomach of a calf during the colostrum period secretes little digestive juices. Colostrum appears to establish peristalsis, and start the process of absorption. There is a gradual displacement of the elements of colostrum by milk ingredients in the mammary glands, and at the same time a secretion of the intestinal digestive juices in the young animal commences. Later, as acid appears in the stomach, the curds of milk are toughened by it and thus the development of the stomach is continued. By the time the teeth are developed the stomach is ready to care for food which the teeth have ground up. This development of the digestive tract is absolutely essential to the well being of growing animals and experiment has shown that they will die if their food is not of a character that will develop their digestion normally.

There are many forms of proteid that are as nourishing as the proteids of milk, but no other forms of proteid have the property of adjusting themselves to the needs of the developing digestive tract. You now see why the proprietary infant foods fail in the long run although they may contain proteid; why peptonized milk in which no curd forms is not a suitable food for steady use and why cow's milk (the readily available milk), although intended for a calf's stomach, must be the basis of an artificial infant food. Our problem is to adjust it to suit the baby's stomach.

NUTRITIVE REQUIREMENTS OF YOUNG ANIMALS.

A chemical analysis of the milk of any species shows the nutritive requirements of the young animal within certain limits. The milk

of different species of animals contains fat, proteid, sugar and mineral matter and water in different proportions. The function of fat and sugar in the economy is to act as fuel. All the tissues aside from fat are made up of proteid, mineral matter and water. Proteid can not be produced from fat and sugar, so we would expect that animals that grow rapidly would need more proteid than those that grow more slowly. It is found that the proteid content of any milk is directly proportionate to the rapidity of growth of the young animal. Growth is an increase in the number of cells and as these all contain nucleo-albumin, nucleo-albumin must be the form of proteid needed by young animals. The proteids of milk are principally nucleo-albumins. The proteids of cereals which are used in building up plant cells are also principally nucleo-albumins.

It may safely be accepted that an analysis of human milk will show in a general way the quantities of fat, proteids, sugar, mineral matter and water needed to insure proper development. There are other ingredients of milk which we cannot take into account in practical feeding, but which are worthy of notice. E. g. lecithin is a prominent constituent of the nervous system. A baby is born with a nervous system poorly developed, while a calf is born with a fully developed nervous system. Human milk is rich in lecithin while cow's milk is poor in lecithin as might be expected.

COW'S MILK.

As cow's milk should be the basis of the infant's food you should see that good milk is obtained. This does not necessarily mean rich milk, but milk in which no great changes have taken place before being used by the infant. The changes in milk are brought about by bacterial action. The cow's teats almost invariably contain bacteria—streptococci at that—but they have not proved to be harmful. After milking, lactic acid bacteria grow rapidly and when a certain amounut of lactic acid has been produced the casein precipitates and the milk is sour. By this time there may be as high as three or four hundred millions of bacteria to the C. C. You all have drunk buttermilk which is partially soured milk and probably relished it bacteria and all. In Europe infant feeding with buttermilk is to some extent practiced and the infants tolerate it. Therefore, the mere presence of bacteria in milk does not make it harmful. I showed you that the addition of a small quantity of acid to the rennet curds of cow's milk caused it to become tough and fibrous. If the milk is only *slightly* sour it is therefore hard to digest, but if the casein has been precipitated by acid it is flocculent and then no curd will form with rennet and it will be more digestible. It is known to be a fact that sour milk is more rapidly digested than sweet milk. There are many other kinds of bacteria found in milk, but whether they are harmful or not is not known. This fact should be remembered: milk that an adult may drink with impunity will often make an infant violently ill. A dog may drink milk that will make a puppy have an attack of vomiting and diarrhoea. As there seems to be no doubt that these attacks are due to bacterial products in the milk it is best to reduce the bacterial contamination. This may be done, (1st.) by keeping the bacteria out of the milk by cleanliness. (2nd.) By retarding their growth by keeping the milk cooled below 50° F., when there is little bacterial growth. (3rd.) By heating the milk to destroy the bacteria. If milk that has been heated is not kept below 50° F., the bacterial spores that are always present and not destroyed by the heating germinate and soon there are millions of bacteria in the milk. Pasteurized or sterilized milk that is a little old will often produce vomiting and diarrhoea. You should remember this and when you order food or milk pasteurized, have it done shortly before using.

Cows rarely transmit disease through milk. The presence of pathogenic bacteria in milk is

generally due to secondary contamination, so cleanliness and proper care of the milk should be insisted upon. Cows should be groomed as thoroughly as horses, and wiped off with a damp cloth before milking to prevent dust dropping into the milk. Dairy utensils should have tight seams. The milk of a number of cows should be mixed, which insures fairly uniform composition, from day to day and cooled by ice or by standing in cold water. To avoid secondary contamination the milk should be placed in closed glass bottles and not opened until received by the consumer. This method of handling milk is now very common.

MODIFICATION OF MILK.

Cow's milk is not of uniform composition, some breeds of cattle, Holsteins for instance, give large quantities of milk rather poor in solids but rich in water while other breeds, particularly Jersey cows milk give, rich in solids and poorer in water.

Human milk is not at all uniform in composition and varies fully as much as cow's milk, as you will see by comparing the range of composition.

Milk	Fat %	Proteids %	Sugar %	Mineral Matter %	Water %
Cow's,	3-5	3-4	4-5	.75	88-85
Human,	3-5	1.50-2	6-7	.25	88-85

You should remember that these are only comparisons of the *nutritive or food value* of the two milks and do not show their physiological differences.

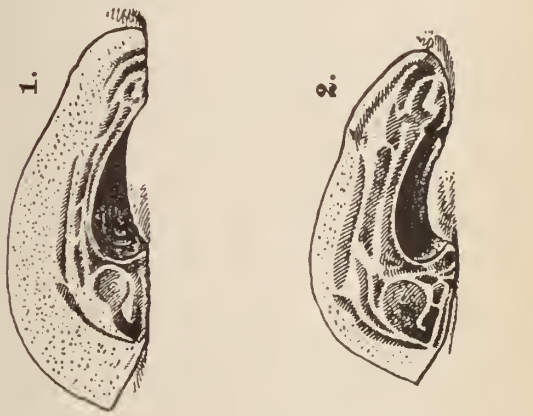
As I told you before, at one time it was thought that by reducing the quantity of proteids and increasing the amount of sugar cow's milk could be made like human milk in composition, but as many infants could not digest this mixture the proteid which was the element that caused the indigestion was cut down to suit the infant's digestive capacity. E. g. Many feeding mixtures made up on this plan contained:

Fat %	Proteids %	Sugar %	Mineral Matter %	Water %
3	.5	6	.10	89

This food often relieved the indigestion but the infants became flabby, anemic and rachitic. The vital tissues are produced from the proteid of the food and it is not surprising that getting only one-third of the normal quantity of proteid found in breast milk the infants failed to become strong. They often become fat and gain rapidly in weight when suffering from proteid starvation, if fat and sugar are kept rather high. This gain in weight is deceiving and while often satisfying the mother and the physician who does not understand the subject, the infant's tissues are in a deplorable condition. Such infants succumb readily to any slight infection as they have no vitality or resisting force.

The illustration which shows cross sections of pigs fed low proteids and high proteids, and the effect on the blood, liver, bones and tissues will bring home to you the fallacy of judging an infant's condition merely by its gain in weight.

Growing Pig fed on low Proteids. Growing Pig fed on high Proteids. (Carlyle)



	Low Proteids	High Proteids
Blood per 100 lbs. body weight,	36.8025	51.2025
Liver per 100 lbs. body weight,	31.9025	48.4025
Muscular tissue,	1	1⅓
Thigh bone broke at a pressure of	380 lbs.	503 lbs.

(Henry)

The great objection to condensed milk as an infant food is that when diluted so that the infant can digest the excess of sugar it contains, it is low in proteids and produces fat, anemic, rachitic children.

diastase is added as diastase itself is unstable. One teaspoonful of Cereo a stable preparation of diastase made for this purpose is used which promptly thins the gruel, which may then be cooled and is ready to mix with milk.

FOOD PRESCRIBING.

No food prescription can be written that will be suitable for every baby. A great deal will depend on the age, weight, the condition of the baby, and the circumstances and intelligence of the parents. It is for the reason that so much will depend on your judgement that I have gone so fully into the principles of feeding. You will have to apply them as you can. You may be called to see a child a number of persons have tried to feed and have succeeded only in producing indigestion; another case may be using half soured milk which comes up in leathery curds. Another case may have been on condensed milk or a proprietary food, having gained in weight and yet being feeble and flabby. Another case may be vomiting and purging; another may not be able to retain anything. Before you can do much successful feeding you must get the digestive tract in a normal state and you will be puzzled and fail a great many times. If you commence right feeding at birth, little trouble will be experienced. You should remember that any feeding mixture you order is a foreign substance not natural for the infant's digestive system; it is not breast milk. You must therefore begin with weak mixtures and work up the strength cautiously, ever keeping in mind the nutritive standard of breast milk, which it is your aim to attain.

Fat	Proteids	Sugar
3-5%	1.5-20	6.-7

The mineral matter you will not need to take into account as there is usually enough in the food.

The following scheme will give you an idea of how to increase the strength and quantity of food for a healthy infant. Digestive capacity is the test that must be applied. Some weak infants, a year old will not digest as much as a strong infant of three months. In all cases it is safe to begin on a weak mixture and if this agrees try a stronger one a few days later until the nutritive value of the mixture approximates that of human milk.

FEEDING SCHEME.

Age	Number of Feedings in 24 hours	Size of Feedings	Feeding Intervals	Milk	Digested Gruel	Sugar	Fat %	Proteids %	Sugar %
1 week	9	1-2 ozs.	2 hours	of 9 oz. Top milk } 2 ozs.	13 ozs.	½ oz.	1.50	.80	7
2-4 weeks	9	2 3 ozs.	2 "	use 4-6 "	24 ozs.	1 oz.	2.00	.95	7
1-3 months	8	3-4 ozs.	2-3 "	Top 9 ozs.	24 ozs.	1 oz.	3.00	1.10	7
3-6 "	6	4-6 ozs.	3 "	Top 16 ozs.	24 ozs.	1 oz.	3.00	1.50	7
6-9 "	6	6-8 ozs.	3 "	Top 20 ozs.	20 ozs.	1 oz.	3.00	1.80	7
9-12 "	5	8 9 ozs.	3½ "	1 qt. whole milk	12 ozs.	1 oz.	3.00	2.50	6
12-18 "	5	9-10 ozs.	3½ "	2½ pt. whole milk	8-12 ozs.	1 oz.	3.20	2.60	6

In these first three mixtures the digested gruel furnishes ¼ to ½ of the total proteid and sugar. Two level tablespoonfuls of granulated sugar or three of milk sugar equal an ounce, either may be used. Keep the food on ice in separate nursing bottles if possible, plugged with cotton. In hot weather all feedings had better be pasteurized. This may be done by heating the food in a double boiler for fifteen minutes having the water just simmering or a pasteurizer can be bought with directions for heating the food to 160° F., or thereabout. In families where the intelligence is small, half

milk and digested gruel may be boiled and cooled and then fed, or modified condensed milk may be given for sometimes we must give the baby a food, even if not what we feel and know it ought to have. In all cases there should be a steady even if small, gain in weight, good rest at night and contentment.

Difficult Cases.—The first thing is to obtain the history of previous feedings and examine the stools to see of they contain curds, masses of fat, mucus, blood or are sour, green or foul smelling or in any way abnormal. The normal stool is soft, smooth and yellow and of uniform consistency. If there are curds in the stools, the quantity of milk should be reduced. If sour, green, mixed with mucus or foul smelling, a dose of castor oil should be given to remove the decomposing intestinal contents and weak feedings given, increasing the strength gradually.

Vomiting with diarrhoea or summer diarrhoea requires prompt attention and the treatment is principally dietetic. Calomelgr. ! in divided doses 1-10 grain every half-hour or a teaspoonful of castor oil should be given until thorough evacuation has taken place. This affection is looked upon as being principally a food poisoning although some cases have been thought to be caused by the *dysentery bacillus of Shiga.* Milk must be stopped at once and completely. Here digested gruels are of the greatest service. It may be necessary to keep the infant on these alone for weeks. When a return to milk is made not over one teaspoonful to a two ounce feeding of digested gruel should be given. Sometimes this small quantity will cause a renewal of the attack so you cannot be tooo careful in resuming milk.

In some of these cases the digested gruel will not be tolerated. Mutton broth may often succeed. This is made by slowly boiling a pound of chopped lean mutton and cracked bone with a pint of water for two or three hours and obtaining about half a pint of broth. This is strained and cooled, the fat being removed. It jellies on cooling owing to the gelatine extracted from the meat. It may be served warm or cold in two ounce feedings as is best taken.

In many cases of poor appetite mutton broth or expressed beef juice may be added to each feeding as an appetizer.

When leathery curds are vomited; look to the milk supply. The milk may be partially sour or kept in a warm place. A strip of blue litmus dipped in the milk will redden it if it is at all acid. If the milk seems all right have the food pasteurized and if this does not help matters make one tenth to one-fourth of the feeding mixture lime water and also pasteurize. I showed you by experiment that heating the milk and adding lime water retarded the formation of curds.

When all attempts fail to make fresh milk agree, condensed milk well diluted with digested gruel may succeed and often does. The condensed milk may be mixed with an equal quantity of cream and diluted which overcomes some of the objections to condensed milk. Sometimes *whey* will tide a case over a few days until something more substantial may be found to agree. In older infants with history of peptonized milk, soluble proprietary foods or milk mixtures with low proteids a change to a small quantity of whole milk may often bring about rapid improvement.

The difficulty in these cases seems to be that the stomach demands something to develop its motor function; as soon as this is supplied in the curd formed from the milk, the stomach feels satisfied.

These difficult cases should be watched until ther are on a diet that approximates breast milk in nutritive value.

When the teeth have begun to appear a cracker may be given to chew, a small portion of very tender vegetable, half a soft boiled egg once or twice a week, a little scraped or finely minced meat, etc. The taking up of table diet should be gradual and done with common sense.

GENERAL REMARKS.

I have purposely omitted telling you about making mixtures from 16% cream and 4% milk, of the difference between gravity and centrifugal cream and many of the matters that have risen into prominence and settled out of sight; of whey and cream mixtures which are supposed to contain various quantities of caseinogen and lactalbumin, the supposed proteids of human and cow's milk. I have shown you some of the properties of and differences between proteids of the two milks and how erroneous it is to suppose that caseinogen and lactalbumin form the total proteids of either cow's or woman's milk. As this scheme of feeding has little scientific basis and is very complicated and difficult to apply I have not attempted to explain it to you. As a better knowledge of the function and chemistry of milk becomes more general less attention will be paid to such schemes. If you are interested in such things you will find them coming and going. You will learn one year the exact size of an infant's stomach and the exact composition of woman's and cow's milk. A year or two later you will learn that your exact knowledge has been exactly wrong. Infant feeding is a subject in which you should exercise your common sense. After the teeth are supplied an infant can make good flesh out of meat, milk, bread and butter, potatoes and vegetables and without having the dietary calculated by a mathematician. There has not been a sudden revolution in the chemical processes of the infant, but a gradual development of the digestive tract in which food is prepared for assimilation. The work of the infant feeder is to prepare food that will nourish and develop an animal with an immature digestive apparatus. This fact you should keep ever in mind and I commend to your study Chapin's "Theory and Practice of Infant Feeding" in which you will find the physiology of the digestive tract of many animals and the production, chemistry, and bacteriology of milk treated at length.

RECAPITULATION.

The points which I wish you to particularly remember are:

1st. Cow's milk cannot be made into human milk by adjusting the percentages of its ingredients.

2nd. The proteids of cow's milk which are what cause the greatest trouble in infant feeding consist of at least five bodies and are not a simple mixture of casein or caseinogen and lactalbumin.

3rd. The proteids of human milk are also mixtures of different proteid bodies and behave differently than the proteids of cow's milk with reagents.

4th. The curds of cow's milk and human milk differ markedly and this difference cannot be overcome by diluting the milk with water.

5th. The curds of milk play an important part in the development of the digestive tract and for this reason milk of some kind must be the basis of an artificial infant food.

6th. The addition of lime water or bicarbonate of soda to milk retards the action of rennet on the milk and prevents the formation of curds until some strong acid H Cl or lactic has combined with the lime or bicarbonate of soda.

7th. Heating the milk alters it chemically so that less dense curds form, as well as destroys bacteria.

8th. In preparing an infant food care must be exercised to supply sufficient fat, proteids, sugar, mineral matter and water.

9th. A baby can usually digest sufficient fat and sugar but has difficulty with proteids i. e. curds of cow's milk.

10th. Too great a reduction of proteid i. e., too great a dilution of milk, will cause the infant to become anaemic and rachitic although it may gain in weight from the fat and sugar of the food.

11th. Cow's milk is made more digestible by diluting it with digested gruels which at the same time increase the amount of proteid the infant receives.

12th. When the food cannot be kept below 60° F., pasteurize.

13th. No fixed rule for infant feeding can be given. Each case must be studied by itself.

14th. In cases of vomiting and diarrhoea stop all milk feedings, clean out the digestive tract, feed digested gruel and begin milk feeding gradually.

THE RELATIVE IMPORTANCE OF HEREDITY, SUSCEPTIBILITY AND CONTAGION IN THE DEVELOPMENT OF TUBERCULOSIS.*

By Charles S. Caverly, A. B., M. D.
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Dr. Joseph A. Gallup of Woodstock, in the year 1815, published o book entitled "Sketches of Epidemic Diseases in the State of Vermont," "to which is added," the title continues, "Remarks on Pulmonary Consumption." Dr. Gallup was a man of intelligence, and his book may be supposed to have reflected the opinions of the authorities of his day. This is what he says of the causes of consumption: "The causes of consumption have, by modern writers, been considered to be five: viz., hemoptysis, or spitting of blood; pneumonia, ending in suppuration, catarrh, asthma, tubercles."

Who will hazard a guess that our now modern ideas of the etiology of this disease may not seem as quaint to our successors at the end of another century as those quoted appear to us? We are wont to think that we are fast getting to "rock-bottom" facts about the causation of some of the infections. If however medical history furnishes any guide our views on these matters may yet undergo startling modifications.

Few of us are too young to remember the stereotyped dictum of the lecture room, "consumption is an hereditary disease." Other factors were occasionally mentioned as playing a minor part, but heredity overshadowed all others. With Koch's discovery, two decades ago, of the bacillus, there was a revulsion of sentiment. Suddenly attention was centered in the germ, and during recent years all our ideas of the disease, its cause and prevention, have swung about this center. The disease was shown to be infectious and contagious. The profession and laity gradually developed a morbid fear of the omnipresent germ. The bacillus-bearing sputum, dried and pulverized, was being scattered broadcast about our streets and highways, and the wonder was that any escaped. Indeed the autopsy table demonstrated that the disease was even more prevalent than the mortality records indicated. The dread of consumption became a true bacilliphobia.

Of late it is noted that there has been a gradual reaction from these extreme views. In spite of the continued warning of the discoverer of the germ, the pendulum is beginning to swing back. There is a suspicion that in our fierce study of germs, we may have lost sight of other elements in the etiology of the disease. The paper of Dr. H. Edwin Lewis, before the last American Congress of Tuberculosis at New York last summer, fairly represents this tendency to modify our views. As in other directions, medical thought has shown a proneness to run in grooves and to extremes in the search for the causes and methods of preventing tuberculosis. There is a feeling abroad that in this universal campaign against "The Great White Plague" our minds have been too firmly fixed on the germ; that other factors which may have a

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* Read before the Rutland County Medical Society, at a meeting held jointly with the State Tuberculosis Commission, April 14, 1903.

determining influence in the spread of the disease may have been overlooked.

We are all ready to admit that the bacillus is the direct exciting cause of the disease, but that we do not all succumb to it is strong *prima facie* evidence that something else plays a role in its causation.

That consumption, the disease (the germ), is seldom inherited is now known to be a fact. Such experiments and observations as have been made on animals and the human family, show conclusively that intrauterine tuberculosis is extremely rare. So rare indeed is it that it may be left out of account. Dr. George Ogilvie, in an article on germ infection in tuberculosis in the British Journal, September 13, 1902, speaking of these observations on intrauterine disease says "all that one is entitled to infer from thes statistics is the fact that congenital tuberculosis in man is exceedingly rare."

The bearing of heredity then on the transmission of tuberculosis must be in another direction. It must mean the handling down from parent to offspring of peculiarities of constitution, of tissue formation, of cells and organs, having a diminished resisting power to the germs.

I noticed that the subject assigned me at this meeting mentions "susceptibility" as a causative factor in the disease. If I rightly comprehend the meaning of this word in this connection, the two, "heredity" and susceptibility" have to a large extent the same meaning here. The susceptibility which figures in the etiology of tuberculosis may be inherited, but not always. It may also be acquired after birth. Peculiarities of physical makeup inherited from parents are undoubtedly a large element in this susceptibility; there may be another element however which is peculiar to the individual and has no connection with a preceding generation of the family, produced by environment, by habits, or by disease. Thus we may have the susceptibility that comes from living and working in dust; the susceptibility that comes from close confinement indoors; from living over damp soil; from intemperance; from an attack of measles or of pneumonia. So while susceptibility and heredity as here used may mean the same thing, i. e., that there is an hereditary susceptibility, there is another form of susceptibility which is peculiar to the individual and is acquired.

As to contagion, the third factor in the causation of the disease mentioned in my theme, there is no doubt that every case of consumption is thus acquired. The germ theory of the disease at once placed consumption in the same class with other communicable diseases.

Each case of the disease is as much dependent on the preceding case, as are successive cases of small pox or diphtheria. This is the only logical deduction from our present beliefs in regard to these infections.

I am asked to speak to-day on the relative importance of these different factors in causing tuberculosis. In casting about for data upon which to base some rough estimate of the importance of each of these causal factors, it has occurred to me that facts observed here at home, under conditions prevailing here, may be better appreciated by our State Tuberculosis Commission, who modestly tell us they are here for information, than facts gathered from the voluminous literature of the disease.

I have carefully gone over my case-books for some years back, and tabulated such cases as were recorded with sufficient detail as to family and personal history as to make them useful in this connection.

Of the 188 cases so selected, 114 were male and 74 female.

There were cases of disease primarily of the lungs, 175; of the larynx, 9; of the intestinal tract, 2; of the knee-joint, 1, and of the bladder, 1.

Occupation.—Of the 70 males of which I have recorded the occupation, those following sed-

entary or indoor occupations, like dentists, barbers, clergymen, lawyers, stone-cutters, office and store clerks, etc., numbered 41. The largest individual item in this list is stone-cutters, 10. Those whose occupations were more varied or in the open air, like quarrymen, farmers, truckmen, etc., numbered 29. I have not included females in this list, because of their usual indoor life. I can say however that my memory furnishes me many instances of the disease among employes of the shirt factory and teachers.

Nationality.—Of the 186 cases, whose nationality I have recorded, there were American (white) 85, and those whose parents, one or both were born in Ireland, 77. The remainder were of various nationalities. The chief significance of these figures lies in the number of cases among the first generation of Irish born in this country.

Family History.—Of the 188 cases, there was no immediate family history of tuberculosis in 99 instances, i. e., there were no cases of the disease among the parents, brothers or sisters. I appreciate the liability to error in these figures, especially as I have noted that one or both parents, or a brother or sister were dead of unknown cause in 17 cases. There were other conditions noted among these as follows:

Those in whom one brother or sister had enlarged glands	2
Those in whom both parents had heart disease	5
Those in whom one or more uncles or aunts had tuberculosis	4
Those in whom the father had asthma	2
Those in whom one parent had paralysis	2
Those in whom one parent had rheumatism,	3
Those in whom the mother had cancer	3
Those in whom the husband or wife had tuberculosis	2
Those in whom a grandparent had tuberculosis	2
Those in whom there was a personal history of pneumonia	3
	3
Those in whom there was a personal history of measles	2

In single instances it is noted that a sister had "fits," a sister had "spinal disease" and a daughter had tuberculosis, and son had tuberculosis. Thus while over half these cases show no direct family history of tubercular disease, a considerable number of these do show other conditions, family or personal, that probably had a bearing on the susceptibility of the cases. 89 of these cases gave a history of tuberculosis in the immediate family. These varied from those who gave a history of the disease in both parents and one or more brothers and sisters to those who gave a history of the disease in one brother or sister. Nearly half of these gave a history of no tubercular disease in either parent, but in one or more brothers and sisters. Here we see the susceptibility acquired after birth, or due to some inherited weakness other than tubercular. The element of contagion it is likely played a prominent part also in some of these.

Only 57 of these cases gave a history of tubercular disease in a previous generation. Less than one-third could be said to have an inherited tubercular tendency. Yet it is true that rather more than half gave a history of some disease (tubercular or other) that might have influenced their susceptibility. Among these cases which I have reported are those from families which have been fairly decimated by the disease. This does not always happen to those whose parents or grandparents suffered from tuberculosis. I have notes of a family, in which there had never been a case of tuberculosis, living in the country, temperate and healthy. A young man came home from a distant city, sick with pulmonary consumption. One after another five more of this family, including his father, developed the disease. Such a history, with minor variations comes to all of us. Probably these are examples of contagion quite as much as of susceptibility. The youngest case on my books was a child of 3 years, born of tuberculous parents at Saranac Lake, where it had always lived. I have ventured

to give these figures from my practice, because as I said they happened under conditions we all meet with continually. They may not be representative, as tuberculosis is met with the world over. They illustrate however with probably fair accuracy the relative importance of heredity, susceptibility in its various forms and contagion in causing the disease among our people. More correctly, they illustrate the relative importance of hereditary and acquired susceptibility in causing the disease. While I feel that we may sympathize with those who decry the exclusive attention which the tubercle bacillus has received during recent years, it behooves us not to ignore its agency and potency in causing tuberculosis. A rational and scientific division of the responsibility for the disease, along mathematical lines, is not now possible. Susceptibility, hereditary or acquired, and contagion are twin causes. One is inoperative in the absence of the other. One is the fertile soil, the other the seed. It is the same precisely as with small pox or with diphtheria. Given a certain number of exposures to either infection, and the disease will follow in only the fraction, usually the small minority of those exposed, who possess that vague something which we call "susceptibility."

Heredity may be eliminated from the enquiry These others, susceptibility and contagion, remain to divide the responsibility.

This is the natural corollary; the successful campaign against this universal disease lies in the extermination of the germs, or in so increasing the resistance of the man to their action as to eliminate his susceptibility. The attainment of either of these ends would apparently exterminate tuberculosis from the human family. I say apparently, for a modification of our views in the future is, as I have said, not unlikely.

We are probably nearer the truth about the etiology of tuberculosis than the men of Dr. Gallup's day, yet none of us would assume that the final word has yet been spoken of it.

THE LOGIC OF THE OPEN AIR TREATMENT OF TUBERCULOSIS.*

By C. W. Peck, M. D., Brandon, Vt.

Mr. Chairman and Gentlemen:

I am asked to discuss the logic of the open air treatment for tuberculosis. If I am to be understood as advocating simply the open air treatment with no medication, then I shall hold it is not logical. If I am to be understood as advocating the open air treatment associated with what I understand is practiced at the present time called the stuffing process, then I shall hold that also is illogical. If I am to be understood as advocating the open air treatment in connection with other reasonable methods, being governed always by good sound common sense and an accurate knowledge of the laws which govern the process of digestion and assimilation, then I am heartily in favor of the use of the measure and hold it is not only logical but the best method known to man to-day.

Unfortunate indeed it is that our noble profession should be guilty of running into fads in the practice of the healing art at this advanced period in the history of medicine, when its progress must depend upon facts, not blind theory. To adopt the open air treatment of tuberculosis unaided and alone to the exclusion of all others, would be absurd and foolish. It would be casting to the ground as worthless the entire system of therapeutics in the management of one of the world's greatest curses and declaring that all medicine in this disease stands for naught.

Would it not be wise for us as medical men to pause and ask ourselves the question, what are the relative merits of each of these methods at

*Read before the Rutland County Medical Society, at a meeting held jointly with the State Tuberculosis Commission, April 14, 1903.

our command? Would it not be wiser to examine the individual at the same time we examine the germ that destroys it? Would it not be wise for us to ask ourselves the question, How do sick people get well? What is this intricate process and particularly in this class of cases, how do they recover?

What are the facts, not only in this disease, but in all? Is there not a common law of resistance and resolution in the system against all inflammatory actions whether of a germ or traumatic origin? Do you not cure your case by encouraging, strengthening and fortifying the resisting powers of your patient against the ingress of all impurities from without and within, and is there less danger to the individual from the contaminating influences upon the blood and secretions of a tubercular patient from within than from without? In this so-called stuffing process we forget the blood corpuscles can do only so much work in oxidizing and purifying the blood. The stomachic capacity is limited.

The liver struggling under its unnecessary burden fails to perform its function perfectly. The kidneys in consequence are loaded with an abnormal product, the whole system becomes poisoned with unoxidized substances, thus furnishing the very best possible conditions not only for the development and growth of all germs within the system, but a most excellent receptacle for germs from without, and can we depend upon fresh air or any one method to correct this condition? Does it not necessarily demand a combination of methods, sanitary, dietetic and medicinal? Since I am not to invade the domain of treatment in this discussion I will call the attention of this society to an article in the Medical Record of January 3rd, by M. D. Veeder the subject of which is, "Why the Open Air Treatment of Consumption Succeeds."

There is, I am sorry to say, and has been for some time, an erroneous idea in the medical mind that we could find for the treatment of tuberculosis some specific, some local disinfectant to be applied to the bronchial mucous membrane, some atomizer charged with some inhaling fluid, which fluid could be taken into the lungs and thus destroy the germ. A more dangerous idea could not be advocated. It is in direct opposition to the fundamental principles upon which our professional work is established and upon which we must succeed, if we succeed at all. The question of the success of the application of germicides even in surgery is in my mind very dependent upon the condition of the blood and secretions of the individual when it is used and if any of you have doubts upon this subject just try to disinfect the inflamed uterus in a case of puerperal septicaemia in a woman whose blood has been poisoned by retained waste for nine months.

For over thirty years I have studied this disease and had fairly good opportunities for observing it. I was taught in college it was hereditary, an idea long since exploded and we see to-day how foolish. Largely from my own experience I have been led to believe it a very fatal disease even under all circumstances. To-day I believe it quite curable in a very large class of cases if taken early and in some rare cases even late in the disease, but in all cases I claim you should have recourse to every possible method in its treatment and avail yourself of any and all, being governed always by general principles, including open air which probably stands supreme, a reasonable medication, with a sufficient amount of exercise and a careful dietetic management; always keeping in mind the individual as well as the invisible germ, remembering that the more perfectly the functions of the system are performed the greater will be the resisting power of the individual and consequently the greater your success. Some few cases that have come under my observation have led me to think fresh air or rather exercise in the fresh

air has proved very useful and I have builded better than I knew.

Two cases occur to me at this time, one, *J. R., male,* aged thirty,, ten years ago called on me to examine his lungs for the purpose of advising him as to the best place for him to work, indoors or out. He was very poor and so were all his relatives, a saving clause in his case. I think he had had three or four different doctors, was then pale with a dry, hacking cough which was almost constant. He had had four hemorrhages and in my opinion had but two or three months to live. His whole right lung was involved. We had no bacteriological institution then so my diagnosis was not confirmed, only by the universal opinion of all who saw him that his doom was sealed. I advised him to go to driving a team, drawing lumber from Sucker Brook mountain, an altitude of 1,200 feet above the level of the sea. He began his work and I began watching for his funeral procession. Well we won out, no more hemorrhages, no funeral, but he is alive and as well to-day as any man in this room so far as I can discover.

C. H., aged 32, eleven years ago contracted a cough, his mother having recently died with consumption. He had no hemorrhages but the upper parts of both lungs were inflamed, high respiratory murmur, dullness on percussion, shortness of breath, profuse expectoration, very thin, flat chested, pale and sallow. Medicine had very little effect upon him. It was about this time he had the good fortune to fall into the hands of a new step mother, who like Sancho Panza believed in early rising and gave him the enviable opportunity of rising at four o'clock each morning and peddling milk by hand, drawing a cart, repeating the same after dark each evening for about two years. I watched the boy, not as he passed my place for I was not up, but ere long I heard his merry whistle as he went by and soon saw the color was coming in his face, he was growing strong and to-day is well and strong, no cough.

These and a few other cases which I will not enumerate I thought were going to die. They were flung upon their own resources and made the fight for life in the open air and to-day they are well. They inhaled fresh air, they purified their blood, they invigorated their digestion, they fortified their systems against the development and growth of the tubercle bacillus and they are alive and well.

NEWS, NOTES AND ANNOUNCEMENTS.

Burlington and Chittenden County Society.—The regular monthly meeting of the society was held at their rooms, 160 College St., March 27th at 8:30 p. m., the President Dr. H. R. Watkins in the chair. The programme was as follows:

Obstetrical Instrospection—Dr. D. D. Grout, Waterbury, Vt.

Discussion opened by Dr. P. E. McSweeney.

Neurasthenia in the Male—Dr. H. E. Lewis.

Discussion opened by Dr. J. M. Clarke.

Raymond Hitchcock says that while he was lying in a Philadelphia hospital three or four weeks ago, convalescing from an operation for appendicitis, one of those fool friends who always say the wrong thing in the yrong place called on him and told him the following story to cheer him up: Philadelphia's most famous appendicitis expert has a dog of which he thinks a great deal, which had a lop-sided walk. A friend asked the doctor on one occasion the cause of this. "Why," was the reply, "he's got appendicitis." "Then why don't you operate on him?" queried the caller. "What, operate on that dog! Why, that dog's worth a hundred dollars."—*New York Commercial.*

The Fly and Disease.—The list of diseases which the fly is now known to transmit with facility, and perhaps to nurture into still greater virulence in transit, is a long one; and further investigation will probably add to the number of diseases. The following are already proven:

Anthrax or lump jaw, from cattle to man and vice versa, or from man to man.

Cholera, from animal to man, or man to animal, or man to man.

Consumption, from man to man, or from animal to man, or vice versa.

Diphtheria, from man to man.

Filiariasis, from man to man, animal to man, and vice versa.

Gastro-intestinal diseases of various kinds, from man to man.

Malaria, from man to man, or from decaying vegetable matter to man.

Ocular affections of many kinds, from man to man.

Plague, from man to man, or animal to man, and vice versa.

Typhoid fever, from man to man, or from putrid material to man.

Various intestinal parasites from man to man, or animal to man.

Wound infection, including suppuration, and probably gangrene and tetanus (lock-jaw).

Yellow fever, man to man.—*Medical World.*

The Primae Viae in Very Truth.—Dr. John Nelson Goltra, in the *Physician and Surgeon* for December, 1902, tells us that a short time ago when a school teacher in one of our western cities asked of the school the question, "What is the greatest canal in the United States?" a small boy promptly replied, "The alimentary canal!" "Out of the mouth of babes, etc."

Gynecological Hints.—In treatment of gleet and gonorrheal urethritis in women, make short bougies of wax and cocoa butter, incorporating a medical uterine wafer. (Micajah & Co.)

Order bougie inserted in urethra after micturition before retiring.

The exfoliation of dead mucous membrane from the urethra is assisted, the complete cast coming away intact, while the germicidal action of the wafer prevents attack of the new membrane by gonoccoci.

Bennington County Medical Society.—A regular meeting of this society was held at Firemen's Rooms, North Bennington, on Wednesday, April 8th, 1903, at one o'clock P. M. The scientific portion of the meeting was conducted by the Vermont State Tuberculosis Commission, and participated in by the members of the profession present. There was a good attendance and much interest was shown in the subject.

A Meeting of the Rutland County Medical and Surgical Society was held at the Berwick House, Rutland, Vt., Tuesday, April 14th, 1903, at 11 A. M. This meeting was devoted to the study of tuberculosis, and was held in connection with a meeting of the Vermont Tuberculosis Commission.

PROGRAMME.

Reports of officers and other business.

1. Work of the Tuberculosis Commission,
   By one of the Commissioners.
2. Relative Importance of Heredity, Susceptibility and Contagion in the Development of Tuberculosis,
   C. S. Caverly, Rutland.
3. Age, Sex and Occupation as factors in the Development of Tuberculosis,
   C. B. Ross, West Rutland.
4. Logic of the Open Air Treatment of Tuberculosis, including Climate,
   C. W. Peck, Brandon.
5. Home versus Sanitarium in the Treatment of Tuberculosis,
   W. N. Bryant, Ludlow.

Discussion, general.

The meeting was very instructive and interesting. The papers were excellent.

The Vermont Medical Monthly.

A JOURNAL OF REVIEW, REFORM AND PROGRESS IN THE MEDICAL SCIENCES.

H. Edwin Lewis, M. D., *Editor.* Frank C. Lewis, M. D., *Business Manager.*

Associate Editors,

D. C. Hawley, M. D. *Burlington, Vt.*
C. S. Caverly, M. D. *Rutland, Vt.*
S. C. Gordon, M. D. *Portland, Me.*
G. P. Conn, M. D. *Concord, N. H.*
J. N. Jenne, M. D. *St. Albans, Vt.*
A. Lapthorn Smith, M. D. *Montreal*
A. B. Bisbee, M. D. *Montpelier, Vt.*
J. M. French, M. D. *Milford, Mass.*
F. S. Hutchinson, M. D. *Enosburg Falls, Vt.*

Burlington, Vt., March 25th, 1903.

EDITORIAL.

POLITICS AND HEALTH OFFICERS.

If there is a public office on earth that more than another should be free from the intrigues and degenerating tendencies of political methods, it is that of health officer. The people hardly realize it but the position of health officer of any town or community is the most important office that has to be filled. The reasons for this statement ought to be apparent. The public health, and all that relates to its preservation, is a question that appeals to every person irrespective of age, sex,occupation and religious or political preferment. All classes alike participate in the efficiency of measures designed to promote the general health of a community, and it is needless to state that all classes suffer alike when the same measures are inefficient. It is pretty generally recognized that laws however good seldom execute themselves. Some one must have the ability, power and energy to see that they are executed, and in regard to health matters, these attributes are supposed to rest with the local health officer. We say supposed, for while the power is usually present, the ability and energy shown in their execution depends entirely on the incumbent. Therefore, the first qualifications of a health officer should be force and character. His political belief, or pull should not be mistaken for credentials, nor his burning desire for the position as an especial fitness for discharging the duties of the office. The position, one of trust and not much profit, requires the best man that can be obtained for it. And when he has been found every effort should be made to keep him and stand by him.

* * * * * * *

Last year Dr. F. E. Clark was named as city health officer by the Board of Aldermen and the State Board of Health issued him a commission as health officer of Burlington for three years. Those who knew Dr. Clark were not surprised to notice the zeal with which he entered upon the duties of the office, nor the system which he introduced into the various departments of his work. He went at it methodically and energetically. His methods were appreciated by the medical men of the city and it has generally been felt that the health matters of the city were in safe hands. With tact and discretion he has met every emergency and has had courage enough to do his duty and stand by his convictions in every trying instance. We do not wish to draw any invidious comparisons,for Burlington has had some excellent health officers, but if the opinion of the local profession is worth anything, Dr. Clark has thus far been one of the best that the Queen City has ever had. He is a gentleman of culture and possessed of a personal address that is representative of the kind of professional men to be found in Burlington. In a word, he is fitted for the position, and that the Board of Aldermen at their last annual meeting should have attempted to supercede Dr. Clark by nominating another man was a disgraceful evidence of political chicanery.

It may be true that the man nominated, wanted Dr. Clark's position and "wanted it bad," but this was hardly qualification enough. In no sense would he be as suitable a person for the position. Therefore it is a

fortunate thing for Burlington that the Board of Aldermen over-stepped their rights and that they have no power to either remove Dr. Clark or appoint another in his place. This power any time during the life of Dr. Clark's three years commission rests entirely with the State Board of Health according to the following Vermont Statute:

Act No. 113. Sec. 10. The health officer appointed by the state board of health, with the selectmen of his town or the aldermen of his city, shall constitute a local board of health for said town or city. The health officer shall be the secretary and executive officer of the local board of health, and shall hold office for three years, and until his successor is appointed unless he shall sooner die, resign or be removed by the state board of health. The state board of health may in its discretion remove any health officer appointed by it, and fill all vacancies in said office by a new appointment, provided the appointment is approved by the selectmen of the town, the committee on health of the board of aldermen of the city, or the trustees of the incorporated village.

"BUNCOED AGAIN, BY GOSH."

A spirit of sadness or depression is characteristic of many of Burlington's leading physicians. Some of them have recently been "deeply touched" by passing events in the person of one A. W. Morris, and their sorrow cannot be assuaged. It was not exactly a gold brick that Morris offered our local brethren. Easy as we are, gold bricks hold no attractions for us. But he had a new proposition to the effect that he would accept old books in part payment for new ones, the balance to be paid him in cash. Burlington doctors just dote on new books and the generosity of Mr. Morris was noble in its self-effacement. His desire to modernize local libraries was truly laudable and any man with so worthy a mission could not be an imposter! Accordingly he was taken in and treated well by a good many of Burlington's physicians, whom it is feared thought Morris was "a good thing" and welcomed the opportunity of unloading their old books on the poor man. That he appreciated the kind treatment given him is shown by the fact that he trusted those who dealt with him to keep their old books until he came with the new ones. He was also willing, in order to consummate the deal, that the cash balance between the value of the old and new books should be handed to him at once. In several instances the balance was fifteen or twenty dollars, but the size of the amount did not bother him at all. Of course he did not distrust the doctors, but it was better to pay him at once and get it off of their minds. Then they would not have to pay him when he brought the new books, and he thoughtfully left their old books to insure his return! He was also kind enough to give a receipt for all money paid him. And expressing the confidence he reposed in our local physicians (to take care of their old books until his return), with their progressiveness and fairness withal, "he hiked" himself on to other fields—for further missionary work. He agreed to return about the first of March, but he has not got around yet, and a good many sad eyed doctors are still using the same old books that Morris so kindly left with them.

The following letter from the representative of Lea Bros. will be interesting to those who wanted new books.

PITTSFORD, VT., MARCH 29th, 1903.

H. E. LEWIS, ESQ., Burlington, Vt.

Dear Sir:—

The imposter A. W. Morris, alias Fitzgerald-Smythe was collared, cooped, tried and convicted, and sentenced to two and one-half years in the House of Correction, in Pittsfield, Mass., last week. I am writing the Chief of Police at Pittsfield, Mass., now, and if I can learn anything more about him will keep you posted. Respectfully yours,

P. J. FLEMING.

It is feared that Morris' books will be old by the time he gets around to deliver them.

EDITORIAL NOTES AND CLIPPINGS.

WHAT'S THE USE?—There is no discouragement to the good like the triumph of the wicked. It not only shakes their faith but it does worse by stopping their energy. When a man says "What's the use?" he reaches low-water mark.

And yet we find many purposeful people using those hopeless words. They see bosses win in politics, men with doubtful methods get hold of millions, and persons of small merits gain social and official honors, and they settle back disconsolately and exclaim, "What's the use?"

There's a big lot of use. Let us illustrate it by a true story which has never been published. In the dark beginnings of Civil Service reform two young men sat in the office of the Commission at Washington and smiled grimly at the assaults and victories of the spoilsmen. They also dreamed a bit as young men sometimes do. "What a fine thing it would be if you could be Governor of New York!" said one, and the other laughed and replied, "Why not say President of the United States?" But the impossibilities did not dismay them. They looked at the situation and the conditions and agreed to keep on because they were right. And in the course of time the young man did become Governor of New York and he is now President of the United States, and the other fills an important legal office of the government—appointed by President McKinley and reappointed by his friend Roosevelt.

These young men came in close contact with the bosses, but instead of becoming discouraged they saw the value of the persistence of their enemies and kept at it. Of late we have read much of three men, all "practical politicians," but differing in methods and in individual records and characteristics. No attempt is made here to point out how good or how bad each may be; the comment is on admitted facts.

Senator Quay has stood against some of the ablest, most earnest and most brilliant reform movements in the history of American politics. He was beaten, but he refused to stay beaten. He laid his plans and worked steadily to his ends—and this year he was found in his old seat in the Senate holding all of his old power. His famous and successful contest against a former tariff bill and his warding off of anti-trust legislation under the cover of the Statehood bill illustrated his method—careful planning far ahead and then persistence.

In the case of Senator Gorman the reform forces of both parties got together and wrought one of the most complete overthrows ever known in this country. From one end of the land to the other the political death of Gorman was proclaimed. That was only six years ago. Mr. Gorman seemed to accept the verdict, but he prepared his campaign, worked steadily to his ends, and now we see him once more the leader of his party in the Senate where he once served as a page. It was plan and persistence that did it.

Many thousands of columns could have been printed about Mr. Addicks of Delaware, and the condemnation of him has been well-nigh universal. There is no need of examining the verdict, but there is a bearing of his case that is not without usefulnes. When he began to try to rule a State he met only ridicule—nobody thought he would ever do anything. But he had his plan and his persistence has been one of the most extraordinary exhibitions that any land ever knew. It seems incomprehensible. But it is easily understood—it's the result of keeping at one thing without let or hindrance, of industrious, unswerving indefatigability.

Politicians constantly teach reformers lessons—if the reformers would but learn them. Men of lesser standards who plan, persist and win teach the men of higher standards the value of planning and persisting. It is far easier to triumph in a good cause than in a bad one. The good man always has the better prospect, but if he waits for virtue to bring its own reward or falls comfortably back upon a satisfied conscience he is going to be disappointed. He must fight for results—plan for them, persist until they come.

It is a pretty practical old world and it is inclined to do better for the bad man who plans and persists than for the good man who asks "What's the use?" and quits.—*Saturday Evening Post.*

MEDICAL ABSTRACTS.

Ductless Glands and Their Work.—Dr. C. E. de M. Sajous' volume on the functions of the ductless glands is one of the most remarkable books published in recent years. For fourteen years the author devoted much of his time to labors of research and the results obtained have been shown in a book, which, if accepted by the profession, will revolutionize medicine.

Dr. Sajous bases his arguments on the assumption that there is an affinity of adrenal extract for oxygen, and that it is the carrier of oxygen to the tissues, whence follows the erection of the adrenals into a position of commanding physiologic importance. The oxygen-laden adrenal extract, termed adrenoxin, is identical with the "oxidation ferment" found in the plasma by several observers, and with the Lepine's "glycolytic ferment." Oxygen travels via the plasma through various unrecognized plasma channels, *e. g.*, the hollow, tubular "axis cylinders" and the dendrites of the nerves, and in the neuroglia fibrils, which are plasma capillaries, and which contain a fluid identical with plasma in staining reactions. The immanent source of all nerve energy is the reaction between the myelin surrounding these plasma tubes and the contained plasmatic oxygen. In the muscles, the myosinogen represents the contractile substance which, upon combining with the oxygen of the plasma, liberates energy of contraction, the function of the nerves being merely regulative. Fluctuations in the temperature of the blood are due to variations in the amount of its fibrinogen, which combines in fixed ratio with the plasmatic oxygen.

The adrenals are connected with the anterior pituitary body via the solar plexus, spanchnics, and the cervico-thoracic ganglion. This pituitary body is the most important organ in the economy, being the governing center of the adrenals, and, through them, of all oxidation processes. The efficiency of this pituitary body is maintained through thyroid action, the stimulating principle being the thyroidal iodine compounds. Instead of being due to a direct action on the blood of cellular elements, "symptoms of infection or poisoning are all manifestations, more or less severe, of overactivity or insufficiency of the adrenal system. Indeed, the physiological action of remedies was also traced to the anterior pituitary body." Cholera, cholera infantum, and poisoning by arsenic and by toxalbumins, and the intoxications, are all "syndromes due primarily to adrenal insufficiency." Pulmonary tuberculosis is due primarily to lowered adrenal function, and all the remedies for it are adrenal stimulants. Syphilis, too, is due to adrenal insufficiency, and mercury is a powerful adrenal stimulant, and iodine is "nature's own stimulant." The majority of drugs, toxins, and physiological toxalbumins stimulate the adrenals in small quantities, and paralyze them in larger amounts. In tetanus, epilepsy, hydrophobia, septicemia, and eclampsia, sedatives and depressomotors may easily do harm by depressing adrenal action, and the success of Baccelli's carbolic-acid treatment of tetanus and of the Pasteur treatment of hydrophobia by injection of extract of dessicated cord, is owing to stimulation of the adrenal system. Element of specificity in each disease is an expression of the particular way in which each drug or toxin affects the adrenals, some stimulating first and then paralyzing; others, like hydrocyanic acid, overwhelming them at once.

The posterior pituitary body is the chief functional center of the nervous system. It is the anterior pituitary body's co-center in sustaining metabolism, and it is an important feature of the morbid process of influenza, hay fever, hysteria, catalepsy, and other obscure affections. The spleen and pancreas unite in furnishing trypsin to the blood. Its main function in the blood is the destruction of toxic albuminoids. Phagocytosis is the preponderant immunizing

factor, but it is trypsin which reduces the toxic albuminoids to inert cleavage products in the digestive vacuoles of the leucocytes. Ehlich's views become simplified, his amboceptor being adrenoxin, and his complement (Buchner's alexins, Metschnikoff's cytases) being trypsin. Fibrinogen, however, plays a preponderant role also in this matter, the process requiring the co-operation of the three factors,trypsin, adrenoxin, and fibrinogen, for trypsin is sufficiently active only in the presence of given proportions of adrenoxin and fibrinogen. Thus in typhoid fever, fibrinogen is missing, whereas in diphtheria, it is trypsin which is lacking in the blood, and the dominant active principle of diphtheria antitoxin is trypsin. The white blood cells have functions exceeding in importance those heretofore ascribed to them, even hypothetically. The neutrophiles are traced from the solitary and agminated follicles to the cavity of the intestine, where they ingest proteids; and through the villi, and the mesenteric and portal veins where they absorb trypsin. They form peptones, myosinogen, and fibrinogen, and distribute these to all tissues, the muscles, and the blood itself. The eosinophiles are daughter cells of the neutrophiles, mitosis occurring in the liver. They are traced to the pulmonary alveoli, where they participate in the formation of the nucleated epithelium. Their product is hemoglobin. The basophiles take up fat and change it into myelin, which they distribute to the nervous system.

From this brief summary some conception may be gained of the extent of Dr. Sajous' investigations. He hopes to evolve a system of "immunizing medication," whose purpose it will be to arrest diseases during their insipiency through stimulation of the adrenal system.

Dr. Sajous has embodied his ideas in a handsomely printed book of over 1,000 pages, published by the F. A. Davis Company, of Philadelphia. A second volume, which is promised in the near future, will bring out more fully the author's ideas on "immunizing medication."—*Gaillard's Med. Jour.*

The Necessity and Desirability of Inducing Abortion in Tuberculous Working Women.—Dr. C. Hamburger (Berliner klin. Wochenschrift, November 17 and 24) says that the fight against pulmonary tuberculosis will be useless as long as the question is undecided: What shall be done with the pregnant working woman? The importance of this question is enhanced by the fact that in Prussia over 75 per cent of working women have an income of not over 900 marks ($180), and are therefore compelled to live under conditions in which useful treatment, even during menstruation, is out of the question. Hamburger advises induction of abortion in these women because it is a misfortune for them to be pregnant; because treatment during the time of the pregnancy (since they are compelled to work) is an impossibility, and is, therefore, time lost; and because their children are likely to be tuberculous and in their environment every additional tuberculous individual is an additional danger. The pregnancy is dangerous to the mother, to the family and to the community. He would limit the operation to those in whose sputum tubercle bacilli are found. The author concludes by saying that a great step forward would be made in the fight against tuberculosis if his attitude could be made clear in obstetric text-books, and he recommends to the next congress on tuberculosis the adoption of this formula: "If a wife is suffering from tuberculosis recognizable by emaciation, loss of strength, constant cough, and purulent or bloody sputum, pregnancy is to be avoided by every known means. If the woman becomes pregnant, however, the physician is to have a consultation with another, with a written and signed agreement, to decide whether the continuance of the pregnancy is dangerous to the life of the mother."—*New York Medical Journal.*

Treatment of Colds.—In a paper read before the New York State Medical Association at its recent meeting, Dr. A. A. Smith stated that he believed that cold in the head might be catching, but he would not on that account isolate the sufferers. Cold bathing would have a certain effect in preventing cold. He thought that all with a temperature of 100° F. or over should go to bed. Opium and quinine at night, with a cathartic in the morning, were frequently productive of good. Giving a cathartic at the beginning was commendable. Relief may be obtained by taking a few drops of spirit of camphor on a lump of sugar. Coal-tar preparations had also been found useful, but they often reduced the cold to a certain point and then it remained at that stage. He had been disappointed in carbolic acid. Tincture of aconite was good for children. Turkish baths were good in the beginning of a cold. He had found no benefit from the resinous preparations in the air-passages above the vocal cords. Saline solutions often gave temporary relief, but they were attended by danger. In recurrent catarrhal colds he recommended the tincture of ferric chloride in large doses, but it should not be given beyond a few days. After all, the tendency to recur could only be relieved by change of climate.—*Amer. Med.* IV, No. 18.

STRAY THOUGHTS.

TALK HEALTH.

Talk happiness. The world is sad enough
Without your woes. No path is wholly rough;
Look for the places that are smooth and clear,
And speak of those to rest the weary ear,
Of earth, so hurt by one continuous strain
Of human discontent and grief and pain.
Talk faith. The world is better off without
Your uttered ignorance and morbid doubt.
If you have faith in God, or man or self,
Say so; if not, push back upon the shelf
Of silence all your thoughts till faith shall come;
No one will grieve because your lips are dumb.
Talk health. The dreary, never changing tale
Of mortal maladies is worn and stale.
You cannot charm, or interest, or please,
By harping on that minor chord, disease.
Say you are well, or all is well with you,
And God shall hear your words and make them true.

—*Ella Wheeler Wilcox.*

No man is born into the world whose work
Is not born with him; there is always work,
And tools to work withal, for those who will;
And blessed are the horny hands of toil!
The busy world shoves angrily aside
The man who stands with arms akimbo set,
Until occasion tells him what to do;
And he who waits to have his task marked out
Shall die and leave his errand unfulfilled.

—*James Russell Lowell.*

We are all Tired at times and unless we make unceasing effort toward maintaining our enthusiasm we may develop a total fatigue, and it is easy for us to sympathize with the gifted "Amber" who wrote: "I am tired of many things. I am tired of the miserable little god, 'worry,' shrined in every home. I am tired of doing perpetual homage to the same black faced little wretch. I am tired of putting down pride and curbing a righteous indignation. I am tired of keeping my hands off human weeds. I am tired of crucifying my tastes, and cultivating the nickel that springs perennial to meet my needs. I am tired of poverty and all needful discipline. I am tired of seeing babies born to people who don't know how to bring them up. I am tired of folks who smile continuously. I am tired of amiable fools, and the platitudes of unintelligent saints. I am tired of mediocrity. I am tired of cats, both human and feline." Our only relief is in turning our minds to the good, the true and the beautiful all around us and vowing to make each waking hour some one the happier for our presence.—*Medical Mirror.*

BOOK REVIEWS.

CLINICAL TREATISES ON THE PATHOLOGY AND THERAPY OF DISORDERS OF METABOLISM AND NUTRITION.—By Prof. Dr. Carl Von Noorden, Senior Physician to the City Hospital in Frankfurt am Main. Authorized American Edition, Translated under the direction of Boardman Reed, M. D., Professor of Diseases of the Gastro-Intestinal Tract, Hygiene and Climatology, Department of Medicine, Temple College, Philadelphia. Part I, Obesity. The Indications for Reduction Cures. Part II, Nephritis. Part III, Membranous Catarrh of the Intestines. Price of first and third part, 50 cents each; of second part, $1.00. New York: E. B. Treat & Co. 1903.

This series of monographs, founded upon extensive experience and experiments, are equally scientific and practical, and promise to be a noteworthy addition to our knowledge of the degenerative conditions so prominent in modern life. These little books are remarkable for their originality and common sense. Their perusal will be found highly entertaining to advanced thinkers, and much benefit will be derived therefrom. They are beautifully printed and bound, and altogether acceptable additions to any medical library, while those who are making a special study of internal diseases cannot afford to be without them.

DISEASES OF THE STOMACH.—By Dr. F. Riegel, of Giessen. Edited, with additions, by Charles G. Stockton, M. D., Professor of Medicine in the University of Buffalo. Handsome octavo volume of 835 pages, illustrated, including 6 full-page plates. Philadelphia, New York, London: W. B. Saunders & Company, 1903. Cloth, $5.00 net; Half Morocco, $6.00 net.

This volume, like the others of this excellent practice, is thorough and complete. The importance of examining the stomach-contents in diagnosis, and the various methods of obtaining the contents and performing the examination, are discussed with the accuracy and clearness that spring from wide experience. Full consideration is given to the hydrochloric acid question as a factor in the pathology of stomach diseases, the latest views having been incorporated by the editor. Particular attention has been accorded disturbances of motility, and their influence in the disturbances of secretion. It is evident that careful study has been devoted to the subject of impairment of the absorptive powers, and the significance of gas-fermentation has been emphasized.

The eminent editor, a recognized authority on diseases of the stomach, has added to the already excellent German text his own extensive experience, bringing the work in accord with our present knowledge. We are confident that for scientific excellence and completeness, as well as for mechanical perfection, this work stands unrivaled.

NEWER REMEDIES.

DIPHTHERIA.—J. W. Pearce (*Amer. Pract. and News*) relates as follows the way he treats diphtheria, and he has never lost a case: If he can get perfectly fresh antitoxin he gives it, but if it can not be had perfectly fresh he does not. Whether antitoxin is given or not, he gives Ecthol, in full doses appropriate for the age of the patient, every three hours, administered by the mouth. The entire fauces, larynx, and pharynx are sprayed with a mixture of Ecthol and peroxide of hydrogen, three parts of the former to one of the latter, every fifteen to thirty minutes. Calomel in small doses is administered every hour until the bowels are thoroughly moved. Nourishing and supporting diet is given at short, regular intervals, and plenty of fresh air admitted. In a series of twenty-four cases treated in this manner, seven received antitoxin and seventeen did not. The seventeen did as well as the seven. All recovered, and the author attributes most of the remedial effects to the Ecthol, which was used in all cases throughout the entire attack.

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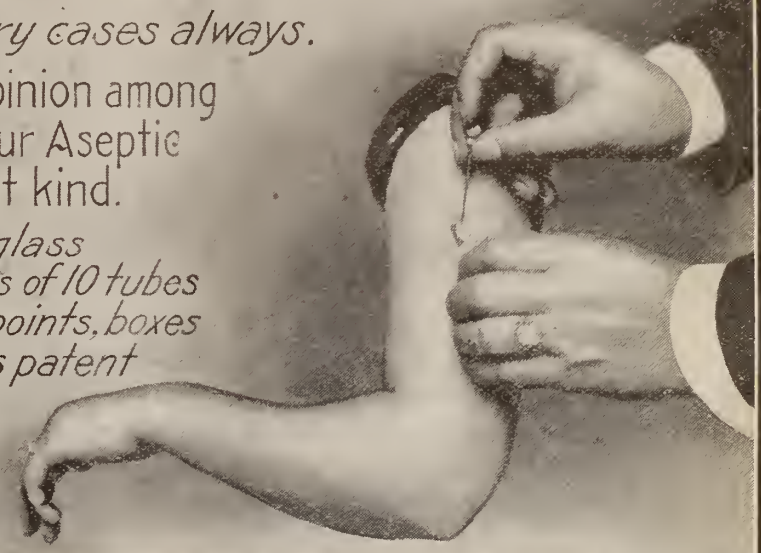

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Iron as a Remedy.—Time out of mind, iron has been leaned upon, as one of the special standbys in medicine, particularly as a builder and reconstructor. But unless iron be given in proper form, one might as well give absorbent cotton, or chips or wet stones. When we desire to produce any increase in the number of red blood corpuscles, and to make them redder and richer with hemoglobin, we need to be sure of the form of iron that we are giving. The evidence has been accumulating these many years, that manganese, in itself an admirable remedy, combined with iron emphasizes the potency of both.

Dr. Gude, the great German chemist, contributed very definitely to the good of the profession when he presented the product of long years of experimentation and clinical experience, the therapeutic product known as Pepto-Mangan (Gude).

Added to the many hundreds of clinical contributions, Dr. J. W. Frieser, of Vienna, Austria, recently reports most favorably, and very forcibly, observing as follows:

"Pepto-Mangan contains iron and manganese combined with peptone in the proper proportions, and in a readily digestible and absorbable form, so that the preparation can be completely utilized by the organism. As is well known, the peptones represent artificial predigested products, which, when taken into the organism, make no special demands upon the digestive functions, which in anæmic and chlorotic persons are usually weakened and impaired in action. This fact is the more important, since in these cases the digestive process and the secretion of gastric juice is usually reduced, in consequence of which the nutrition is quite impaired, while frequently there is a condition of hyperacidity of the gastric juice. It has been most gratifying to me to observe that during the use of Pepto-Mangan (Gude), which experience has taught me is particularly adapted in these maladies, it does not interfere with or exert any disturbing effect upon the digestion. On the contrary, under its administration the appetite and the digestion are stimulated in a very satisfactory manner.

"As a rule, during treatment with Pepto-Mangan the improvement in the constitution of the blood, as shown by physical examination, was accompanied by a beneficial effect upon the general condition and strength. The appearance and appetite of the patients improved visibly; the digestion and nutrition progressed favorably, and the patient felt better, happier, and more vigorous. Disturbances of the gastro-intestinal tract, such as pressure or pain over the stomach, nausea, a disagreeable feeling of dullness, a diminution of appetite, constipation, congestions, etc., which are so frequent during the administration of other iron preparation, especially those of inorganic character, were scarcely ever observed during the use of Pepto-Mangan (Gude). On the contrary, in those cases in which there is a tendency to constipation and a marked atony of the gastric functions, my experience has led me to regard this remedy as especially useful and effective.—*Medical Mirror.*

Hueppe and Koch.—The two schools of thought on questions bacteriological are well represented at present by the distinguished investigators Hueppe and Koch. Both men are deeply versed in bacteriology and physiological chemistry. Hueppe emphasizes the importance of the perfect health of the body cell—and the special treatment of the body cell as a means of frustrating the attacks of germ life. Koch emphasizes the importance of destroying entirely all germ life so that there will be no attack.

Of course both men are right. We must destroy all the germ life we can. But since a war of extermination of disease germs is impracticable at present the physician finds a more profitable field for his exertions in preparing the body cells to resist and throw off the attack of germ disease. It is no doubt by this sort of special preparation of the lung cells that hypophosphites and cod liver oil do so much to prevent the progress of the tubercular organism. Scott's Emulsion containing both the cod liver oil and the hypophosphites is a good example of those therapeutic agents which bring immunity by reinforcing cell life.

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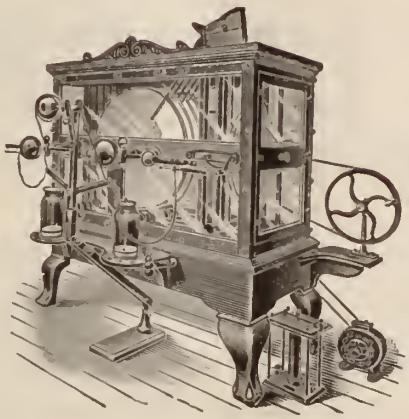

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THE

Vermont Medical Monthly

Official Organ Vermont State Medical Society.

Vol. ix. No. 5. Whole No. 101. | Burlington, Vt., May 25, 1903. | $1 per year. Single copies, 15 cts.

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Entered as second class matter at Burlington, Vt., Post Office.

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The Vermont Medical Monthly

Vol. IX. May 25, 1903. No. 5

ORIGINAL ARTICLES.

MECKEL'S DIVERTICULUM AS A CAUSE OF INTESTINAL OBSTRUCTION.

Read before the Harvard Medical Society of New York City, Feb. 28th, 1903,

By Dr. Frederic N. Wilson of New York City.

Member of the New York County Medical Society; Medical Society of Greater New York; Harvard Medical Society of New York City; Fellow of the New York Academy of Medicine; Instructor in Surgery in the New York Post Graduate Medical School and Hospital; Attending Surgeon to the Babies Wards of the New York Post Graduate Hospital.

While intestinal obstruction from a Meckel's Diverticulum does not occur as frequently as from some other causes, it is met with frequently enough to be of both theoretical and practical interest and importance to all those whose work leads them into the abdominal cavity.

The first description of this congenital malformation was made by Ruysch in 1701. Some seventy years later (1769) Morgagni pointed out its origin from the omphalo-mesenteric or vitelline duct, but the most accurate description of both its origin and the part it plays in the causation of intestinal obstruction was made by Meckel in 1808.

Embryologically the diverticulum is analogous to the other blind pouches connected with the intestinal tract, i. e. the caecum and vermiform appendix.

Histologically its structure is identical with that of the small intestin; an external serous coat, a middle muscular layer and an internal lining of mucous membrane.

Origin.—Its origin is from the so-called umbilical vesicle or yolk sac, that embryonic appendage of the intestinal canal, the contents of which supply the embryo with nutrition during the first few weeks of its life.

At about the third week of foetal life this sac is more or less pear-shaped and attached by its stem or neck to the primitive intestinal canal. At about the fourth week it has reached its maximum size and at the end of the fifth week retrogression has commenced, the foetus then obtaining its nourishment from the uterine sinuses of the mother through the vessels of the allantois.

This yolk sac remains visible, however, up to the fourth or fifth month, together with its pedicle and the omphalo-mesenteric vessels. The cavity of the yolk sac communicates through its stem or neck with the so-called middle gut, that is that part of the embryonic intestinal canal which eventually forms all of the small intestine except the first portion of the duodenum. The sac is entirely outside the body of the embryo, its neck or stem only passing through the umbilicus with the placental cord as the abdominal walls come together. As the embryo grows and the placental circulation is established, the yolk sac becomes smaller and smaller and rests upon the placenta, its neck being incorporated in the placental cord. This neck or stem of the sac ordinarily atrophies throughout its entire length, its cavity becomes obliterated, and finally the entire structure undergoes fatty degeneration.

It is in those instances where this obliteration of the cavity of the stem does not take place that we have the structure known as Meckel's diverticulum.

In the new-born, according to Fitz, if a diverticulum exists it is found about twelve inches above the ilio-caecal valve. As the intestine grows, the position of the diverticulum changes

in reference to the caecal valve until in adult life it may be found as far distant from it as four feet. Its length varies, depending upon the extent of the process of atrophy which takes place and the extent of this atrophy depends in turn upon the persistence of the omphalo-mesenteric vessels which accompany the neck of the yolk sac.

Atrophy of the duct, however, is not always accompanied by the disappearance of these vessels which may persist in forming a band from intestine to umbilicus and which may be in itself a possible cause of intestinal obstruction. The distal end of the diverticulum may be attached to the umbilicus, the abdominal wall, the mesentery, the intestine, or lie free in the abdominal cavity. In the statistics of Halstead of Chicago, who reports sixty-nine cases from various sources, twenty-three were attached to the mesentery, fifteen to the umbilicus, three to the small intestine, one to the omentum, one to the colon, one to the rectum, and one to an appendicular exudate.

The *proximal* end, as before stated, is attached to the small intestine, its situation being from one to four feet above the caecum. When attached to the convex surface of the intestine it has no mesentery but receives its blood supply from the vessels of the intestinal wall. When springing from the lateral wall or near the mesentery, it may be supplied with a mesentery of its own. The frequency with which Meckel's diverticulum is found has been estimated at from 1.25 to 2.50 per cent. of all bodies examined.

Kalynack found it present eighteen times in fourteen hundred and forty-six necropsies; in none of which, however, did it have anything to do with the cause of death. At St. Bartholomew's Hospital, in three thousand four hundred post-mortem examinations, there were twenty-seven cases found, a percentage of 1.26. Authoritative statistics regarding the frequency of this diverticulum causing intestinal obstruction I have been unable to find.

Many of the older statistics are misleading because the vermiform appendix was confused with Meckel's diverticulum, while in other cases a careful examination was not made to establish beyond doubt the presence of a true diverticulum. I think it is fair, however, to assume that the percentage is greater than is generally supposed. Leichterstern, reviewing one thousand one hundred and thirty-four cases of intestinal obstruction, found 39 per cent. due to intussusception; 9 per cent. to bands and adhesions, and 6 per cent. to diverticula.

In considering the manner in which a Meckel's diverticulum causes intestinal obstruction, we have to bear in mind the existence of two different primary anatomical conditions of the diverticulum itself. One where the distal end lies free in the abdominal cavity unattached to any structure, the other where its tip is attached to the abdominal wall or to some viscus. The latter variety is the more common.

METHODS OF OBSTRUCTION CAUSED BY MECKEL'S DIVERTICULUM, THE DISTAL END OF WHICH IS UNATTACHED PRIMARILY.

1. *Intussusception.* In this variety, as the name implies, the diverticulum is invaginated into the lumen of the intestine obstructing the passage of its contents below the point of invagination. This may occur under two conditions, one when the distal end of the diverticulum is free in the abdominal cavity, the invagination starting at the proximal end and continuing on toward the distal until enough of the diverticulum has been invaginated to occlude the intestinal lumen.

The second where an umbilical faecal fistula exists as the result of the non-closure of the neck of the yolk sac at the umbilicus. Through this opening the intestine protrudes until the posterior intestinal wall projects as a spur, which may become so firmly wedged into the

umbilical ring as to completely close the lumen of the intestine. Guthrie reports such a case, which terminated fatally.

Hubbard of Boston has with good reason recently drawn attention to the importance of considering the presence of a patent Meckel's diverticulum at the umbilicus which may be mistaken for an ordinary umbilical polypus. In some of the apparently simple polypi the glands of Lieberkuhn have been found showing they are undoubtedly the remains of a closed diverticulum. The practical importance of this lies in the possibility of our converting what appears to be a simple growth into a faecal fistula by carelessly cutting it off.

2. Volvulus, with loop of intestine inside the twist. Such a case has been reported by Treves.

3. Chronic inflammation of the diverticulum with cicatricial narrowing of the gut. The diverticulum becoming filled with faecal matter or concretions, the resulting inflammation extending to intestines; ulceration and cicatrization following.

4. Inflammatory attachment to some other portion of the intestines, the traction causing closure of the lumen of the gut.

OBSTRUCTION DUE TO A DIVERTICULUM, THE DISTAL END OF WHICH IS PRIMARILY ATTACHED, MAY BE PRODUCED IN THE FOLLOWING WAYS:

1. The diverticulum acting as a band, the loop of intestine passing under it and the band constricting its lumen.

2. Occlusion due to loop of intestine passing over a tensely drawn band, the gut dropping over it, causing an acute flexion.

3. Volvulus of the diverticulum, the intestinal lumen being closed at point of origin of the diverticulum.

4. Over-distension of the diverticulum with gas, has been reported as a cause.

There are other methods by which obstruction is produced, but they are rare and consequently not of special practical importance. From those I have mentioned it will be seen that obstruction may be brought about in various ways, the occlusion of the lumen being complete, no matter how produced.

Diagnosis.—In the majority of cases the onset is sudden, but in a few instances symptoms of chronic constipation amounting almost to obstruction have existed for a varying length of time before the signs of complete occlusion developed.

Fitz states that in nearly one-half the cases a history is given of previous attacks of intra-abdominal pain. This seems to me to be of little practical significance, inasmuch as such pain is the result of many intestinal troubles. A discharge from the umbilicus or the history of such a discharge earlier in life would be very suggestive. It does not seem to me that pain in the region of the umbilicus, unless co-incident with some other suggestive feature, would aid much in making a diagnosis.

Symptoms.—So far as I know there are no pathognomonic symptoms which would lead us to make a diagnosis of obstruction from a Meckel's diverticulum. The presence in a case presenting symptoms of intestinal obstruction of such external malformations as club-foot, exostrophy of the bladder or hare-lip,might lead one to suspect the obstruction due to a Meckel's diverticulum, but they occur co-incidently too rarely to be of much significance.

The symptoms in general are identical with those of obstruction from any cause. The faeces are usually characteristic, skin pale, eyes sunken, perhaps cyanosis due to either impeded circulation from distension, or from shock. The body temperature may be raised, but will often be found to be sub-normal.

Extremities cold and damp. The pulse increased in frequency, small and weak. There may be observed through the abdominal walls the outlines of intestinal coils, sometimes to be seen in active peristalsis. Pain may be severe

or moderate, or varying from one to the other, depending much upon the increased peristaltic action of the intestines.

Tenderness likewise varies and is dependent somewhat upon the extent of peritonitis that is present. Tympanites are usually marked after the first twelve to twenty-four hours. Tumor is present in a certain number of cases.

Treatment.—Inasmuch as it is not always possible to make a positive or even a reasonably sure diagnosis in these cases at the very onset, the treatment will naturally divide itself into methods to be adopted during the time we are in doubt as to the exact nature of the case in question and those to be carried out after the diagnosis of obstruction has been made. Much may be done to relieve the patient's distress during the first mentioned period. The lower bowel may be emptied by a high enema, a procedure which is not only beneficial in itself but which will also give information as to the permeability of the colon.

Lavage of the stomach by cleansing it from the so-called faecal contents gives the patient much relief in spite of the temporary discomfort attending the procedure and diminishes the frequency of the paroxysms of vomiting as well as preventing septic absorption from the mucous surface.

As all foods taken by mouth are vomited, nourishment is best administered by rectal enemata. The excessive thirst may also be much alleviated by small saline enemata.

Cathartics almost invariably increase the pain and vomiting, and if administered at all should be given cautiously. Opium relieves the pain, but it masks the patient's general condition, giving to both patient and physician a feeling of security which the actual condition may not warrant. For this reason it had better not be administered.

The diagnosis of obstruction once made, I believe there is but one method of procedure which promises the maximum of success with the minimum of risk and that is laparotomy, and this should be performed at the earliest possible moment after the diagnosis has been made. If a tumor can be made out by palpation through the abdominal wall, the incision for opening the peritoneal cavity had better be made over it, as this will probably bring the operator closer to the existing trouble than would an incision made in the median line.

The obstruction once found and its nature determined, the operator must proceed according to the special indications in the case. To attempt to outline in detail the various steps to be taken would mean a recital of all that is common or special in intestinal surgery. Suffice it to say that the diverticulum or the omphalo-mesenteric bands should be removed entire. The diverticulum should not be inverted into the intestine, as is sometimes done with the appendix, for its blood supply may be sufficient to nourish it indefinitely, during which time it will act as a fixed foreign body in the lumen of the intestine and thereby invite obstruction more or less complete.

Prognosis.—According to Gibson the mortality from obstruction by Meckel's diverticulum is considerably higher than that from other forms of intestinal occlusion. This he thought due to the fact that operators failed to recognize the true nature of the obstruction in those cases where it was caused by Meckel's diverticulum, the diverticulum not infrequently being divided without being secured by ligature; leakage of intestinal contents yielding a fatal result.

If this can be true that an operator could be guilty of such gross carelessness as to cut through any structure without considering its nature, or if its nature were not possible to determine, to at least provide against subsequent hemorrhage by applying ligature to the divided ends, it seems to me the lowering of the mortality rate is a very easy problem to solve.

Naturally the prognosis is dependent upon many circumstances, the age of the patient, his

general condition, the length of time the obstruction has existed, the damage done to the intestine and to the general peritoneal cavity, and last, but not by any means the least, the method of treatment adopted.

Halstead reports in Annals of Surgery 69 cases, 57 operated on, mortality 59.1 per cent.

106 West 47th St., New York.

AN INTERESTING CASE OF COMPULSIVE INSANITY.

By Watson L. Wasson, M. D., Vermont State Hospital, Waterbury, Vt.

Owing to its comparative infrequency and with the feeling that it might prove of interest to some, the following case of Compulsive Insanity is described:

By compulsive or imperative insanity is understood a condition in which arbitrary states of consciousness force themselves into the mind of the individual against his will. It can readily be seen that the character of the condition and its possible variations is limited only by the possible number of the different states of consciousness, and this in turn is determined by the mental capacity and education of the individual. The influence of this condition may be felt in either the ideational, emotional, or volitional fields, singly or combined. In the form where ideation is involved it may be of the subjective type alone, without leading to involvement of volition, and the consequences of which are confined to the person by whom it is experienced. This is the condition known under the name of imperative or compulsive ideas. Again the enforced mental condition may consist of suggestions to commit some act contrary to the individual's moral sense. Unfortunately these compulsions most frequently lead to the committal of deeds of criminal nature.

The involvement of the emotional side leads to the so-called "phobias," of which agoraphobia (fear of public places), mysophobia (fear of dirt), etc., are examples. The possible phases of emotional derangement run through the whole gamut of the feelings. Avarice, jealousy, vanity, love of fire, etc., may each be so abnormally developed as to exert a morbid influence on the organism.

Impulsive insanity may be defined as follows: A volitional morbid impulse determines the perpetration of an act without the antecedent influence of the idea or emotion, and is the expression of a sudden resistless impulse to action, which leaves no choice to the individual but to obey.

The foregoing propositions serve to illustrate only in the most general manner what imperative insanity subserves, but the history of the following case will exemplify and elucidate some special features of this psychopathic state:

The patient is a young man of 27 years of age, unmarried, a native of Vermont, of good education and above the average intelligence. His family history is excellent, and his character, during the years of childhood and youth, was not noticeably different from that of the average boy. The prodromata were meagre, consisting mainly of a slight stomachic dyspepsia, a feeling of dullness in the head, and an occasional buzzing in the ears. Insomnia has never been present.

Mentally his condition has been fairly uniform since under observation. Although slight improvement seems at times apparent in certain fields of conduct, his general condition has suffered no amelioration. Hallucinations have not been present at any stage and consciousness is perfectly clear. He is in normal relation with his surroundings, temporally and spacially. He has perfect insight into his morbid condition of mind, and has an ever-present desire to be rid of it. He strives with himself to that end, but has not sufficient inhibitory power to prevent his thoughts from dwelling on the imperative ideas which force themselves into the field of consciousness. Thought is largely influenced,

both in vigor and scope, by these imperative concepts, which force themselves into consciousness suddenly and without any association whatever with the previous train of thought. He is utterly unable to inhibit them, so they remain to torment him and greatly restrain and limit freedom of thought.

The essential feature of his condition consists in the involuntary obtrudingof names of different people into the train of thought. They persist there for a certain period, usually not longer than 24 hours, and their presence causes a depressed emotional tone, sometimes bringing him to the point of tears. At one time he was found standing in the corridor of his ward, depressed and crying, because he could not get his sister's name from his mind. It had suddenly occurred to him as he was leaving a room where he had been engaged in sewing some buttons on his vest. He said he never could go into that room again without thinking of his sister, and the fear of that troubled him. He even felt that he must remove the buttons from his vest, as their presence would tend by association to call up the name of his sister with its accompanying unpleasant state of the emotions.

The case is not only one of imperative conceptions, but early in its development an incident occurred which would serve to place it among those peculiar cases of indecision or doubt, which the French term *Folic-du-doute*. He was given an important letter to deliver, and for a long period afterward was greatly troubled in mind with the *doubt* that he might not have delivered it. After a considerable lapse of time he reasoned this out of his mind, saying that he probably would have heard of it by this time if it had not been received.

When walking he will suddenly stop, back a step or two, start forward, then back again, doing this several times before he finally succeeds in forging ahead. This is explained as the result of his desire to get rid of some sudden idea that has flashed into his mind, while he was walking along. He must retrace his steps to the point where the idea first came to him and wait till he can force it from his mind and think of something else. It is during this mental struggle that he takes his forward and backward steps. If he were to walk along and not wait till he had freed his mind it would "bother" him for a long time afterward. The repetition of certain acts would suggest stereotypy, but analysis shows it to have its basis on influences exerted by imperative concepts, as described, rather than on a persistent morbid impulse, as is usual with stereotyped movements. Judgment and reason are unimpaired.

Emotionally his interest in things and response to the ordinary matters of life is about on an average; however, a more or less depressed emotional tone is often present, due to the unpleasant effect of his mental state. His trouble greatly limits his usefulness in manual fields, as he can do nothing while he is under the influence of some imperative concept. He is greatly disturbed and anxious if he is requested to anything new or novel to his usual daily routine. This anxiety has for its basis the *fear* that when he goes to do what is desired he will think of something that is going to persist in mind and be a source of mental suffering to him.

Physically, adherent lobules and small Darwinian tubercles on both ears, are the only stigmata present. The development of such cases for the most part occurs on a psychopathic basis, dating from birth. They are classified with several other kindred psychoses, under the heading "Constitutional Psychopathic States." The first symptoms may follow some severe shock. The course varies in individual cases, some improving rapidly and sufficiently to return to their homes, but for the most part the prognosis is unfavorable.

THE DIAGNOSIS AND TREATMENT OF INCIPIENT PULMONARY TUBERCULOSIS.*

By H. Edwin Lewis, M. D., Burlington, Vt.

Of all the facts determined by the recent widespread study and discussion of tuberculosis, none is more certain than that the chief hope of the consumptive rests on the early recognition of his disease. The importance of early diagnosis and treatment cannot be questioned, and a large share of the lives that have been sacrificed each year to tuberculosis must be laid to the lamentable fact that proper treatment has too seldom been inaugurated in the first stages. Undoubtedly the principal cause for this has been carelessness on the part of the patient in presenting himself for treatment. But there certainly have been enough other patients in whom the true condition was not recognized by their attending physician until too late, to warrant the statement that the medical profession has not been entirely free from responsibility in the high death rate from this disease. Every painstaking physician who has given any special attention to pulmonary tuberculosis is aware of many an advanced case that has come into his hands from other medical men, but whose true condition none the less has apparently never been recognized. Too many patients have been treated for bronchitis and catarrh, in whom a careful physical examination and sputum analysis would have demonstrated a much more serious state of affairs. Such cases (and the comparative frequency of their occurrence is my excuse for this protest) are not only a disgrace to our profession, but too often an evidence of neglect. A surgeon who mistakes a dislocation for a fracture is amenable to the law and is often called upon to answer for his lack of skill or care. Why not, then, the physician who neither recognizes the condition of a tuberculous patient nor avails himself of accepted methods of diagnosis until too late? The incompetence of the surgeon seldom means more than permanent inconvenience, but that of the physician is not only disastrous to his patient, but dangerous to countless others. Failure to recognize and warn a patient of the danger from a careless disposal of his sputum is, in most instances, a greater wrong to the public than to the individual.

With the facilities of modern methods of diagnosis, especially the aid given us by the microscope, there is, therefore, less excuse than ever before for failure to recognize tuberculosis, and one writer has gone so far as to suggest that the time will come when a tuberculous patient, as well as the State, will have an action at law against a physician who fails to diagnosticate the disease within a given time. While we can hardly expect this, a physician who neglects to use due care and vigilance in determining tuberculosis should be liable for his negligence.

The diagnosis of incipient pulmonary tuberculosis can never be absolutely made from one symptom alone. A number of facts, only derived oftentimes from observations extending over a period of several days, must be taken into consideration in forming an accurate conclusion. Of these facts the principal ones are those obtained from careful inquiry in regard to the temperature, pulse, cough, weight, digestion, physical condition of the chest and the repeated examinations of the sputum.

Interrogation of the temperature is one of the most valuable aids to diagnosis. Not that its absence precludes tuberculosis, but that an unaccountable rise of one to three degrees some time during each twenty-four hours is pretty certain to indicate the presence of a tuberculous process.

I am convinced from cases that I have been able to study in the early stages that the earliest and most positive symptom of tuberculous infection is variation in the temperature range.

* Read by invitation at the 89th Annual Meeting of the Vermont State Medical Society.

The presence of one degree above normal during any time within twenty-four hours without evident cause is most significant and should always excite suspicion of incipient phthisis, as well as prompt, careful search for other symptoms.

It is useless to form an opinion from the perfunctory night and morning record. The elevation of temperature may vary in the time of its appearance in different individuals, or even in the same individual, showing itself at different hours of the day, and in some cases only on the second and third day; but if a tuberculous infection is present, a careful two or four-hour record of the temperature from 6 A. M. to 10 P. M., covering one week's time, is quite certain to demonstrate a slight rise some time during the period, with an occasional fall to subnormal. I am in the habit of loaning an accurate thermometer to intelligent patients with directions to keep a careful two or four-hour record of the temperature while awake. The results are often very significant, as I have many times determined the presence of fever by this method when a simple examination at my office would have been valueless.

In one hundred and six cases that I have been able to observe, or from which I was in a position to obtain accurate data during the early stages, ninety showed a rise of temperature during the twenty-four hours of each day; seven showed a rise on alternate days, and in nine a record of increased temperature was not obtained at all, though a drop to subnormal was frequently observed. Subnormal temperature some time during the twenty-four hours of each day was noticed in seventy-three of one hundred and five cases. The time of day at which the highest temperature was recorded was between 2 and 6 o'clock P. M. in eighty-two cases. The lowest or subnormal temperature was between 5 and 9 o'clock A. M. in sixty-four cases.

The pulse may give another significant symptom of incipient tuberculosis. It is, as a rule, increased in frequency, but decreased in force and tension. A pulse rate of eighty-eight, ninety-six or even one hundred and twenty, out of all proportion to the temperature, is not uncommon. In fifty-nine out of sixty-four cases a pulse rate of eighty-eight or over was observed.

The most valuable symptom, next to rise of temperature and an increased pulse rate, is cough. It may be slight, indeed so slight as to escape the patient's attention, but careful inquiry from other members of the family will almost invariably elicit the information that there is a little cough in the morning and occasionally during the night. The cough may be dry and just a little hacking, but it is quite constant early in the disease. The patient's testimony should not be taken as final in regard to cough, for I frequently have them come into my office and assert that they are not coughing at all when it has been sufficient to attract my attention. It is not necessary that the cough should be paroxysmal, indeed the characteristic cough in the incipient state is free from spasm, being simply an effort to relieve a slight though persistent bronchial irritation. Expectoration is rarely an accompaniment of cough until the lung or bronchial tissue begins to break down, or when considerable catarrh of the air passages is present. It may, therefore, show itself early or late, depending upon the condition of the respiratory organs and the extent of the process.

Gradual but progressive loss of weight is another important symptom taken in connection with the foregoing, and is usually proportionate to the digestive and assimilative disturbances which are so constant and important factors in the etiology and course of pulmonary phthisis.

Hemoptysis is a symptom which may prove of the utmost importance, but it has been by no means of common occurrence in the incipi-

ent stages of cases that I have been able to observe. Real hemorrhage from the lungs has occurred during the early stages of only 23 per cent. of one hundred and ninety-four cases that I have been able to collect reliable data from. It would seem that hemorrhage is rather more of an indication of the extent and location of the process in the later and ulcerative stages than during incipiency. Blood-streaked sputum is common in the early stages, however, and of considerable significance.

In regard to the physical signs I shall say little, for it must be confessed that they are neither constant nor well marked in the early stages of pulmonary tuberculosis. A careful examination of a patient on several successive days and in different postures, however, will usually give a careful diagnostician consider able information. A prolonged expiratory murmur on auscultation and slight percussion dullness at either or both apices just over or above the clavicles with some increase in vocal fremitus are the earliest and most important of the physical signs of incipient phthisis. Often crackling rales at either apex are very significant. They occur at the end of inspiration and many times can be with difficulty distinguished from the normal crepitant rale. Having the patient lie on his back will frequently accentuate them, and they can usually be caused to disappear by coughing. The rythm of respiration is frequently changed, and the rate may be quickened to twenty or more per minute.

Of the further symptoms of pulmonary phthisis, notably the anemia, night sweats, debility, shortness of breath, sinking spells and the alternate constipation and diarrhea of the average case, which all go to make the symptom complex, I shall say nothing. They are too well known to require attention.

I would like to refer, however, to two other minor symptoms that I have frequently observed in incipient stages of tuberculosis, but which are seldom mentioned. One is a more or less marked and extreme dilatation of the pupil. The ciliary and pupillary reflexes are nearly, if not quite, normal, but on the least excitement or fatigue the dilatation becomes unusually noticeable. The other is a tendency to hoarseness without apparent cause, ranging from slight huskiness to complete aphonia. Neither of these symptoms taken alone is of diagnostic importance, but considered with others they become more or less confirmatory.

Finally, careful and repeated examinations of the sputum should always be made as a routine aid to diagnosis. Since the detection of Koch's bacillus is of such positive value in the presence of certain pathological conditions, a search for it is justifiable on the slightest suspicion. Many times the bacilli are not found in the sputum on the first examination, but it should be remembered that clinical experience has demonstrated that negative examinations cannot be considered final as long as a single suspicious symptom remains. In rare cases the tubercle bacilli may be present, but from some chemical change or tinctorial peculiarity they may not stain by any of the known methods of staining. I have seen several patients who have never shown tubercle bacilli in their sputum, even to the day of death. But that the disease was tubercular was demonstrated not only by its course and outcome, but by post-mortem examination and inoculation experiments on lower animals. Therefore, while the microscopical examination of the sputum is highly important and a valuable aid to diagnosis, the clinical symptoms and physical signs of the disease should be given due weight in every instance. I feel certain, moreover, and my convictions have been justified by my own cases, that repeated microscopical examinations covering a period of one or two months will, with rare exceptions, almost invariably demonstrate tubercle bacilli if present and the patient is not improving.

In regard to the use of tuberculin as a diagnostic procedure, while I cannot question nor criticize those who recommend it so highly, I do

feel that its use is fraught with more or less danger and inconvenience to the patient, to say the least. I cannot help but believe from my experience with it, both for diagnosis and treatment, that there are other safer methods for both purposes. A tuberculous condition obscure enough to require its use can safely be treated on general principles or let alone until the disease is more apparent.

In regard to the treatment of tuberculosis, not alone in the incipient but in any stage, it must be said that it is the stumbling block of most practitioners of medicine. The fault lies not in incompetence, but largely in a lack of confidence and interest in the subject, and in an erroneous idea that there is a routine treatment for tuberculosis. The men who accomplish the most in restoring tuberculous patients to health realize that there is no treatment for tuberculosis. They do, however, treat the tuberculous patient, and to the extent to which they study each case and adapt treatment to each individual patient, just to that extent do they obtain any measure of success.

The limitations of this paper prevent any extensive consideration of a subject which must obviously be open to so great modification and variation. What I may say, therefore, on the treatment of patients with tuberculosis will be of a general character and in no wise deal with details or special conditions.

The role, however, of failing metabolism in the etiology and progress of tuberculosis and the arresting influence of its re-establishment give us our most valuable suggestion for treatment. Restore the nutritional balance of the tuberculous patient (which means the establishment of digestive and assimilative equilibrium in not only the alimentary canal, but in the circulation and fixed cells of the body), and the tuberculous process need cause little apprehension. Our means for doing this are an abundance of good air, in other words, ample oxygenation, good, easily-digested food, rest or intelligent exercise, depending upon the individual case, and wise medical treatment.

In regard to fresh air, too much stress cannot be laid on out-door living. Every patient afflicted with phthisis should spend at least ten hours a day in the open air. Purity of the atmosphere is the one great requisite of any climate suitable for tuberculous patients, and, since an excessively humid atmosphere is never a pure one, we should choose a location with a view of obtaining a minimum of humidity. Temperature, if not liable to sudden and extreme changes, is not a factor, but sunshine is, because of its purifying effect on the air and its stimulating influence on all vital functions.

A country residence is more suitable for consumptive patients than one in the city, from purer conditions of the atmosphere. In the country it is a simple matter and entails little expense to have a covered porch or veranda built with two sides completely open. Here the tuberculous patient should live day in and day out, and even sleep when the weather will permit. If conditions are not favorable for sleeping outdoors, the consumptive should spend his nights in a high, spacious room occupied only by himself, and with one window always wide open. With plenty of clothes to keep him warm, he will sleep better, perspire less and never run the slightest danger of "catching cold."

The question of rest or exercise is one on which authorities differ. Some recommend absolute rest, while others do not hesitate to advise a variable amount of exercise both systematic and otherwise.

On general principles the temperature range should be the index for rest or exercise. If the fever is high or continuous, absolute rest, preferably in the open air, should be enjoined. The rationale of this must be apparent. In the presence of an acute febrile process physical exercise means an extra tax on the vitality of the body, an extravagance the consumptive can

ill afford, and it almost invariably results in an aggravation of the symptoms and an extension of the disease. It is sound wisdom, therefore, to recommend a zealous economy of force as long as a single symptom of an acute process remains. But, when neither the fever nor other symptoms point to an acute progressive process and the vitality of the patient is not noticeably low, a certain amount of moderate exercise in the open air may prove beneficial. Especially valuable are systematic breathing exercises calculated to increase the lung capacity. Almost without exception the chest expansion of the average consumptive falls below three and one-half or four inches. If this can be increased to six or more inches, the benefits are usually marked and lasting.

Proper feeding is of next importance in the treatment of the tuberculous patient. The problem is not how much food can we get a patient to take, but how much can we get his body to digest and appropriate? A moderate amount of food properly digested and assimilated exerts a far more beneficial influence than the ingestion of quantities so large that the vital forces of a strong person would be overtaxed, to say nothing of one already weak and debilitated. Then, again, the oxygenating powers of the average consumptive are markedly lessened, and to attempt to force a greater amount of food combustion than is physically or chemically possible cannot mean anything else but harm to the whole organism. In every instance the digestive apparatus and assimilative powers of each patient should be carefully interrogated. The degree and character of the indigestion, whether of the proteids, of the fats, of the carbohydrates, or of all should be determined. If the proteids are not well digested, it is ridiculous to put a patient on an excessive diet of beefsteak, raw eggs, etc., and expect him to gain in weight and strength. Or, if the fats are not digested, it is quite as ridiculous to give a patient excessive amounts of cream, cod-liver oil and the like. The resources of his digestive tract alone should regulate his diet. If he cannot digest proteids, he should be helped in this direction by the administration of those predigested foods which are largely composed of peptones. If he cannot digest fats, what he does take should either be thoroughly pre-emulsified and predigested by the use of pancreatic extract, or their internal use should be completely interdicted, and the necessary amount supplied by inunctions of cocoa butter, cocoanut oil or cod-liver oil.

Careful study of every case of tuberculosis shows the importance of promoting the digestion and absorption of food as the one gerat object of all hygienic, dietetic or therapeutic measures, and there is a world of truth in a recent statement by William Henry Porter that "tuberculosis can be fed into or out of the human species."

The variety of drugs recommended for pulmonary tuberculosis tells eloquently how disappointing medicines have been in the treatment of the disease. Of all the drugs that have been found of some value, strychnine easily stands at the head. The dosage should be larger than commonly administered, and to admit of this it can well be given in increasing doses. Following is an excellent prescription:

Strychnine sulphate,	1½ gr.
Aquæ,	1 oz.

S: Begin with five drops in water, three times a day, and increase a drop each day until a dose of thirty-two drops three times a day is taken.

When the maximum dose is reached, which is equivalent to one-tenth grain, three times a day, the patient is advised to go back to the initial dose and increase again.

With very rare exceptions this manner of administering strychnine is followed by improvement in the cough, pulse rate, appetite, digestion and, in fact, the whole condition. The

patient sleeps better, and the exhaustive night sweats are stopped or greatly reduced.

Arsenic is, next to strychnine, the most potent drug which we possess for improving the condition of the tuberculous patient. Its well-known tonic effect and stimulating influence on the function of nutrition make it a very valuable remedy in all forms of tuberculosis. Fowler's solution is an excellent form for administration, but a maximum dose is not needed, three to five minims, three times a day, giving just as good an effect as larger quantities. Recently I have been using sodium cacodylate with very gratifying results. This preparation of arsenic, the di-methyl arsenate of soda, is by all means the safest and most efficient of the arsenic salts. The dose is one quarter to one grain, three times a day. A peculiar garlic-like odor is given to the breath, but otherwise the drug is free from disagreeable influence.

Sodium cinnamate and cinnamic acid have proven worthless in my hands.

In a certain number of cases the administration of iron in a readily assimilable form is followed by marked improvement, while in certain other cases it is more harmful than beneficial, so its administration must always be tentative.

In the majority of cases, when a patient's nutrition begins to improve, the cough will begin to lessen. But when in the beginning of treatment the cough is so severe as really to require some amelioration, guaiacol carbonate combined with codeine or heroin is very efficient:

Guaiacol carbonate,	1 dr.
Heroin,	2 gr.

M. et ft. capsula No. 24.

S: A capsule every three or four hours.

Creosote as commonly administered has no place in the therapy of tuberculosis and is not nowadays seriously considered by leading therapeutists. It is extremely liable to derange the digestion and is, moreover, exceedingly disgusting to the sensitive taste and smell of the average patient. In small doses creosote may prevent fermentation and putrefactive changes in the digestive tract, but I have never seen its administration exert any lasting influence on the tuberculous process.

Atropine, agaricin and picrotoxin are each efficient in relieving night sweats of phthisis, but the average patient is markedly improved by an alcoholic bath and rub-down at bed time. Flannel soaked in alcohol and laid over the chest is a simple but effective means of relieving troublesome chest pains, as also is oil and turpentine, equal parts. Alcoholic stimulants are of little value internally, except in an emergency.

Inhalations are not as highly esteemed nowadays as they have been in the past. When there is much catarrh of the air passages, soothing antiseptic vapors may be applied by means of a good nebulizer with more or less benefit. Numerous remedies are recommended, but an especially eligible combination is one of iodine, tincture of benzoin, oil of cinnamon, oil of eucalyptus and albolene.

In conclusion, let me emphasize this all-important fact that to-day the cure of incipient pulmonary tuberculosis is not the elusive phantom that it was ten years ago. We know that the intelligent co-operation of patient and physician offers considerably more than even chances in a conflict with early tuberculosis, and this is a message which the medical profession should preach at every opportunity.

But with all the hope that we can honestly give the consumptive early in his disease, it should be remembered that his complete and permanent recovery can only be purchased at the price of from one to five years' patient perseverance and discretion on his part, and a like period of vigilance on the part of his medical adviser. The single efforts of either alone may accomplish a measure of success, but they must be united to win back with any degree of certainty that *summum bonum* of all life.—good health.

ABSCESS OF THE BRAIN, IN THE TEMPORO SPHENOIDAL LOBE; WITH A REPORT OF TWO CASES OPERATED UPON.*

By G. Carlton Berkley, M. D., St. Albans.

Probably no more rare and obscure disease is met with by the general practitioner or the eye and ear specialist than abscess of the cerebrum. It became my lot in less than a year to have in my practice two cases whose clinical value I believe will be of great benefit to this Society. In the first case the abscess was upon the left side of the cerebrum in the temporo-sphenoidal lobe. The second case was in the same lobe of the brain but upon the right side, and both cases were operated upon.

A young man, 22 years of age, came to my office in the early part of March of 1900 with an attack of influenza followed by acute otitis media. After suffering severely for four days from pain in the left ear, a discharge occurred, this being followed by great relief. Under treatment, the discharge gradually ceased and he was apparently well on the first day of May, although deaf and suffering from tinnitus aurium. The treatment of the ear was discontinued and Politzer inflation twice weekly and painting the throat with an iodine-glycerine solution substituted. This treatment was continued occasionally till the first of July; then, upon the recommendation of Dr. Twitchell of Burlington, three times a week.

On the 15th of July there was a sudden and violent recurrence of the pain in the ear, lasting for about ten days. On the 26th of July he was seized with rigors and vomiting, the pain and tinnitus at the same time ceasing. At that time temperature began ranging from 100 to 101.05 degrees F. The headache recurred on many occasions, however. The vomiting occurred two or three times daily and was distinctly cerebral in type. August 5th I took him to Montreal and entered him in the Royal Victoria Hospital under care of Drs. Buller, Bell and Stewart.

On admission he was suffering from more or less constant headache with vomiting. He was slow in answering questions and since the onset of the rigors and vomiting, etc., ten days previously, he had great difficulty in naming objects. He was unable to mention the name of any object whatever at this time. He did not know his own or his mother's name. He, however, had a very extensive vocabulary of words and knew their proper use. Although he was unable to name an object he had no trouble in proving that he understood the use of objects that he was totally unable to name. He understood perfectly what was said to him and he also correctly obeyed commands given in writing. He was able to write from dictation and to copy correctly. He read correctly and easily.

The left ear was not discharging; the canal was narrow. The membrana tympani was congested but not perforated. There was no swelling or tenderness about the mastoid; the right ear was normal and a watch was heard at half an inch. Eyes—The pupils were normal in size and reaction. There was distinctly a beginning double optic neuritis.

A diagnosis of abscess of the temporo-sphenoidal lobe was made and immediate operation determined on August 7th. Dr. Buller opened into the mastoid cells. He found a little pus. Dr. Bell proceeded to expose the brain over the temporo-sphenoidal region and after opening the dura, he found the parts bulging, but not pulsating.

With a trocar he was able without any trouble to find a pus-containing cavity in the left temporal lobe. Nearly three ounces were evacuated. The night after the operation the patient slept better than he had for many weeks, being free from pain and discomfort. Even within twelve hours after the operation it was

*Read at the 89th annual meeting of the Vermont State Medical Society.

noticed by several observers that there was a distinct improvement in his speech. In twenty-four hours the improvement was so marked that it could be said that he had completely recovered his lost power. All kinds of test objects were promptly and correctly named. Unfortunately, about thirty hours after the operation symptoms of meningitis developed which proved fatal forty-eight hours after their onset.

A post-mortem examination was not obtained. This does not, however, detract much from the clinical value of the case, as during life the presence of the abscess had been demonstrated.

Mrs. C., aged 34 and married, came to my office in July of 1900, suffering from deafness of the right ear dating from an attack of purulent otitis media of two months previous, on same ear, which lasted a few days and stopped of its own accord without treatment.

I found upon examination the membrana tympana was dry and stiff. The nasal opening of the Eustachian canal upon the affected side was very small. I treated her three times a week for two or three weeks with Politzer inflation and painting the throat and posterior nares with an iodine-glycerine solution,strength one to eight.

On Dec. 27th, 1900, she was taken with a feeling of malaise; loss of appetite, acute coriza and some temperature which lasted about one week, she then suffered pain again in the right ear, which was followed after four or five days with a purulent discharge. This discharge continued for about a week and suddenly stopped. The pain in the ear became more severe, extending to the right side of the head back to the occiput and down the neck. This pain was so severe that it required several hypodermics of morphine daily to control it. The patient showed slow comprehension; disconnected ideas; weakness of memory; great mental excitement; growing restlessness and hysteria; little or no elevation of temperature; slow pulse; vomiting two or three times daily of a cerebral type. The patient showed no aphasia.

January 27th, 1901, patient fell into a heavy coma simulating chloroform anaesthesia. The right pupil dilated and eye reflexes absent and lids partially open, which required my closing them with isinglass plaster to prevent ulceration of the cornea. This coma lasted uninterruptedly until the 2nd of February. There was no tenderness or swelling over the mastoid and an examination of the eyes with the ophthalmoscope revealed a beginning optic neuritis of the right eye.

February 2nd I took her to the St. Albans Hospital and a diagnosis of an abscess of the temporo-sphenoidal made and an immediate operation determined upon; consequently February 3d, in the presence of Drs. Jenne, Page, Belden and Lunderville, I opened the scalp above and behind the ear and trepaned out a small button of bone, (which I will here submit for your inspection), over the superior temporal sphenoidal convolution, exposing the dura. I found the dura bulging into the opening where the bone was removed. I passed a large sized aspirating needle directly into the right temporal lobe. After passing through about 2 cm. of brain substance, I struck the abscess with the first puncture and nearly 2½ oz. of pus was evacuated. I then withdrew the aspirating needle and with the handle of a scalpel proceeded to tear the opening in the dura larger. I passed in a small curette and removed some of the slough. This I followed with an irrigating nozzle and thoroughly washed out the cavity with a normal salt solution. I inserted through the opening in the dura and brain two small wicks of iodoform gauze to serve as drainage and partially closed up the wound in the scalp and dressed it with dry sterilized dressing.

I proceeded to re-dress this every day and at each dressing irrigated the abscess cavity in the brain. After about one week I substituted for

the gauze wicks a small rubber drainage tube and as fast as the cavity granulated in, I shortened the drainage tube, until at the end of two weeks I removed the drainage altogether, and in four weeks from the operation the scalp was nearly closed over the opening, and in another week the wound was entirely healed.

As soon as the patient recovered from the anesthetic all her senses returned and all her previous symptoms disappeared.

I failed to say that the patient also had diplopia, which was the only symptom present after the operation. This lasted for about five days and then disappeared. The patient has been perfectly well and is at the present time doing her own housework for a family of four.

Also during the five or six days which the patient was under the coma she was distinctly clonic and tonic spasms of the left side of the body which would come and go several times during the day. She took no nourishment by mouth of any kind or any fluid during the continuance of the coma. She was nourished by nutrient enemas.

Two important points in this case is the absence of temperature, which is always present in meningitis complications, and the absence of motor or sensory aphasia, which is frequently present in affections on the left side of the brain.

I find during the past two years reports of very few abscesses of the cerebrum, and that writers and text books upon this subject differ greatly in their opinions and do not deal with the subject with any degree of exactness. After observing these two cases and making rather extensive research of literature upon the subject, I am able to present the following conclusions:

This severe affection is induced in the great majority of cases, not by diseases of the mucous membrane, but by diseases of the bone which almost always extend to the dura mater. The best authorities show us that it is always caused by otitis media and that 91 per cent. of the cases is due to chronic otitis and 9 per cent. to acute. The dura is almost always united to the surface of the brain at a point where the cerebral abscess is nearest to the diseased bone. The brain substance which separates the abscess cavity from the place of union, between dura and bone, is, as a rule, only a few millimeters broad, and has almost always been found diseased.

The abscesses are found in about 75 per cent. of the cases in the temporo-sphenoidal lobe in the neighborhood of the diseased bone over the tegman tympani et mastoidei, upon which the fusiform gyrus is situated. It is very rarely that they are found in the occipital or frontal lobes. In 10 per cent. more than one abscess has been found in the brain. When more than one abscess is found it is usually in cases of long standing.

The size of the abscess varies from the smallest dimensions to the occupancy of almost the entire temporo-sphenoidal lobe. Some of them are as large as from 7 to 9 centimeters long and 5 or 6 centimeters high. They contain usually the same kind of pus as the otorrhea shows, thick and creamy or thin, frequently greenish and offensive. The majority of these abscesses being chronic, are surrounded by a capsule varying from 1 to 5 millimeters in thickness. Those not capsulated are commonly surrounded by a zone of softened brain substance. The abscesses continue to steadily grow, whether they are invested with a capsule or not.

The abscesses frequently communicate with the mastoid or middle ear and give off continuously some of their contents; they may also perforate the cranial capsule and discharge pus through a fistula. This spontaneous evacuation does not, however, cure the abscess. A notable fact is that a constant otorrhea from central abscess often suddenly stops without any significance as to the result. So far only one case of spontaneous recovery of a cerebral

abscess has been recorded. That was discovered at an autopsy by Sutphen of Newark, N. J., showing where an old abscess had emptied itself previously by a carious perforation of the temporal bone. The almost unexceptional termination of an encephalic, if not operated on, is death, caused either by cerebral pressure, by perforation into the ventricles or the subarchnoid space, or through complicating simus thrombosis and meningitis.

The symptoms, course and termination in many cases may be divided into four stages; the initial with fever, headache, vomiting, etc., the latent with milder discomfort, hysteria; the great nervousness; the manifest with full development of a severe brain disease, and the terminal, with exhaustion and coma, or sudden appearance of the fatal phenomena.

For the sake of consideration and study the arrangement of the symptoms by V. Bergman into three groups are of great benefit. In the first or general symptoms we have weakness, loss of appetite, foul tongue, pale or yellow color, as in all grave diseases; fever, moderate or absent.

The second group, or cerebral pressure symptoms, generally more pronounced in cerebellar than in cerebral abscess. Headache is the earliest and most constant symptom. It is usually in the neighborhood of the abscess, but not infrequently radiating to other regions, particularly the occiput and forehead and all over the head. Tenderness on percussion is frequently but by no means generally present. Nausea and vomiting are almost always present but are not characteristic. Dizziness and disturbance of equilibrium are frequent. Disturbance of the functions of the brain is a frequent and marked symptom. Slow comprehension, apathy, incoherence of ideas, weakness of memory, at night great mental excitement, crying, restlessness, delirium, alternating with drowsiness, are always present and frequently the cause of confusing the attending physician into making a diagnosis of hysteria, as at this time there is frequently no discharge from the ear and no external objective symptoms of brain abscess.

Convulsions and elevation of temperature, moderate and usually with slight evening exacerbations, pulse slow and respiration regular. The opthalmoscope will almost always reveal an optic neuritis, which will show itself earlier and more pronounced on the abscess side of the brain.

The third group, or localizing symptoms, deafness in the non-suppurating ear, has been observed several times and is explained by the fact that the auditory center of the right ear is situated in the temporal lobe of the left side and vice versa. Word deafness—mental or sensory deafness—i. e., the patient hears the word but does not understand it. Word blindness, dyslexia, letter blindness and word without letter blindness, conditions in which with normal vision the patient cannot understand written or printed language, are referred to the visual memory center situated in the angular and supramarginal gyri on the left side of the brain.

An abscess in the left temporal lobe may give rise to a speech defect or it may not. Very considerable accumulations of pus may be situated in this region without any apparent speech disturbance, while, on the other hand, a small purulent focus may be enough to give rise to marked disturbance of speech. In speaking of defect of speech in this paper I intend to refer solely to aphasia, and not to either slowness of speech or to dysarthria.

Aphasia is probably present in nearly 50 per cent. of abscesses of the left temporal lobe. The exact form of aphasia met with is, however, rarely treated by writers on this subject with any degree of fullness or exactitude. The simple but vague statement that aphasia is present, being all that is found in the great majority of text books, even in those dealing more especially with diseases of the nervous system. A

few authors refer to word-deafness as being the only characteristic symptom of lesion in the temporal lobe. This form of aphasia is, however, comparatively rare. It would be a mistake to wait for its appearance in any case before concluding we had to do with an abscess in this situation. A pure and complete motor aphasia has been met with, as also par-aphasia, the presence of the former being explained by distant pressure, and that of the latter by cutting off of the connections between the auditory and motor centres.

Crossed paresis, crossed clonic and tonic spasms and convulsions, crossed facial paresis and crossed hemianesthesia,all due to a lesion of the internal capsule, are occasionally met with.

Homonymous hemianopsia, a condition where the corresponding area of the visual field of both eyes is destroyed, has been reported several times. This sometimes is produced by the destruction of the optic tract somewhere along the optic radiation between the region around the calcarine fissure and the optic chiasm. In cerebral abscess it refers chiefly to the optic radiation in its subcortical passage through the temporo-sphenoidal lobe. This sometimes is not looked for and would be found more often if it were.

The differential diagnosis of purulent mastoiditis and its different intracranial complications is not hard to make. In children it is sometimes difficult to ascertain whether the mastoid is diseased alone or together with the intracranial structures. Meningeal irritation, caused by congestion, is not easy to distinguish from infective intracranial inflammation. The symptoms will usually show and if persistent and alarming an exploratory operation should be decided upon and the exposition will usually lead to a diagnosis.

The most important helps in the diagnosis are the kind and seat of the original ear affection. Here, too, often an exploratory operation will be the decisive step. The abscesses in the middle cranial fossa are induced by diseases of the tegman tympani and tegman tubae.

Abscess of the cerebellum is induced chiefly by mastoid suppuration, rarely by disease of the petrous bone. The latter variety can be recognized by the total deafness it produces in the affected ear. If cerebral disease exists together with suppuration of both ears, it may be difficult to ascertain which hemisphere of the brain contains the abscess. Local pain, tenderness on percussion and the opthalmoscope are a great help in making the diagnosis.

A cerebral tumor may co-exist with purulent otitis media. The diagnosis is usually easy. The tumor has a slow development, no fever or rigors and almost always a constant headache. The diagnosis between abscesses and meningitis is very important and is usually made by the fact that in meningitis we have high temperature and great acceleration of the pulse without remissions, and the irritability, restlessness and general excitement and hyperesthesia of the organs of sense, contrasted with the slow cerebration, apathy and drowsiness in abscess. Menengitic temperature may indicate the existence of both abscess and meningitis.

Infective sinus thrombosis is characterized by mental depression, rigors, constipation, anorexia, apathy, and the steep-peaked pulse chart. All of the intracranial complications may be present in the same patient. Cases of this kind have been reported, but are usually found in the latter stages of intracranial disease.

I am very much indebted to Herman Knapp, M. D., of New York; Francis Buller, M. D., and James Stewart, M. D., of Montreal, and M. C. Twitchell, M. D., of Burlington, Vt., for much of the material contained in this paper.

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SPECIAL THERAPEUTIC ARTICLE.

THE LOCAL TREATMENT OF RHEUMATIC CONDITIONS.

By P. F. Gardiner, M. D., Milford, Mass.

Although in the treatment of rheumatic conditions we have learned to rely chiefly upon internal medication, an important place must always be reserved for local measures, if for no other reason than to satisfy the whims of the patient. It has been the custom from time immemorial to make various applications to rheumatic joints and muscles, consisting of poultices, liniments, blisters, plasters, etc. As to their actual value in these cases it is difficult to decide, since the element of mental suggestion no doubt plays a part in their therapeutic action. At the same time it cannot be denied that they do much good and that the patients feel easier under their use.

A very popular application of late years has been the oil of wintergreen, applied in the pure state or in mixtures with oil. As is well known, this oil contains methyl salicylate, and in its use we have to deal not alone with a local action but with a general effect due to a more or less absorption of the salicylic acid. We must therefore distinguish between local measures such as applications of turpentine or camphor or chloroform liniment, which act chiefly as counter-irritants, and the topical use of the oil of wintergreen, which acts as a direct curative agent through the absorption of its salicylic acid ingredient by the skin. There is still another element which enters into consideration and that is the massage employed in making these applications. There is no doubt that massage has a beneficial influence in rheumatic cases, if care be taken to adapt the manipulations to the amount of sensitiveness present.

Lately I have employed in place of the oil of wintergreen a substance called mesotan, which is a methyl oxy methyl ester of salicylic acid. According to the reports published this new chemical has an almost specific antirheumatic effect, which is due to the fact that even if gently rubbed in its salicylic acid component is quickly taken up into the circulation and its curative influence thus brought to bear directly upon the diseased structures. The rapidity of its absorption is evidenced by the fact that shortly after its use salicylic acid may be detected in the urine. On comparing its effect with that of oil of wintergreen I have been led to believe that it acts more quickly and surely, and is in general a more agreeable application. I have employed it both in the pure state and in various proportions with olive oil, but generally not in as low a dilution as is ordinarily recommended, namely 50 per cent. It has been stated by some authors that in the stronger solutions it is capable of producing considerable irritation, but this I have observed only once after using it in full strength.

I append the histories of a number of cases treated, showing the conditions in which I have found mesotan of particular service. It is, of course, impossible to say to what extent the drug contributed to the recovery of the patients, since in most instances internal antirheumatics were conjointly employed; this much is true, however, that the addition of metan to the treatment greatly promoted the comfort of the patient by relieving the pain, which is the most distressing element in these cases.

Case I. Mrs. C., nurse, aged 40 years, had to give up her occupation on account of severe

rheumatic pain in the feet and ankles, which were badly swollen. Aspirin was prescribed in 12 grain doses, followed by one-half tumbler of water, to be repeated every three hours. Mesotan was also applied to the affected parts in a mixture with 30 per cent. olive oil. The results were all that could be desired. The patient stated that the application relieved her almost instantaneously. She walked to my office within ten days from my first visit, and is completely relieved from the painful conditions of her feet and ankles. She has now resumed her work.

Case II. Mr. C., aged 58 years, complained of severe pains in the shoulder. Twelve grain doses of aspirin were ordered, to be repeated every three hours. The patient was instructed to keep warm, and 90 per cent. mesotan in olive oil was applied to the affected area. At my second visit I found the pain much relieved, the patient stating that the "oily stuff" worked like a charm every time he used it, and he wanted to know if he could have it a little stronger. I then ordered mesotan in full strength, and the aspirin to be continued in the same dose. Within the short time of two weeks there has been almost complete relief.

Case III. Mrs. E., aged 54 years; knees badly swollen and very painful. She objected to powders, so I prescribed antipyrine and sodium salicylate in solution, and ordered rheumacilate with lanoline to be applied. This produced some alleviation of the pain, but not to such an extent as I hoped for. Some tinnitus aurium was present, due to the salicylates. She finally consented to try powders, and was given ten grain doses of aspirin, repeated every two or three hours, while mesotan 75 per cent., with lanoline was applied freely to the affected areas. There was no more complaint of ringing in the ears. The relief was not so immediate as in the other cases, but there has been a steady improvement, and I anticipate complete recovery. This was a more chronic case than the previous ones.

Case IV. Mrs. B., married, aged 51 years; chronic articular rheumatism of the knees, which were badly swollen and painful. Her general health was fairly good. The patient had to use a crutch to walk any distance. She came to me very much discouraged, as she had tried almost everything and had consulted nearly all the doctors in this vicinity. She objected to internal medication. I gave her calomel, ipecac and sodium tablets, to be followed with a seidlitz powder, and ordered mesotan in full strength to be rubbed in well. After the use of this drug for several days she obtained some relief, but as it caused more or less cutaneous irritation it was diluted with 10 per cent. olive oil. The sensitiveness has almost completely subsided, and she states that mesotan has relieved her more than anything she has ever used. I shall have her continue the remedy, and hope later to induce her to take aspirin in full doses, which I believe will afford more pronounced relief.

Case V. Mrs. G., aged 40 years, had been suffering for several days with muscular rheumatism which involved the right shoulder and arm. The patient had used a number of remedies, had painted on tincture of iodine, etc., without obtaining much relief. The movement in the arm was quite restricted and was attended with much pain. After two applications of mesotan there was marked relief, and after three days' use the patient was able to attend to her usual housework and has completely recovered.

Case VI. Man, aged 31 years, had severe attack of malarial fever. After several days he commenced to improve slowly. As he lived in a town some distance away from my office, I did not visit him very frequently, but instructed his wife to inform me of any change in his condition. After about ten days' treatment she called on me, and stated that he was so sensitive on each side along the ribs that he could not turn over, and had to remain on his

back. I had never tried mesotan for any condition except rheumatism, but decided to test it in this case. I ordered it to be applied over the tender parts. I called to see him on the following day, and found that the application had relieved the sensitiveness almost completely.

Case VII. Mr. B., machinist, aged 51 years. When first seen was suffering from an acute rheumatic attack, being unable to move his right leg, and the following day the left became involved, leaving him helpless. His wife being away and unable to return, we considered it best to send him to a hospital 12 miles away. He remained there about two weeks, when he was discharged. A day or two after he had returned home the pain and lameness again manifested itself, and he was in nearly as bad a condition as when I was first consulted. I prescribed aspirin in 12 grain doses every three hours, and ordered mesotan to be thoroughly applied. He is making a rapid recovery and will be able to return to his work within a short time.

These are a few of the many cases treated with mesotan. There was not a case of rheumatism in which mesotan was used properly that was not more or less relieved, and from my experience I consider the drug to be the best external application that we have to-day for rheumatic conditions. It acts more quickly and the benefit derived from its use is more lasting. But no external remedy should be depended upon entirely; internal medication should be given in most, if not all, cases.

PROGRAM OF FIFTH ANNUAL SCHOOL OF INSTRUCTION FOR HEALTH OFFICERS.

BURLINGTON, VT., June 16 to 19, inclusive, 1903. Arranged and issued by the State Board of Health. Meetings to be held in the Young Men's Christian Association Hall, entrance of College street, near Church.

Tuesday evening, June 16, 8 o'clock. Opening Session.

Preliminary remarks, the President of State Board.
Address of welcome, His Honor the Mayor of Burlington.
Address, His Excellency, the Governor of Vermont.
Address, Recent Public Health Legislation in Vermont, as it Affects Local Boards of Health, Hon. Joel C. Baker, Rutland.
Discussion, Dr. E. J. Fish, Health Officer, Royalton; Dr. C. W. Peck, Health Officer, Brandon; Hon. Henry Ballard, Burlington.

Wednesday, June 17. Morning Session.

Paper, Vermont Laws Relating to the Registration of Vital Statistics, Henry L. Stillson, Health Officer' Bennington.
Discussion, Mr. Charles E. Allen, Burlington; Dr. J. H. Hamilton, Health Officer, Richford.
Paper, What Constitutes a Nuisance Injurious to the Public Health, and How Shall it be Legally Abated? Dr. J. H. Blodgett, Health Officer, Saxton's River.
Discussion, Dr. W. G. Church, Burlington; Mr. Jay Spicer, Health Officer, South Burlington; Dr. J. W. Copeland, Health Officer, Lyndonville.

Wednesday, June 17. Afternoon Session.

Paper, The Sanitary Regulation of Barber Shops, Dr. E. M. Brown, Health Officer, Sheldon.
Discussion, Mr. E. B. Moore, Health Officer, Rutland; Dr. M. F. Prime, Health Officer, Barton; Prof. J. N. Jenne, Medical Department, University of Vermont, Burlington.
Paper, Human and Bovine Tuberculosis, Prof. M. P. Ravenel, University of Pennsylvania, Philadelphia, Pa.
Discussion, Dr. F. A. Rich, Member Board Cattle Commissioners of Vermont, Burlington; Dr. Don D. Grout, Member of State Commission on Tuberculosis, Waterbury; Mr. George Aitken of the Board of Agriculture of Vermont, Woodstock.

Wednesday, June 17. Evening Session.

Lecture, illustrated by lantern, The Place of the Sanitarium in the Prevention and Treatment of Tuberculosis, Dr. S. A. Knopf, New York City.
Discussion, Dr. H. Edwin Lewis, member State Commission on Tuberculosis, Burlington; Dr. W. N. Bryant, member State Commission on Tuberculosis, Ludlow; Dr. B. H. Stone, Bacteriologist, State Board of Health.
Following the scientific program of the evening, the Vermont Society for the Study and Prevention of Tnuberculosis will tender an informal reception to Dr. Knopf, the State Board of Health, the State Tuberculosis Commission and the health officers in attendance.

Thursday, June 18. Morning Session.

Paper, The Management of Outbreaks of Smallpox, Diphtheria, and Scarlet Fever, Dr. H. D. Geddings, Assistant Surgeon General, U. S. P. H. & M. H. S., Washington.
Discussion, Dr. C. H. Beecher, Burlington; Dr. S. E. Darling, Health Officer, Hardwick; Dr. E. F. Norcross, Health Officer, Brighton.
Paper, The Management of Outbreaks of Measles and Whooping Cough, Dr. H. D. Holton, Secretary State Board of Health, Brattleboro.
Discussion, Dr. D. C. Noble, Health Officer, Middlebury; Dr. F. L. Osgood, Health Officer, Townshend; Dr. A. C. Bailey, Health Officer, Randolph.

Thursday, June 18. Afternoon Session.

Paper, Disinfectants and Disinfection, Dr. Hibbert W. Hill, Director Bacteriological Laboratory, Boston City Board of Health.

Discussion, Dr. B. H. Stone, State Bacteriologist, Burlington; Dr. J. F. Shattuck, Health Officer, Wells River; Dr. W. Lindsay, Health Officer, Montpelier.

Paper, What Records Shall the Health Officer Keep and How? Dr. F. E. Clark, Health Officer, Burlington.

Discussion, Dr. Thomas H. Hack, Health Officer, Proctor; Dr. C. W. Locke, Health Officer, Springfield; Dr. H. A. Elliott, Health Officer, Barnet.

Paper, Legal Uses of the Laboratory, Dr. M. J. Wiltse, Director Laboratory of Hygiene, Burlington.

Discussion, Hon. H. F. Graham, State Auditor, Craftsbury; Hon. C. J. Russell, Burlington; J. E. Cushman, Esq., Burlington.

Thursday, June 18. Evening Session.

Lecture illustrated by lantern, Sewage Disposal, Mr. X. H. Goodnough, Chief Engineer, Massachusetts State Board of Health, Boston.

Discussion, Prof. J. W. Votey, Burlington; Dr. W. T. Slayton, Health Officer, Hyde Park.

Friday, June 19. Morning Session.

Paper, Sanitary Defects of Vermont's Country Schoolhouses, Dr. S. H. Phelps, Health Officer, Fairfax.

Discussion, Dr. F. S. Hutchinson, Health Officer, Enosburgh Falls; Dr. F. J. Gale, Health Officer, East Calais.

Paper, Ventilation as a Principle, Prof. S. H. Woodbridge, Massachusetts Institute Technology, Boston.

Discussion, Mr. Frank Austin, Burlington; Dr. C. B. Ross, Health Officer, West Rutland; Dr. J. B. Wheeler, Burlington.

NEWS, NOTES AND ANNOUNCEMENTS.

Two young kindergarten teachers, intelligent and attractive, while riding down on the street car were engaged in an animated discussion. In the seat behind them sat a good-natured, fatherly-looking Irishman enjoying a nap. Finally one inquired of the other, "How many children have you?" "Twenty-two," she replied; "And how many have you?" "O, I have only nineteen," replied the first. At this point, the Irishman, now wide awake with astonishment, leaned forward in his seat and without any formality inquired in a loud voice, "What part of Ireland did you'se come from?" —*Iowa Medical Journal.*

The Franklin County Medical Society.—A regular quarterly meeting of the Franklin County Medical Society was held at Sheldon Junction, May 28th, in conjunction with the State Tuberculosis Commission. The session was very interesting and of value to all in attendance.

Medical Graduates and the Code of Ethics.—In recent years the American Medical Association has arranged to provide a sufficient number of copies of the Code of Ethics for presentation to the members of the graduating classes of every medical college in the country. This is a wise and proper measure. It should lead to further and more far-reaching efforts for the betterment of ethical standards among our young men and women. A series of lectures in every center of medical education for the benefit of the senior classes of all the colleges, dealing with the history of medicine, the achievements of our great men, the ethics of the profession and our relationship to world-problems, would be of exceptional benefit, not only to such advanced students, but to those practitioners upon whose shoulders the burdens of actual work have grown heavy and to whom the duties of the hour are irksome. We hear too little in our medical colleges of the genuine "institutes of medicine," just as we know too little of them outside the colleges. The *esprit de corps* of the profession needs cultivation. The best place to start is with the students; the copy of the Code on commencement night is a good thing; may it lead to still better things.—*The Philadelphia Medical Journal.*

The Burlington and Chittenden County Clinical Society.—The regular monthly meeting of the Society was held May 29th, at the rooms, 162 College street.

Dr. A. O. J. Kelly opened a general discussion on "The General Principles of Medical Treatment," that proved highly interesting and instructive.

The Vermont Medical Monthly.

A JOURNAL OF REVIEW, REFORM AND PROGRESS IN THE MEDICAL SCIENCES.

H. Edwin Lewis, M. D., *Editor.* Frank C. Lewis, M. D., *Business Manager.*

Burlington, Vt., May 25th, 1903.

EDITORIAL.

Phthisiophobia.

Efforts to popularize information concerning any great question of a scientific nature, are apt to be followed by extreme and often erroneous ideas. It would seem that the enormous consideration that has been given to the subject of tuberculosis, while of great value, has nevertheless given emphasis to certain phases of the question that cannot fail to prove pernicious. People are prone to take a part for the whole, and Koch's discovery of a specific germ as a causative factors in tuberculosis, while one of the most important of medical discoveries, has augmented the fear of direct contagion to an unwarrantable degree. From the idea that tuberculosis was a hereditary disease and that it was transmitted only from parents to offspring, the pendulum has swung to the other extreme that its contagious or infectious character was equal and analogous to that of measles, small-pox, etc. For this view of the matter, the medical profession are to blame. We have harped on this one string so continuously, the germ factor, that it is little wonder that phthisiophobia is so widespread and fastened in the public mind. Closer and deeper study, however, is showing conclusively that the germ is neither the sole nor principal factor in the development of the greatest scourge of mankind. Only superficial or ill-informed people, in the presence of the great array of facts that are being produced, can hold to the doctrine that tuberculosis is contagious or infectious in the same way that the other zymotic diseases are. More than any other disease the occurrence of tuberculosis depends on the suitability or susceptibility of the soil in which the seed (the bacillus) is sown. As Osler states in the last edition of his Text Book on Medicine:

"The ultimate result in a given case depends upon the capabilities of the body to restrict or limit the growth of the bacilli. There are tissue-soils in which the bacilli are, in all probability, killed at once—*the seed has fallen by the wayside.* There are others in which a lodgment is gained and more or less damage done, but finally the day is with the conservative, protecting forces—*the seed has fallen upon stony ground.* Thirdly, there are tissue-soils in which the bacilli grow luxuriantly, caseative and softening, not limitative and sclerous, prevail, and the day is with the invaders—*the seed has fallen upon good ground.*"

The following editorial from the *Medical Record* for June 21, 1902, is also of interest in this connection:

BACTERIOLOGY AND PHTHISIS.

"The views of the majority of scientific and medical men with regard to the bacteriology of pulmonary tuberculosis and its importance have varied considerably.

The advance of bacteriology since its inception has been remarkable and startling, until at the present time the sole aim of medical science would seem to be the discovery of disease-producing bacilli. There are, however, signs that a certain change of front as to the supreme consequence of microbes in causing disease is taking place, and many medical men are beginning to ask themselves whether the power of germs in this respect has not been over-estimated.

At the American Congress of Tuberculosis, which met at Hotel Majestic, New York city, on June 2, 3 and 4, the disposition to regard with a somewhat more lenient eye than formerly the reputed evil influence of microorganisms in connection with consumption was much in evidence.

Dr. H. Edwin Lewis, Secretary of the committee, read a paper in the second day's discussion on 'The

Importance of Individual Predisposition in the Development of Tuberculosis, with Some Remarks on the Relation of Metabolism to Human Susceptibility.

In the course of his remarks Dr. Lewis said that, in spite of the influence of Koch's discoveries on all discussion of tuberculosis, the specific treatment of the disease was no further advanced than it was 20 years ago, partly due, perhaps, to the reliance upon laboratory research more than on independent and clinical work.

It is a certain fact, the speaker went on to say, 'that while at least 50 per cent. of mankind are susceptible to the bacillus of tuberculosis, only 14 per cent. really die from its harmful effects. . . . . The meagre results of the struggle with this disease show that valuable time has been lost in directing energy toward the extinction of the tubercle bacillus. In other words, the patient had been neglected, and important changes in his internal economy had been overlooked too much for his own good and for the advancement of medical science.'

Dr. Lewis gave the following as his conclusions:

1. Individual predisposition is a far more important factor in the development of clinical tuberculosis than bacterial infection *per se*.

2. The constancy of a pronounced failure in metabolistic equilibrium, during and preceding clinical tuberculosis, points to its importance as the constituting factor of individual predisposition.

3. The study of ferments in physiologic processes shows that the enzymes are the working elements in the maintenance of normal metabolism, and justifies the conclusion that conditions of malnutrition are the result of their absence, decrease, or variation.

4. Study of the chemistry and biology of the bacillus tuberculosis and the conditions favoring and resulting from its growth in the animal body points to the fact that it possesses certain ferments in its organism which, under favorable conditions, perform the functions common to organic life.

5. Immunity to tuberculosis may be considered as the result and complement of those metabolistic changes in living tissue whereby the enzymes, through greater potency than those of the bacillus tuberculosis, are able to maintain a normal osmotic and functional activity in the ultimate cells.

6. Susceptibility to tuberculosis may be considered as a negative condition of organic tissue, whereby enzymes are less potent in the maintenance of normal osmotic and functional activity of component cells than those of the tubercle bacillus in establishing bacteriogenesis."

Now, this editorial is prompted by the experiences of a physician who is establishing an open air sanitarium in Vermont for the treatment of respiratory diseases during the summer months. The physician in question has given considerable study to the subject of respiratory diseases and fully realizes that a sanitarium run for a few months in the summer could not hope to accomplish anything with consumptive patients in so short a time, and from his study of the great European sanitaria he is well aware of the fact that advanced or progressive cases of tuberculosis are not proper for sanitarium treatment. Consequently it has never been his intention to run a consumptive hospital. His sole aim has been to establish a summer institution for those patients who from catarrhal diseases or debilitated states are predisposed to tuberculosis, or those who are in the first or incipient stages of the disease. Through misunderstanding and misapprehension on the part of residents about the locality where this institution is situated, and an over zealous attitude of an impulsive health officer, the impression went forth that an army of consumptives were about to descend on an unsuspecting people. Much antagonism was aroused and the matter went so far that a town meeting was called to exclude the doctor's harmless, but falsely represented enterprise. Fortunately the people of the community were unusually intelligent, and simple explanations were sufficient to allay fears and apprehension and show the real causes of opposition. But it is easy to see how in a community of less intelligence or less fair-minded people false statements and impressions might do considerable harm to worthy and beneficent causes of a different but more important character. We refer to tuberculosis sanitaria. Just such mistaken ideas were responsible for the disgraceful bill passed by the last New York Legislature prohibiting the establishment of consumptive camps in any town in the State of New York without the permission of local authorities. The senseless fear of the consumptive does not speak too highly of the intelligence

of a people, for as Cornet well says, "The consumptive in himself is almost harmless, and only becomes harmful through bad habits." This may be equally true of well people and bad habits on the part of the healthy may endanger the public health to a serious degree, to say the least.

There are many facts that uphold the contention that phthisiophobia is ill founded, but the following extract from an editorial in the *Journal of the American Medical Association* sums up the whole question so sententiously that we give it to our readers:

"*The Journal* has always maintained that the abject fear of tuberculous contagion was needless, and with reasonable and perfectly practicable precautions there is no danger in even the intimate association with consumptives. The experience of well-managed consumptive hospitals and sanatoria gives ample proof of this. Moreover, even without these precautions, but with otherwise good sanitary conditions, the danger is by no means as excessive as is commonly stated and supposed by the average layman whose fears have been aroused. In Great Britain and in this country so far as statistics are available, the mortality from tuberculosis had steadily diminished with the improvement of the standard of living and better sanitation long before the general recognition of the germ and the present agitation for special prophylaxis of the disease.

The prospect of the complete eradication of tuberculosis, so much talked of just now, seems to us an *ignis fatuus*, perhaps of use as an ideal that will be always ahead of us, but not justifying measures that seriously diminish the aggregate of human comfort and happiness. There is no doubt, on the other hand, that by proper methods of increasing the individual resistance, not neglecting rational antisepsis against the germ, we can greatly diminish the mortality and make consumption, not the chief, but only one of the many unavoidable causes of the death which is the inevitable fate of us all. When it does come in this way let us make it easier to the victim, and not be adding to his misery by our selfish and irrational fear. We can also teach the public that the tuberculosis germ has by no means the fatal significance that they are learning to attach to it, that, while probably few if any of us escape it altogether, serious consequences result to only a small proportion of the whole. Probably in future years, and it may be in the near future, tuberculosis will be accounted only of secondary importance as a cause of death; it may even be, like other former scourges of the race at the present day, only a comparatively rare and negligible ailment, but if this is to be it will be through rational and humane methods and *not reckless exaggeration and stimulation of insane public fears with their natural result of brutal inhumanity to the unfortunate.*"

THE VERMONT SCHOOL FOR HEALTH OFFICERS.

The Annual School for Health Officers, held under the direction of the State Board of Health, will convene June 16th to 19th. The program as outlined for the forthcoming meeting promises an unusually interesting session, and with the large amount of energy given to the matter by the individual members of the Board, it cannot fail to be as successful as its predecessors. It certainly offers a splendid opportunity for the health officers of the State to come together and annually review the various phases of public medicine, as well as to acquire the latest ideas in regard to sanitary progress.

Too great credit cannot be given Dr.s Caverly, Holton and Styles for the system and methods they have taken, not only in regard to the Health Officers' School, which is, of course, important, but in regard to all the many problems in State medicine which properly come under their jurisdiction. They are zealous and capable officials, and the medical men of the State should neglect no opportunity of showing that they are commended and upheld in the splendid work they are doing.

It was a source of great satisfaction to Dr. Holton's many friends that he was reappointed by Governor McCullough for another six years of service. Dr. Holton is one of the leading students of sanitary problems in the United States, and it would be hard to find one to fill his place, of greater experience or ability.

As we have said before, and shall say again at every opportunity, the people of Vermont should congratulate themselves on their Board of Health and what they are doing in the interests of the public health.

MEDICAL ABSTRACTS.

The Prognostic Value of Tubercle Bacilli in the Sputum—Brown (*Journal of the American Medical Association*, Feb. 21, 1903) states that the examination of one specimen of the sputum is of value if tubercle bacilli are found in proving the case one of tuberculosis of the respiratory tract; but if no tubercle bacilli are found, one examination is of little value. At least four or five specimens should be examined after the patient is directed how to collect his sputum; from one specimen little or nothing can be said regarding the prognosis. If it is found that the number of bacilli steadily decreases in a series of examinations at intervals sufficiently long, the patient may be improving, but the constitutional symptoms and local signs give much more accurate information. If on repeated examination large quantities of tubercle bacilli are found, the disease has in all probability advanced to caseation. The morphology of the tubercle bacilli affords little or no ground for prognosis, but the short bacilli are suggestive of a more active process. The arrangement of the bacilli in clumps is more apt to be found in the severer cases, but may occur in all.—*Charlotte Medical Journal.*

Adrenalin as a Stimulant.—Miles and Muhlberg (*Cleveland Med. Jour.*) have made a series of experimental researches in animals. In certain cases of circulatory collapse the usual heart stimulants have little effect, because it is not the heart which is at fault, but the vasomotor system. Adrenalin has been considered an agent which can readily overcome vasomotor shock by acting directly on the heart and arterioles, but it is unfortunately evanescent in its action when injected into the blood. The aim being to make the action more prolonged and less powerful, the authors have extended their research in this direction. They produced a condition of shock in rabbits by excessive quantities of an anesthetic (ether). When more or less complete motor paralysis was present injections were given in the jugular vein with the object of increasing the blood-pressure of digitalin, strychnine, whiskey, salt solution, and adrenalin. Digitalin, whiskey and strychnine were without effect on the blood-pressure. Normal saline caused a slight fall in the pressure and a decided slowing of the heart rate. The 1-1,000 solution of adrenalin was diluted 10 times, and one-half to one c. c. injected. An immediate and powerful rise of blood-pressure resulted, which remained up for about five minutes. The rise was often higher than the original pressure before the ether poisoning. The sinking was gradual but not below the original level. The subcutanous injection was not followed by so prompt an action. The pressure only rose when massage was practiced at the site of the injection, probably hastening in this way the process of absorption from the subcutaneous lymph-spaces. The authors draw the following conclusions from their experiments: (1) Adrenalin may be of value in so-called heart failure during anesthesia, etc., when ordinary stimulants fail; (2) it is more likely to succeed where the respiratory centers are not paralyzed, since adrenalin does not appear to be a very powerful respiratory stimulant; (3) when used it should be given subcutaneously and slow masage done at the site of injection; (4) that dilution with normal saline solution by making absorption slower, causes a more prolonged and less energetic rise in the blood-pressure; (5) bad after-effects were not observed, but the danger from secondary hemorrhage as a result of the high pressure must be borne in mind; (6) adrenalin, subcutaneously, is indicated on theoretic grounds for the vasomotor collapse following cocaine or chloroform poisoning, and possibly shock after operation.—*Charlotte Medical Journal.*

BOOK REVIEWS.

TUBERCULOSIS: Recast from Lectures Delivered at Rush Medical College, in affiliation with the University of Chicago. By Norman Bridge, A. M., M. D., Emeritus Professor of Medicine in Rush Medical College; Member of the Association of American Physicians. Handsome 12 mo. volume of 302 pages, illustrated. Philadelphia, New York, London: W. Saunders & Company, 1903. Cloth, $1.50 net.

In this excellent work the practical side of the care and management of those sick with the various non-surgical forms of tuberculosis has been concisely stated. Full consideration has been given to prophylaxis, an all important phase of the subject that has hitherto been much neglected. There are also chapters upon the Bacillus of Tuberculosis; on the Pathology, Etiology, Symptoms, Physical Signs, Diagnosis, and Prognosis of the disease, each treated in the judicious and thorough manner to be expected in a work by such a well-known authority as Dr. Bridge. Treatment is accorded unusual space, there being chapters upon Hygienic Treatment, Management of the Diseased Lung, Climatic Treatment, Medicinal and Local Treatment, Special Treatment, besides a chapter devoted to the subject of Sanatoria. Altogether the work is a most valuable one, and we heartily recommend it to practitioners as the latest and best work of its pretensions it has been our good fortune to review.

DISEASES OF THE PANCREAS, DISEASES OF THE SUPRARENAL CAPSULES, AND DISEASES OF THE LIVER. By Dr. L. Oser, of Vienna; Dr. E. Neusser, of Vienna; and Drs. H. Quincke and G. Hoppe-Seyler, of Kiel. The entire volume edited, with additions, by Frederick A. Packard, M. D., late Physician to the Pennsylvania and to the Children's Hospitals, Philadelphia; and Reginald H. Fitz, M. D.; Hersey Professor of the Theory and Practice of Physic, Harvard University Medical School, Boston. Handsome octavo of 918 pages, illustrated. Philadelphia, New York, London: W. B. Saunders & Co., 1903. Cloth $5.00 net; half morocco, $6.00 net.

This book combines in one volume the sum of our knowledge concerning diseases of the pancreas, the suprarenal capsules, and the liver. Any contribution on these subjects is of great interest to the profession, and these monographs, proceeding from such distinguished investigators, will be found of unusual importance. In the sections on the pancreas and the suprarenals, the numerous experiments upon animals cited will be of the greatest value to the pathologist, the clinician, and the pathologic anatomist, affording an insight into the more deep-seated processes, and offering an opportunity of comparing the disturbances of function produced by morbid conditions experimentally induced, with bedside and autopsy observations. In editing these sections the editor has availed himself of the writings of Korte and Mayo Robson, especially the latter's important treatise on the etiology and treatment of chronic pancreatitis. An editorial addition to the section on the suprarenal capsules which seems especially noteworthy, is the investigations and discoveries on the active principles and therapeutic properties of suprarenal extract.

The excellent article on the liver is as thorough and complete as those on the pancreas and suprarenals. Dr. Packard's careful clinical work, and his interest in the diseases of the liver mark him as the most suitable person to edit this article. A survey of this work shows numerous critical additions, embodying the very latest contributions, besides expressions of his own views regarding subjects under discussion. He has devoted special care to diagnosis and treatment, including the surgical procedures that have recently found their place in this field. With these numerous editorial additions the articles are brought fully up to date, and have no equal in our language.

TYPHOID AND TYPHUS FEVERS. By Dr. H. Curschmann, of Leipzig. Edited, with additions, by William Osler, M. D., Professor of the Principles and Practice of Medicine, Johns Hopkins University. Handsome oc-

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tavo of 646 pages, illustrated, including a number of valuable temperature charts and two full-page colored plates. Philadelphia and London: W. B. Saunders & Co., 1901. Cloth, $5.00 net; Sheep or Half Morocco, $6.00 net.

The original German edition of this volume is universally recognized as the standard authority on the subjects of which it treats. The American edition, however, even surpasses the German, for, besides containing all the material of the original, extensive additions have been made to almost every chapter, thus incorporating into the work the very latest views on the subjects under discussion.

The chapter on Bacteriology has been thoroughly revised and much new material added, giving prominent consideration to the distribution of the typhoid bacilli, especially in the urine, the rose-spots, and the blood.

To the chapter on Pathology many minor additions have been made, incorporating the important work of Mallory. The literature on the localized lesions due to the bacillus has been carefully reviewed and made to conform to the most recent advances in that part of the subject. Thayer's exhaustive study of the state of the blood has been utilized, and the Surgical Aspects of Typhoid Fever have been fully revised with the aid of Keen's monograph.

Much valuable material has been added to the chapter on Diagnosis by Bacteriologic Methods, particularly with reference to the recent work in blood-cultures and on the detection of bacilli in the urine.

The chapter on Perforation and Peritonitis has been practically rewritten, as has also the section on the Hepatic Complications of Typhoid.

Thus it will be seen that the American edition of this valuable work, while still possessing all the commendable qualities of the original German, is greatly enhanced in its field of usefulness by being brought strictly abreast of the latest literature on the subjects, and by representative specialists.

NEWER REMEDIES.

Menstrual Disorders.—In disturbances of the menstrual functions Hayden's Viburnum Compound has gained the reputation of a standard remedy. In those forms of menstrual disorders in which there is no organic disease, but a functional disturbance, its continued administration in connection with appropriate hygienic regulations, has often been sufficient to produce a cure.

Hints in Gynecology.—Cases of intra uterine catarrh respond readily to the tonic, astringent and germicidal action of Medicated Uterine Wafers. The micro-organisms which are the active cause of so many serious uterine disorders, apparently cannot survive the continued presence of the wafers.

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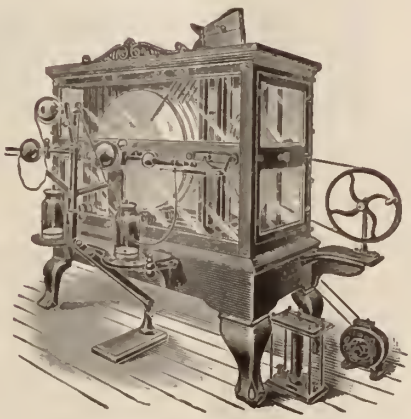

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THE

Vermont Medical Monthly

Official Organ Vermont State Medical Society.

Vol. ix. No. 6. Whole No. 102. | Burlington, Vt., June 25, 1903. | $1 per year. Single copies, 15 cts.

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The Vermont Medical Monthly

Vol. IX. June 25, 1903. No. 6.

ORIGINAL ARTICLES.

THE MANIC DEPRESSIVE PSYCHOSIS AND SOME OF ITS ETIOLOGICAL AND PATHOLOGICAL PHASES.

By Walter D. Berry, M. D.

Clinical Director and Pathologist, State Hospital for the Insane, Waterbury, Vt.; Professor of Mental Diseases, University of Vermont Medical College.

Before narrating a chronological summary of a case of Manic Depressive Insanity, it may not be amiss for me to review certain points relative to the statistics, etiology, and pathology of this disease.

From the large number of statistics, it has been learned that about fifteen per cent of admissions to insane hospitals are in reality none other than the class known as the manic depressive state. From these statistics we also learn that men do not have the disease as often as do women and of the etiological features, hereditary defectiveness plays a most important role, seventy to eighty per cent of all cases having an hereditary legacy handed down to them, through the avenues of mental bent toward this disease. Previous to the exact breaking down, these patients display certain peculiarities such as being abnormally bright or in other cases they show a tendency toward eccentricity or over piety, but in quite a different manner than that of Dementia Praecox cases.

As to physical stigmata,they may be present; however, such symptoms do not seem to be pathognomonic of the disease in any way. Individual attacks usually occur quite independent of external causes with the exception of the first breakdown which in the vast majority of instances does seem to be connected in some way with such external stimuli. Of these external stimuli or predisposing factors, alcoholic excess and parturition seem to be extremely causative and in other cases mental shock or trauma and improper nutrition during acute disease appears to have considerable bearing in bringing on attacks.

In by far the larger number of cases on record, it is learned that the first attack usually begins about the twenty-fifth year and in somewhat less than ten per cent, about the fortieth year; however, in these two periods, the female sex predominates.

In taking up the distinctive meaning of the term Manic Depressive Psychosis, it is now applied to that form of mental disease which is distinctly recurrent as definite forms appearing at varied intervals throughout the psychic life of the individual and as has been said previously, has hereditary defectiveness as the most prominent factor. By far the greater number of the patients usually diagnosed delirious mania, simple mania, periodic mania, simple and recurrent melancholia, and circular types, really belong to this group of mental diseases. When these cases are reviewed according to the old conception they present diagnostic difficulties on account of the too frequent occurrence of conflicting symptoms, which would be in keeping with a diagnosis according to the older conception.

It sometimes occurs that a typical picture of circular insanity may be mistaken for this psy-

chosis and therefore the diagnostic picture marred by the appearance of distinctly maniacal or melancholic attacks. One has only to review any series of cases of periodic mania or melancholia, noting these varying features when that one is forced to conclude that on account of such inharmonious manifestations they are not accidental but in reality certain phases within one distinct symptom-complex.

On account of the frequent recurrence of the fundamental symptoms in all of the different attacks, the oneness of their course and result in the occasional relation with different forms of the disease, wherein one form may be run over gradually into another, these conditions have gradually led alienists to the conclusion that manic depressive insanity appears in at least one of three types, maniacal; the depressed; or the mixed type. The maniacal form is usually characterized by great motor and psychomotor restlessness, frequent flight of ideas, word salads, formal associations, distractibility, inharmonious emotional attitude, varied delusions, hallucinations, pressure of activity, and usually very little clouding of the consciousness. On the other hand the depressed form presents, instead of psychomotor restlessness, psychomotor retardition and a distinctly depressed emotional sphere with absence of spontaneous activity, instead of the flight of ideas they have a dearth of ideas, the prominent delusions and hallucinations are of such a character as to be in keeping with the resultant emotional attitude, a clouding of the consciousness being usually present. The mixed form, as the word implies, is simply a combination of the two previous types which I have outlined, as characteristic of these conditions. By this possibility of such a conception of the case, it is possible to make a diagnosis immediately at the onset of the disease, without having to wait for the next attack as was thought several years ago by prominent alienists.

In regard to the pathology of this psychosis, no characteristic anatomical or pathological changes worthy of note have yet been found. As I have said before in the etiology of this affection, the pathology necessarily rests upon a neuropathic basis and this, in a great majority, is hereditary defectiveness. The theory presented sometime ago by Adolph Meyer, explaining the disease as due to a trophic vascular disturbance, has already been proved improbable. The theory advanced by Meynert, that the attacks were due to an accelerated pulse of great intensity, and usually of hyperaemia of the extremities, inferred that such a state of congestion also was present in the brain. However this may be true of the maniacal state, the theory does not suit the depressed type, for in this type, we have no such vascular or arterial disturbance, the hands and feet being cold and the face pinched and drawn. The theory also would not fit the mixed type.

The longer I am associated with the study of such types of mental disorder, I am still more convinced than ever, of the effect of an hereditary *"anlage,"* and a neuropathic constitution. In order to give some idea of the nature of such cases as they are admitted to the hospital, I propose to cite a case which has recently come under my observation.

April 29, 1903. *Psychosis:* In a woman 29 years of age, with hereditary history as follows: (paternal grandfather, grandmother, grand aunt, and two grand uncles, father, also sister now in this hospital, maternal hereditary denied by mother but consanguinity asserted by neighbors). The anamnesis of the disease is negative in character until the year 1894 when patient is said to have had a slight fall after which she became unconscious for "a few minutes"—no apparent sequelae appeared until nineteen days afterwards when she became suddenly insane—recovered after five months (character of attack unknown), always a quiet, tractable girl, strong physically, married and had one child 9 months old at time of second

attack, Sept. 1898—at onset depressed, worried and at times confused—after a few days began to talk loudly on awakening in the night, answering voices and "reacting to strange delusions."

Admitted here Sept. 21, 1898, on following physicians certificate. *Facts observed:* Violent mania, delusions, foul language, attempt of violence upon herself and members of the family. *Facts learned:* Same as stated above.

When brought into hospital office was wearing camisole, threw herself on the floor, refused to get up, reacted to auditory hallucinations, also delusions of persecution, saying she was going to be killed, her body cut into pieces and burned, also wove considerable religion into talk, after being taken to ward pounded her head, ran about ward, threw herself on floor, crying and shrieking, from then until removed from the institution March 15, 1899, was alternately excited and depressed but suicidal in either state, was restrained to bed part of the time, at times violent, striking and resisting nurses, affect of fear and delusions of persecution by electricity and electric currents, reacting to auditory hallucinations, emotional, laughing and crying alternately, distractable, irritable, sullen most of the time, refusing to speak part of the time, practising masturbation on herself and other patients, occasionally smearing room with faeces, somatic delusions constant, thinking she had no right lung and was losing left, taken from Hospital against advise of staff, and after a time improved so that she got along at home until June 2, 1901, when readmitted, had been violent about a week, but for five weeks previous had been nervous, depressed, emotional, had insomnia and worried for fear of another attack, was maniacal at times, had no fixed delusions, visual hallucinations asserted by auditory denied—had menstruated every two weeks and as attack occurred was menstruating. Physician's certificate states:

Patient said: "On one occasion threatened to throw herself out of the window of her chamber, said that she saw strange objects and persons in her room, that her friends and neighbors tormented her, that she would not take food because it was poisoned, that she sees and converses with deceased friends, and much more of the same character." *Facts learned:* "She sleeps but little, is violent, noisy, prays and sings in a violent manner, attacks members of family violently and refuses to be restrained to prevent her from doing herself or others violence." *Appearance and manner:* Excited at times and at others quiet and refuses to speak at all." *Other facts:* "She has had two former attacks lasting about six months, in 1895 and 1898 respectively, and was during the latter attack confined in the asylum at Waterbury."

When taken into ward kicked the doors and walls, talking loudly and irrelevantly—rhyming at times—"I'll smash that door, dam this floor, Jennie Blood, a precious bud"—said she had "had a great deal of trouble, was in total darkness, without any heaven or God." Very resistive—after being in ward a short time became quiet, acted quite stupid but would suddenly spring up, throw herself around, cry, scream, and try to suicide—well oriented—partial insight—memory good for recent events, delusions of poisoning—auditory hallucinations—in this condition until about August 15th varying between stuporous and excited conditions—sitting with eyes downcast for hours at a time refusing to speak—then having maniacal outbursts—rhyming,—flight of ideas—word salad "temperance, geography, Mary, Grace, dead, no truth"—also desultoriness, "yes, sir, no sir, slow sir, now sir, white coffin sir, rough on rats sir, dead sir, right sir," spelling words then repeating backwards—excited period usually lasting about fifteen minutes—very suicidal—after August 15th improved and was taken home in October but returned December, 1901, on following certificate:

Patient said: "That she contemplates suicide and is continually designing ways and means for its accomplishment—that she has been deterred from it only by means or because of restraint—that she sees moving objects, particularly at night—that she hears voices whispering names of persons to her—on one occasion commanding her or suggesting that she jump into the cistern—states that on one occasion she had thought it best to put her young son out of the way, to save him trouble, etc." *Patient did:* She appeared very melancholy—walked back and forth wringing her hands and apparently in great mental distress. *Appearance and manner:* Quiet, during this examination but she is talkative and unable to apply her mind or hands to any duty. *Other facts:* She has been twice before committed to the asylum—on both occasions, at times very violent and destructive."

Was quite suicidal, feeling depressed because she had to return to the Hospital—had good insight, said if she could not recover she had better be dead—not excitable—had auditory hallucinations—"a voice said if you try to do better you can, there is some way you can do better," marked introspection—trying to control impulses and very depressed when unable to do so—was quiet after admission—said she had no hallucinations after coming to hospital—after a few weeks appeared to regain her normal condition—remaining so until January 10, 1902, when she had a stuporous attack lasting about one hour during which she refused to speak, conjugate deviation to left—jaws working convulsively—no paralysis and able to move all parts of body and limbs voluntarily—from then until September, 1902, was generally in a stuporous condition, with maniacal outbursts and suicidal attempts—when excited,resistive,violent,noisy,talking rapidly,crowing,mewing,bleating, barking, always well oriented—good insight—delusions of self accusation—reacting to auditory hallucinations—standing on her head—jumping about ward—when depressed sat with downcast eyes—refusing to speak—marked mysterious signs—kneeling with hands clasped—apparently in normal condition for about a month—October 28, 1902, had onset of present attack, symptoms similar to others—is now quite depressed—temperature about normal.

Physically: July 15, 1901. Linea albacantia on abdomen—left lobule of ear larger than right—high and narrow palate—reflexes somewhat diminished—slight mitral regurgitation—slight retroversion of uterus—several urethral caruncles—ovaries somewhat tender.

Urinalysis: June 17, 1901. Excess chlorides—phosphates normal—few urates and phosphates. Dec. 7, 1901—diminished phosphates.

Etiology: Heredity, Paternal: Grandfather insane. Grandmother insane. Grandaunt insane. Two Granduncles insane. Father insane. Aunt insane after injury to head. Two uncles insane. Maternal: Consanguinity. Trauma: Sister in hospital (Dementia Praecox).

Duration:

1st attack 5 months.

2d attack 6 months, under observation.

3d attack 7 months under observation.

4th attack 9 months under observation.
5th attack began October, 1902.

Treatment: Hospital routine—restraint from self injury—special diet—hot packs for excitement with good result—Syr. Hypophos. Co. for tonic—exercise outdoors when consistent—Dormiol (dram of 10% solution in hot water and fluid extract of conium for persistent motor and psycho-motor restlessness with insomnia, these giving good results.

Diagnosis: Manic Depressive Insanity (mixed form) fifth attack characterized by a sudden onset; alternating periods of stupor and excitement either of which predominated at varied intervals; continuous phases of depression, self accusation, motor and psychomotor restlessness as well as psychic retardation, mutism, refusal of food and somatic delusions during the apices of maniacal phases presented the characteristic symptoms such as rhyming, word salad, pressure of activity, inharmonious emotional sphere together with considerable destructiveness. The patient showed no disorientation as to place, persons or time and had considerable insight even during excitement.

Dementia Praecox was excluded immediately upon learning of the anamnesis and was further ruled out on account of the absence of the usual symptoms complex displayed while in the hospital.

Prognosis: Will probably recover from this attack but will undoubtedly have subsequent attacks of like character, recovering from each with a shorter period of lucidity between attacks so that finally there will be considerable amount of dementia mixed in with a more or less continuous maniacal stupor.

In connection with the foreging summary and notes, I wish to acknowledge the valued aid of my co-worker, Dr. Upton, who was intimately associated with the care and treatment of the case.

As we look at the subject of heredity, which is not by any means an uncommon feature, in connection with these and many other cases, we at once realize, or give more or less theoretical speculations concerning that peculiar quality or property of organisms which enables them to transmit their essential characteristics to their decedents. Its action appears to be universal and covers all forms of life, whether vegetable, animal or human. Its roots reach down into the very element of all living structures, and appears to be one of the fundamental essentials of life itself. It passes beyond the bounds of healthy functions into morbid conditions of both mind and body. But the *modus operandi* of this marvelous process—this universal biological law—has always hitherto remained, and perhaps still does remain, a sealed book. By what process or method this influence may extend over several generations, manifesting itself in some particular form or disease in one or more persons, and in no others; affecting one member of the family and not another of the same family; how a peculiar character, such as the color of an eye, the hair, the skin, the size and form of the mouth, the teeth, the hand, the foot; the mental and moral characteristics, and even peculiar movements of hands and body, may all appear in one or more individuals in a generation and in no others, these physiological processes have remained a mystery, while observers have been obliged to occupy themselves with the study merely of certain phenomena and characters in organisms, which we say are due to hereditary influences.

Within comparatively few years, however, the study of this subject has received a new impetus. It now relates not so much to the character of the results, as it does to the intricate and delicate arrangements which nature has provided for securing these far-reaching results. This part of the subject, however, is too technical to be introduced into a treatise

of this kind. My present purpose, in presenting this subject, has to do with another phase of heredity, viz: that relation to mental disorders.

In a condition of ordinary health the thought process occurs automatically, except during the hours of sleep, and even then it may take place in what we call dreams, the character of which, the person has a sort of subconscious realization. Its activity, however, during dreams is not subject to the will of the individual. During our waking hours, the impressions received upon the end organs of the five senses, and from the revival of the stored-up experiences of the past, give rise to mental activities which express themselves in the form of speech or motion, if they are presented in outward manifestations at all. But it is frequently the case that these thought activities do not pass from the brain and discharge themselves in any form of outward manifestation. They can be arrested and examined by the personality; be approved or disapproved; be analysed or modified and formed into new combinations which commend themselves more or less fully to the personality and thus become opinions and beliefs; or they can be disapproved and rejected.

Such a belief is the physiological action of that portion of the brain, the function of which relates to sensation, perception and thought when it is in a state of normal and conscious activity. But when by reason of unfavorable influences and experiences such as over-exertions, long-continued anxiety, uncertainty and worry, ill health; or from the effect of poisons acting upon its delicate structure, such as foul air, alcohol, opium and the products of disorganized tissues of the system which have not been eliminated from it; or again from the influence of unfavorable inheritances; these physiological activities of the brain become deranged and changed in character so that the actions and reactions are no longer normal, the effects are manifested in states of mind which we call insanity. In other words, that condition of mind which we term insanity, arises from or consists in the morbid and disordered activities of certain portions of the brain and general nervous system.

Now, when the brain has once become deranged in its normal action, or has passed through a storm of excitement in connection with an attack of mania or the profoundly depressed condition usually seen in melancholia and other forms of insanity, its cell structures do not readily return to a state of healthy function. On the contrary, there is likely to remain for a long time a super-sensitive condition of it and more or less probability that from the experiences of the past in uncertainty, trouble and disappointment, there will again occur a disorder of mental function. Habit of action in the normal condition becomes a sort of second nature to most persons—much more does a habit of action which has been established in a disordered state of the mind tend to become permanent or liable to return again if recovered from. It is this very point, i. e. the acquired or inherited tendency of the brain toward unstable and morbid action that is likely to be transmitted than almost any other morbid condition.

I must also add that in this condition it is not necessary that the peculiar condition in the parent should be developed into actual insanity to insure its doing so in the offspring. It is not infrequently observed that qualities of mental action in one parent which have been regarded as nothing more than eccentricities or peculiarities—sometimes developing in periods of depression and morbid irritability—when crossed with certain characteristics in the other parent, the nature of which may not be known—these not infrequently develop into one of actual insanity in succeeding generations.

Again, a tendency towards some one diathesis or form of disease in one generation may

assume in a succeeding generation a very different form of disease or diathesis. For instance, a consumptive or rheumatic parent may have children who are quite free from tendencies toward that particular form of disease, and yet inherit a brain of such an unstable organization that it has attacks of insanity; or *vice versa*, a parent who has been affected with insanity may have children who have scrofulous or consumptive diathesis.

On the other hand, if one of the parents has a vigorous constitution and a nervous system unusually robust, and is endowed with a tendency to longevity, these qualities may prove sufficiently potent to overbalance any weakness and tendencies toward disease in the other parent and the offspring may be healthy, though in some degree affected by the infirmities of the weaker parent. Some persons and families seem to be endowed with unusual ability in transmitting healthy characteristics of race and nationality, and this may prove an important factor toward eliminating tendencies to disease on the other side of the house. In these two characteristics or qualities, which we may assume exist to some extent in all healthy persons, there is contained a power of incalculable value to the human race—indeed, one essential to its continued existence—that is a tendency on one side to overcome weakness and disease on the other which might otherwise continue to increase, especially under the influence of unfavorable environments.

From these considerations, the danger from consanguinous marriages becomes apparent. Numerous tables of statistics present abundant evidence going to show that intermarriages result very disastrously. The children are not infrequently deaf mutes or idiots, scrofulous, phthisical, insane or otherwise deficient in mind and body.

In this way we see how much more danger there is that a morbid heredity will increase. Like tends to beget like, and if two persons with a tendency toward the same constitutional diathesis or disease are unfortunate enough to marry, the tendency toward this disease becomes double in the offspring. In case only one parent has a morbid tendency, the influence of the other, if healthy and strong, may be sufficient to overcome and eliminate it in the offspring.

You all know that persons and animals of the same family necessarily inherit the same tendencies toward health and disease to a greater or less extent, according to the degree of consanguinity. Persons with no blood relationship are much less likely to have like tendencies. Indeed, they are likely to have characteristics which would have a counteracting influence upon such unfavorable tendencies in others.

We readily, therefore, perceive the danger of unfavorable results from marriages among blood relations, not because of the mere fact of relationship, but because of the probability of increasing tendency toward any special form of diseases which may exist in both parties.

The question arises whether a person who has passed through an attack of insanity should contract marriage? It would not be easy to formulate a rule which would cover all cases and never be set aside; but in view of the fact that when one has been insane he will ever afterward be in great danger of another attack, it is of the greatest importance that all parties concerned should have a full understanding of the case. The practice more generally pursued of keeping secret the fact that a person has had such an experience, especially when the party is a female, cannot be too strongly censured. If after a full explanation, and the other party has consulted friends and obtained our professional opinion, he or she chooses to go forward and consummate marriage, it is in some respects a matter of their own concern. *The right, however, to inflict the state with children having such an inheritance, is criminal.*

If, however, the female is past the period of child-bearing, the objections to marriage so far as they relate to children, would of course be *nil*. But when there is a reason to anticipate progeny, persons contracting marriage assume a responsibility which we as physicians, will not be willing to assume. In case the insanity has been the development of inheritance and has existed in either immediate or remote direct ancestors, the risk becomes even greater. If, on the other hand, the attack can be attributed to some accidental experience or physical disorder, and the other party has a vigorous constitution and good inheritance, the danger becomes less. In such cases there exists a reasonable probability that the stronger and more stable qualities of nerve tissue will triumph over and eliminate the weaker ones.

In taking up further the pathogeny of this affection, I am at present conducting tentative inquiries concerning the causative factors in bringing on the different attacks. Leucocytosis, anaemia, and alternate decrease and increase of weight seem to have some connection with this state. Therefore until a sufficient number of such cases have had skilled "blood-counts" made and an haemoglobin curve averaged, I am unable to give an exact statement concerning the relation of those factors.

If, however, I have succeeded in enlightening any of my professional brethren in regard to this psychosis and its relation to the mental and physical condition together with speculations as to its pathogenesis, I will have accomplished the object of this effort.

ADDRESS TO GRADUATES,

University of Vermont Medical Department.*

By Rev. P. J. Barrett, Burlington, Vt.

Ladies and gentlemen:

With your kind permission I will preface my remarks this evening by quoting the advice that Oliver Wendell Holmes administered on an occasion similiar to this to a graduating class of young doctors such as I have the honor of addressing to-night. "Young men," said Holmes, "the medical practitioner must frequently operate with his tongue, a much more dangerous instrument than the scalpel, therefore should he use it breviter, suaviter, caute, don't talk too much to your patients and their friends, speak gently to them, use your tongue cautiously." Excellent advice, which every physician should carefully follownot only in his professional relations with his patients, but also in his social and political dealings with his fellow men. In fact, this capital advice should form the golden rule for all of us professional men. I would venture, however, to make an exception in favor of the lawyer. The breviter is not practical for him. He is not supposed to stop talking in his professional work. It is only when the court, metaphorically speaking, crushes, paralyzes, all but annihilates him, that his tongue ceases to act. And even then, ever and anon, is heard the old standby "your honor, one word more, and I'll have done." The lawyer as a general rule does not speak in gentle tones. I had occasion to ask a lawyer once why members of his profession used such strong, cutting and severe language; why they could not be milder. His answer was this: "We can never speak gently until we become judges." But as only few of them are ever called to don the ermine, most of them lose this opportunity of their lives. I don't know of any profession in which the breviter is more sadly needed than in that of the cloth. Unfortunately we clergymen have, and I hope enjoy the unenviable reputation of being the most emphatically long winded professionals of all. "Some may come, some may go, but we go on forever." Some years ago a man called on me and said: "Father, did you see me sleeping in church last Sunday during your long sermon?" I answered, "I

*Delivered at the Graduating Exercises of the University of Vermont Medical Department, June 25th.

heard you, you slept pretty loud." "Did you hear me waking up?" he said. "I felt it disturbed the entire congregation." "I want to explain that sleep to you," he said, "it was a peculiar one. I fought it hard for a while but Morpheus finally overcome me, I went to sleep and had a dream. In it I left the church, went home, got scolded by my wife for returning so soon, took suddenly ill, had two doctors working over me for a long time, don't know whether they killed me or not, but I died and went to heaven. Alas, however, in the midst of all the supernal enjoyments of the heavenly Jerusalem I awoke and you were still giving it to them. Pretty long sermon that." I said, "My dear sir, I am very sorry that you ever awoke, sorry above all that you ever left heaven, because I am afraid that you never will have another such chance in the heavenly abode."

Now, your worthy dean, Dr. Tinkham, was fully determined that there would be no long sermonizing, no cosy napping, no celestial dreams, here to-night. So when he invited me to make this address he made me promise in the shades of all the immortal orators, who talked and talked while the world slept, that I would adhere to the breviter and be exceedingly brief in my remarks. In fact he exacted of me a promisory note made payable to you to-night in which he limited me to a 20 minute talk. Spare my feelings, don't hold your watches on me. This note is not to be interpreted with strict mathematical precision. As to the question of the advice, I could not have the heart to talk otherwise than gently to you, young doctors, after your four years' tussle and struggle in that quizzing mill on yonder hill "Caute," cautiously I will speak, for self-preservation is the first law of nature.

The medical college, the alma mater of many of you present to-night, is fifty years old. It has passed safely through the critical age of childhood, the crucial stage of youth, and is now flowering into the strength of manhood's might. Let us pause at this golden milestone, and looking back, unlock for a while the past. Maybe we can draw therefrom some happy inspiration to help us to improve the present, and build for the future. Our dear Green Mountain State has many treasures to which she points with a laudable pride. We read on her scroll of honor, as she unrolls it to our view, the names of her illustrious statesmen and soldiers, orators and poets, lawyers and clergymen, who have won honor and distinction in their respective spheres and noble callings. And last, but not least, we see emblazoned there in characters of gold the names of her medical doctors especially those of the founders, faculty and alumni of her own college, many of whom have scaled the heights of distinction and renown, and some whose names are worthy to grace the walls of the Temple of Fame. Our State is justly proud of her schools and colleges, her asylums and orphanages and her sacred temples. All of which are working steadily and successfully for the spiritual and temporal welfare and betterment of her people. And she has a warm spot in her heart for that institution which for a half century has sent to every city, village and hamlet within her borders and to all the other States of this great Union, men thoroughly equipped and competent to battle with every disease to which human flesh is heir. I do not know to-day any institution in the State better known and more thoroughly appreciated at home and abroad than the medical school, whose golden jubilee we are now keeping. Like all works destined to grow and develop into magnificent and mammoth proportions, the birth and inception of the college were modest and unpretentious. But like the tiny acorn, which kissed by the gentle dew of heaven and warmed by God's blessed sunshine, becomes in time the strong towering gnarled and unwedgeable oak, so our college, small and in-

significant in the beginning but favored by a benign Providence,watched over and cared for, and husbanded by men of tact, men of brains, men of learning, of strong character, with high ideals, men whose hearts went out to suffering humanity, men who had a tear for the afflicted, and a nalms for the poor, men who worked not only for their own times, but also for the benefit of future generations, it grew, thrived and prospered. Its growth has always been strong, sturdy and healthy. The bright star of prosperity rose gracefully o'er its cradle, dimmed though it may have been from time to time, it has never fallen, and to-night it shines brighter than ever, and bids fair to grow with increasing lustre and brilliancy to the end. The illustrious founders of our college have long since shuffled off the mortal coil. Yet they still live in the splendid work, the corner-stone of which they laid and for the building up of which they underwent so many generous sacrifices. They still live in the spirit of harmony and union that reigns among their successors in the medical faculty. They still live in the grateful affections of hundreds of good men, who have gone and are going forth from the arms of their alma mater with well earned diplomas. They still live, yes Dr. Walter Carpenter, Dr. Samuel Thayer, be it said with reverence, and honored for their sterling worth, still live in the hearts of the poor to whose corporal diseases and infirmities, they ministered so carefully like angels of mercy, and who, for their services looked only for the "God bless you,doctor,"as it arose from the parched, feeble lips of some suffering member of the Saviour, and they felt amply repaid. And maybe, too, the good Dr. Thayer, for he was noted for his charitable deeds, was mindful of the sacred words of the Master, the first, best and greatest of the doctors, the divine healer of all, "What service you have done to the least of these, you have done it to me," and he rejoiced that he was worthy to be the servant of the Saviour.

We, who live in an age of comparative ease and affluence, can scarcely form an adequate idea of the difficult task it was to found and equip a medical college, half a century ago. Material resources were few, moral support was meagre. It is true doctors bled people then more than they do now, but not quite in the same way. They did not realize much profit from it. Doubtlessly wiseacres who saw Drs. Carpenter and Thayer, shouldering this gigantic burden, shook their heads and said: "Wait a while." Others have failed in a like undertaking. Now those wiseacres were doomed to happy disappointment and if they have been blessed with extraordinary longevity, they are waiting still. Thayer or Carpenter might have failed, but Thayer and Carpenter, working together, uniting heart, head and hand, were a power in a way invincible. Undaunted by reverses, buoyed by a wonderful patience and perseverence, they commenced the college, put it on a firm basis and sound footing, and when they laid down forever the scalpel and bistuory, they had built to themselves an enduring monument by bequeathing to us, in particular, and to the public in general, a legacy more precious than gold, the medical department of the University of Vermont. It goes without saying that the college has kept abreast of the times. Upward and onward seems to have been her practical motto. That she has fulfilled it to the letter, the splendid standing of her faculty, composed of the best professors and teachers the country can afford, the perfection of her curriculum, her up-to-date graded system of studies, her great laboratory, branches of practical chemistry and physiology, the ever increasing number of her students, can fully attest. And so the college stands to-day, at the close of half a century of successful and useful work,on a high plane of medical advancement, well able and worthy to take her place with the best of the land; and we may say without flattery to her

professors and to her alumni that while they are not afraid to meet and engage with a rival, they would be unwilling and loathe to brook a superior.

I have the mild presumption to believe that I voice the feelings and the longings of the president of the university, of the dean of the medical faculty, of all those closely allied to the college and deeply interested in its welfare, when I say, that if there be one thing more than another wanting for its glorious future, it is a new and suitable building, one that will correspond in architectural grace, beauty and solidity with the other departments of the university, one that will be spacious enough for the growing needs of the medical department, one in which may be easily concentrated the theoretical and practical teaching of medicine, one that will be a credit to our State and a useful ornament to our own Queen City, which is so fast becoming a mecca of learning, culture and refinement. Are we to realize this in the near future? If it is to be built by the combined efforts of those most thoroughly convinced of the necessity and those who owe to the medical college a deep debt of gratitude, then I would dare to presume to say to the medical alumni, the time is ripe for action. Add another draft of joy to your alma mater's cup of pleasure, bring another wreath of laurels to deck her happy brow, by giving your moral and material aid to this noble project. Let the celebration of this golden jubilee be climaxed by laying some definite plans to procure the nucleus of a fund for the building of a new medical college, *inicipiamus et perficiamus.*

Gentlemen of the graduating class: Allow me to offer you a parting word of advice. Give politics a wide berth. Politicians like poets are born, not made. Were you born politicians, you would not be expecting a medical diploma to-night. The doctor or the clergyman, who rushes into the slippery arena of politics reminds me of the would-be good Samaritan who, with more temerity than wisdom, hastens to rescue the wife from the toils of a pugnacious husband. He generally gets it, you know where. Figuratively putting it just about the apex of the spinal column. Charity is preeminently the chosen virtue of the medical profession, its heroes have fought disease in the hovels and garrets of the poor. For sweet charity's sake they have braved the horrors of epidemic, plague and pestilence, they have brought comfort and solace to the wounded on many a grim battle field, they have left their foot prints on the way to every haunt of stricken humanity. When duty calls you be fearless, be brave, be merciful. Walk manfully in those foot prints. Be pure and chaste. Your profession will give you access to the most sacred precincts of the family. Bring with you then naught, save the fragrance and aroma of Christian continency. Let your professional secrets be well guarded. What you know of your patients' hidden life, what you learn of the family secrets, hush it forever in the long, deep silence of the grave. This law is sacred, the doctor who violates it deserves a severe sentence. Let him remember that a patient, who confided in him as a parent, if he once betray that confidence, will detest him as a false friend and a polished traitor. The practical rule for a doctor is never to divulge his professional secrets except in as far as he is compelled to do so by the court of justice, acting within its legal power. For his duty toward his patient is always subservient to his obedience to lawful authority. Honor and respect your profession, you have reason to be proud of it, remember while your vocation makes you the servants of men it does not make you their menials, nor is the value of your profession enhanced one iota by rubbing against the gilded tinsel of wealth and splendor. Finally, be gentlemen in the true sense of the word, be dignified and self-respectful, be polite, obliging and respectful to others. The

quality of being a gentleman has much to do with everyone's success in life, but in particular with the success of a doctor combining the refining traits of a gentleman, with a thorough knowledge of your profession, and with the virtues of conscientious men, ever true to the sound principles of Christian morality you will be an honor to yourselves, an ornament to your profession, the pride of your alma mater and an incalculable blessing to the community in which your lines may cast as the dispensers and restorers of health and happiness to your fellow-men.

FIFTIETH ANNUAL COMMENCEMENT,

University of Vermont Medical Department.

The exercises of the 50th annual commencement of the Medical Department of the University of Vermont were held at the Opera House, June 25th, at eight o'clock. The auditorium was packed to the doors with a brilliant assemblage of relatives and friends of the thirty-one graduates and friends and admirers of the department, brought together from this and other States by the chief event of the college year. The beautiful costumes of the many ladies in the audience, with the evening dress of the gentlemen, made the house a most captivating picture.

President Buckham, the faculty of the medical department, alumni and prominent citizens having taken their seats upon the stage, the graduation class in cap and gown marched down the main aisle to the seats reserved for them. The president then asked the Rev. S. N. Jackson, M. D., to offer prayer. At its conclusion the orchestra rendered the overture "Welcome," following which President Buckham introduced the orator of the evening, the Rev. P. J. Barrett. Father Barrett's address will be found in another column and was a masterly effort. He was frequently interrupted during his address by manifestations of approval.

DEGREES CONFERRED.

The members of the graduating class were presented as candidates for their degrees by the dean of the faculty, Dr. Henry Crain Tinkham. He stated that the members of the class had fulfilled all requirements and recommended that the degree of doctor of medicine be conferred upon each.

President Buckham awarded the diplomas and the thirty-one doctors left the stage with beaming faces, amid the plaudits of their friends.

Following are the graduates:

Charles Gordon Abell, Enosburgh Falls.

William Henry Black, Burlington.

David Russell Brown, Wentworth, N. H.

Emerson Marrs Bushnell, Williston.

Benjamin Joseph Butler, Crompton, R. I.

Herbert Cuthbert Cantle, Norwich, Conn.

Harry Carter, South Manchester, Conn.

Walter Lincoln Chase, Ph.B., Newton, Mass.

Henry Leo Crahan, Chittenden.

Harlen Fuller Curtis, B. L., Springfield, Mass.

Charles Francis Dalton, Springfield, Mass.

Thomas Edward Duffee, Lowell, Mass.

Frank Harvey Dunbar, Swanton.

Albert Clinton Eastman, Barnard.

George Crofton Enright, Burlington.

William Francis Hamilton, Millers Falls, Mass.

Robert Burns Harriman, St. Johnsbury Center.

Oscar Varnum Hefflon, Franklin.

Raymond Alexander Kinloch, Troy, N. Y.

Harry Bradford Perkins, Bakersfield.

Frank Preston, Burlington.

Joseph Warren Richardson, Barre, Mass.

William Rathburn Rowland, East Corinth.

Samuel Dudley Rumrill, Springfield, Mass.

Henry Elijah Somers, Irasburg.

Frank Elijah Spear, Charlotte.

Fenwick Gordon Taggart, Burlington.

John Edward Valle, Island Pond.

Norman Brown Webber, B. S., Manchester, N. H.

Charles Flagg Whitney, B. S., Williston.
Chauncey Warner Willey, Cambridge,

PRIZES AWARDED.

Another selection by the orchestra and the award of prizes by Dean Tinkham took place. The doctor referred to this as a pleasant duty which, coming last, served in a measure to remove the memory of other duties connected with his office not possessing the same happy characteristics. He described the change in the method of awarding prizes adopted this year. The change is in not awarding them upon the work of the student in his last year, but in avoiding a seeming injustice by basing the award upon the standing of the five highest men in all the examinations of the four years' course. This method was adopted in the selection of the present honor men. There are 24 examinations during the course and the maximum mark would be 2,400. Charles Francis Dalton received 2,270 credits and was given the first prize of $50; Albert Clinton Eastman received 2,232 credits and the second prize of $25; Chauncey Warner Willey received 2,189; Fenwick Gordon Taggart received 2,185 and Charles Flagg Whitney 2,158. The last three men were given honorary diplomas and the first two also received these honorary diplomas in addition to the money prizes.

THE VALEDICTORY.

The class valedictory was delivered by Charles Francis Dalton. He spoke of a time in the life of every man when he pauses to sum up his good and bad deeds and strike a balance. He compared an institution to an individual and said the time had come when the medical department of the University of Vermont must pause and consider what it had done and what it purposed for the future. During the 50 years that have passed it has maintained its rank in the fore front of similar institutions of learning in America. As the requirements for a longer course were made manifest it was increased from two to three and then to four years and now with the coming year the number of months in each year are to be increased by one. New subjects have been added and a general improvement made in the entire course. Today among the crying needs are a new building, and increased equipment for laboratory work and research. The department needs the endowment which will make these and other things possible. He called upon the alumni and loyal friends to remember the alma mater and give what they could. Farewell was said to the members of the faculty with the warm thanks of the class for the many favors received at their hands, and the class of 1903 was bidden to go forth and ever uphold by their work the proud name of the University of Vermont.

Dr. Dalton's remarkably high rank has won for him the place of laboratory instructor in the college for the coming year. Dr. L. B. Morrison, who has been assistant house surgeon at the Mary Fletcher hospital for the past year and a half, has been chosen laboratory assistant.

A selection by the orchestra closed the exercises at the opera house, the members of the graduating class, their friends and the faculty with other invited guests repairing to the Van Ness House for the annual banquet.

ANNIVERSARY BANQUET.

The anniversary banquet held at the Van Ness House was attended by fully four times the number of alumni usually present, there was much enthusiasm shown for the proposed raising of an endowment fund for the medical department and the erection of a new building and at the close of the post-prandial exercises an alumni association was formed and officers

elected. Stress was laid upon the fact that there are between 1,100 and 1,200 alumni and that these graduates, the greater number of whom are in prosperous circumstances, are in a position to contribute liberally to the endowment fund.

The dissection of an excellent menu engaged the doctors at ten o'clock and it was not until after one o'clock Friday morning that the banquet concluded with the formation of the alumni association.

After the cigars were lighted, President Buckham called the tables to order and inaugurated the speech making with a neat apology for being the toastmaster when he thought by right that the dean of the medical faculty should have filled that position. He explained his being in the chair by his desire to outline the plan for raising of the centennial fund. He told his idea of what the event would mean and in addition to the plans outlined at the corporation dinner said he hoped to see the laying of the corner-stone of a new medical building. He wanted the medical faculty to bear their full share of the work. He said the new building was in that event more than a possibility, it was an assured fact. He told of his experience in approaching rich men and that they always wanted to know what the college and its alumni were doing for themselves before gifts were forthcoming. His remarks were interspersed with witty advice as to how doctors might influence their patients to remember the university, and anecdotes of the old professors.

The first toast was responded to by the oldest living graduate of the university, Dr. D. B. Smith of Plainfield.

Dr. Smith made one of the biggest hits of the evening. He first told of his class of twelve members and how important the smallness of the class made each of the members. He gave the young doctors some good advice based on his own experience and counselled them to follow the advice of President Roosevelt and beware of race suicide. He advised each graduate to get married at an early day and thus see to it that "departing they left behind them little foot-prints on the sands of time."

Dr. Tinkham was introduced as the handsomest dean in the country and also as the young man on whom largely depended the success of the medical department of the future.

DR. TINKHAM'S REMARKS.

Dr. Tinkham explained that part of the scheme in getting so many of the alumni together was that the project for the raising of the centennial fund might be properly launched and gain the support of all graduates. He told of the college having good teachers but poor facilities and emphasized the crying need of a new building. The limit in the further use of the present building has been reached as every inch of room is now occupied and classes are crowding the structure throughout the day. The medical department is going to have the biggest class next year in the history of the college and the problem is where to put the increasing numbers. There are over 1,100 graduates, the doctor said, doing honest and successful work. He believed they were all in a position to give varying sums of one to fifty dollars each and many are able to give in the hundreds. He warned those present that he should be after every man to help in the good cause. Graduates must be prepared to receive all sorts of literature for the endowment fund is going to be raised. He spoke of the suggestion that scholarships be established and said that he was not prepared to say that he favored them. He thought that a student who had not the stuff in him to work hard for his education was not sure to work hard to succeed after he received it.

DR. KING.

Dr. King, the oldest member of the faculty of the medical department, was the next speaker.

Dr. King spoke of the old methods of instruction and compared them with those of today. He spoke of the "silent partners" and aroused great enthusiasm by the mention of Dr. Andrews. He told of some of the many alumni meetings he attends. He asked what is the greatest university? He said there must be a good product in the shortest time and at the lowest cost. The expensive schools do not mean the best education necessarily. He supported the idea of the appointment of a committee. He hoped to be present many years more at these banquets.

DR. CAVERLY.

The next speaker was Dr. Caverly. He said he was very glad to be present and be able to pay his love and respects to his alma mater. Kindly recollections of the old professors were recounted. The instruction received from these men was something never to be forgotten. Their courage was something well to be emulated. With their example before the present faculty, the raising of an endowment fund is assured. He expressed the sentiment that all present were "boys," "boys" of the alma mater. "We shall not go to a medical college again." Stand back of the effort to maintain the department at the fore front of similar institutions of the country.

ALUMNI ASSOCIATION.

The list of speakers having been exhausted, the lateness led President Buckham to ask those present to take some step toward the naming of a committee to have charge of the movement for the raising of an endowment. Dr. Jackson moved that a committee of three be appointed by the chair to present a list of officers for an alumni association. The motion was quickly seconded and as quickly passed. The committee named reported the following list of officers and they were elected:

President—Dr. D. B. Smith of Plainfield '56.

Vice-Presidents—Drs. B. W. Carpenter of Burlington; W. F. Lazelle of Plainfield; J. H. Bailey of Canandaigua, N. Y.; C. H. Allen of Centerville, Cal., all of the Class of '57; U. A. Woodbury '61 of Burlington; W. S. Vincent '61 of Burlington.

Secretary and Treasurer—Dr. Lyman Allen of Burlington.

Executive Committee—Drs. J. N. Jenne '81 of Burlington, Dean Richmond '82 of Newport, H. C. Tinkham '83, D. C. Hawley '85, B. J. Andrews '85 and P. E. McSweeney of Burlington; C. S. Caverly '81 of Rutland, C. S. Weston '71 of New Haven.

The executive committee was empowered to act with similar committees from the literary department and those of the various alumni associations in different cities for the raising of the centennial endowment fund.

The forming of the alumni association and the election of officers brought the banquet to a close and the doctors dispersed amid much enthusiasm.

ON THIOCOL IN PNEUMONIA.

By J. M. French, M. D., Milford, Mass.

Some time in 1900, I became much interested in the use of creosote in pneumonia, as advocated by Van Zandt and others, and resolved to make a trial of the remedy. I did so, with results which were encouraging, but without realizing the marked effects in shortening the disease by bringing on an artificial crisis, which have been reported by others. It seemed to me that one reason for my failure to secure this result was the fact that my patients were unable to take a sufficient quantity without upsetting the stomach. Even when the dose given was a small one, in some cases it produced unpleasant gastric disturbances.

In 1902, I began to see favorable accounts of the use of thiocol in pneumonia. I learned that thiocol is a creosote derivative, chemically a guaiacol-sulphonate of potash; and I re-

solved to test its virtues in pneumonia. I procured a quantity of 5-grain tablets, and also of the powder.

Case I.—On November 4, 1902, I was called to see Sadie H., a girl of eight and one-half years. She had been taken at 4.30 A. M. with a sharp chill, followed by a high fever, and severe pain in the right side, which was sharp on breathing. I saw her at 9 A. M. and found the pulse 132, respiration 50, and temperature 101.8. Diagnosis, acute lobar pneumonia, the lower lobe of the right lung being affected. Gave aconitine according to the principles of alkaloidal medication, and thiocol, 5 grains every three hours. Ordered a mustard plaster to the affected side, to be followed, on the subsidence of the pain, by a flaxseed poultice. At 6 P. M., the pulse was 132, respiration 50, temperature 101.5, with some cough. Later she became delirious, and the fever ran high until 1 A. M. During the night a rectal enema of warm water failed to move the bowels.

Nov. 5, 8 A. M. Pulse 126, respiration 36, temperature 100.5. Added emetin to loosen the cough. Continued thiocol in the same doses. Gave a saline laxative, which she vomited, but the bowels soon moved freely. She did not now complain of any pain on breathing. There was no bloody expectoration, either now or at any time. I now changed the poultice for a cotton jacket. At 8 P. M., the pulse was down to 120, temperature not taken, patient much better. As the emetin produced some nausea, and the cough was loose, I omitted it. She had taken a little milk during the day.

Nov. 6, 9 A. M. Pulse 90, respiration 30, temperature 99, cough loose, bowels moved, slept well, all symptoms favorable. Lower lobe of right lung solid. Continued aconitin and thiocol as before. At 7 P. M., pulse 94, respiration 30, temperature 100.5.

Nov. 7, 9 A. M. Pulse 90, respiration 30, temperature 99.

Nov. 8, 9 A. M. Pulse 84, respiration 26, temperature 98.8, resolution going on rapidly, all symptoms favorable.

Nov. 10, hour not noted; pulse 80, respiration 28, temperature 98.5.

Nov. 12. Resolution nearly complete. Last visit. Recovery uneventful.

This was a typical case, which at the beginning showed symptoms indicating a course of two weeks at the least, and had ten hours after the attack a temperature of 104.5, with pulse 132 and respiration 50. In two days the pulse was 90, respiration 30, temperature 99; and in two days more the symptoms were nearly normal. On the eighth day the patient was discharged cured.

Case II.—Miss Lou C., a mulatto girl of 17, who several years ago had a severe attack of rheumatic fever, which left a bad valvular heart-lesion and a soft, weak pulse. I was called to see her Dec. 19, 1902, and found her sitting up, saying she was all right and did not need any doctor. However her pulse was 120, and temperature 101.75, with a very sore chest from much coughing. The attack had come on gradually, begining a week or more before I saw her. Sent her to bed, and prescribed aconitine for the fever, with apomorphine, codeine and emetin for the cough.

Dec. 20, 11 A. M. In bed, cheeks flushed, tongue heavily coated, weaker than yesterday. Pulse 108, respiration 25, temperature 102. Abundant vesiculo-bronchial and subcrepitant rales in both lungs, mostly in left, with slight dullness. Marked valvular murmur. Pulse soft and very compressible. Diagnosis, catarrhal pneumonia, with spots of consolidation in both lungs, mostly in left. No bloody expectoration. Continued treatment as yesterday, and added thiocol, 5 grains every three hours; also pill cascarin compound for the bowels.

Dec. 21, 1 P. M. Pulse 108, respiration 30, temperature 101.8. Added strychnine and digitalin on account of the heart weakness, and omitted apomorphine and codeine.

Dec. 22, hour not noted; pulse 108, respiration 20, temperature 100.5.

Dec. 23, pulse 96, temperature 99.5; coughs hard, but doing well.

Dec. 24; pulse 84, temperature 99.5.

Dec. 26; pulse and temperature nearly normal. Stopped thiocol and aconitine.

Dec. 29; convalescent. Last call. Here again the course of the malady was much shorter than there was reason to expect at the beginning.

Case III.—On the afternoon of Dec. 29, I was called to see Dr. S., a brother practitioner living in an adjoining town, who had been taken suddenly ill at noon, when returning from his morning calls, had to be helped into the house, and coughed hard for two hours, developing a severe pain in the right side. He at once began taking the dosimetric trinity

granule, (composed of aconitine, strychnine and digitalin), and sent for me. At 6.30 P. M., I found his pulse 84, temperature 102, and respiration rapid. Being in haste to catch the electric car home, and as the case was apparently a plain one, I did not take time to make a careful physical examination; but the general symptoms, with the history, led me unhesitatingly to make the diagnosis of pneumonia. My directions were to continue the trinity granule, and to add thiocol, 10 grains every four hours; also to apply poultices to the chest.

Next day, to my great surprise, I found him with a pulse of 68, a temperature of 99, the symptoms of congestion almost entirely gone, and no tenderness except in the epigastric region, with some soreness probably due to coughing. This may have been a case of abortive pneumonia, or my diagnosis and his may have been incorrect. Be that as it may, what promised to be a serious illness had practically disappeared, and the patient recovered without any drawbacks.

Case IV.—A. D. D., a farmer, age 65, weight 225 pounds, bluff and hearty looking, but far from robust in reality. Had pneumonia three years ago, lasting six weeks, in the course of which he developed serious heart weakness, with irregularity, intermittency, and valvular trouble, which required my best efforts to bring him safely through. Perhaps owing to the weakness of the circulation, the bloody expectoration lasted fully two weeks. His recovery was slow, and his health had not been good since.

On January 16, 1903, I was called to see him again, and found that, after having had a cold and bronchitis for about two weeks, he was taken at 2 A. M., with a very hard coughing spell which lasted fully two hours, and was accompanied with a slight chill. I saw him at 9.30, and found him in bed, pulse about 100, but variable and somewhat irregular; respiration 20 and easy, temperature 100. Physical examination was attended with great difficulties, on account of the thickness of the chest-walls, and the large amount of muscular and fatty tissue. The respiratory murmur was fairly distinct over the left lung, but indistinct or suppressed over the right. The sputum was already infiltrated with blood —"looked like an old sore," as he said. This had come on since the morning coughing spell. Diagnosis, croupous pneumonia of an asthenic type, affecting the right lung. I gave him the trinity granule, an expectorant cough mixture, and ten grains of thiocol every three hours.

Jan. 17, 10 A. M. Pulse 100, temperature 98.4, sputum still bloody, but less so than yesterday. No pain, no soreness anywhere, except "in the belly," from hard coughing. Query, What has brought about the reduction in temperature, and the lessening of all the symptoms? Changed the trinity to cactin granules, as there was now no fever. Continued the cough mixture as needed; also the thiocol, 10 grains every three hours.

Jan. 18, 11 A. M. Pulse 100, slightly irregular, stronger in left than in right wrist, weaker when arms are held over head, showing the weakness of the heart. Respiration 20 and easy, temperature 98.3. Auscultation and percussion showed infiltration of the posterior portion of the middle and lower lobes of the right lung. The sputum was no longer bloody. General appearance much better; a good movement of the bowels; good appetite.

Jan. 19, 10.30 A. M. Pulse 100, not fully regular, but about as before the attack; temperature 98.5; respiration normal. Sputum cleared up entirely. Has been sitting up some, and on his feet a little. Says he feels all right.

Jan 21, 11 A. M. Sitting up, in a Morris chair; dressed; has been out in the kitchen. Pulse irregular, as usual, but temperature normal. Last visit. Recovery uninterrupted.

Here was a case in which a previous attack of pneumonia had lasted six weeks, the illness had been so severe that his recovery had been for a time in doubt, and his vitality never as good afterward; while a second attack, which threatened at the outset to be more serious than the first, and was treated in every way on the same principles as the first, but with the addition of thiocol, was transformed into a comparatively insignificant affair, whose whole duration was six days instead of six weeks. Was the change due to nature or to the treatment?

Case V.—Called at midnight Mar. 3, 1903, to see Mr. L., for a brother practitioner who was temporarily out of town. Found him just emerging from a severe chill, the right lung sore and much congested, with sharp pain on breathing. Pulse 96, respiration 32, temperature 101.5. Diagnosis, acute pneumonia, affecting right lung. Gave aconitine, with ten grains of thiocol every three hours.

At. 8.30 A. M., his pulse was 110, respiration 38, and temperature 101.5. Added strychnine and digitalin to the aconitine, and continued the thiocol. This case now passed into the hands of the family physician, and I saw it no more. The thiocol was, however, continued for several days. The attending physician did not feel sure whether or not its results were favorable. The patient was very ill, but recovered in due time. Evidently the use of the remedy was not followed by the same improvement in this case as in the others.

Besides these cases of pneumonia, I have used thiocol in a number of cases of cough, acute and chronic, as in grip, bronchitis and tuberculosis, in which I did not keep accurate notes, but only know in general, that some of the cases were benefitted in a marked degree, while others seemed to receive no benefit whatever. In one case of chronic tuberculosis the improvement in the cough which followed the use of thiocol was especially marked. I have not yet been able to determine its precise indications.

I am aware that the cases which I have reported are too few in number to be of any great value, and that in themselves they prove nothing. Indeed, I claim nothing for them, except that they created in my mind an impression very favorable to thiocol, with a desire to test it more fully. In pneumonia I believe it to be equal to any form of creosote in its effects, and superior in that it can be taken in any dose without disturbing the stomach or producing other unpleasant effects.

SPECIAL THERAPEUTIC ARTICLES.

PRACTICAL EXPERIMENTS IN THE TREATMENT OF ANEMIC CONDITIONS.

By Fritz Euler-Rolle, M. D., of Vienna.

In the following I desire to describe in some detail the action of an iron preparation which, owing to its great advantages, deserves a permanent place in our materia medica. The preparation referred to is Pepto-Mangan (Gude), which unites in a fortunate manner those qualities which we have a right to demand of a ferruginous remedy. In the first place it contains besides iron a second constituent of importance in the formation of blood, namely, manganese; and, secondly, both of these are present in a neutral solution, which is the more to be valued since because of this fact it disturbs neither the gastric nor the intestinal functions. For this reason we are enabled to submit every case of chlorosis at once to ferruginous treatment, irrespective of the condition of the gastro-intestinal tract. Other authors have called attention to this advantage. Heitzmann* emphasizes particularly how well the preparation is tolerated, and that, unlike other chalybeates, it does not have an injurious influence upon the digestive organs, but even increases the appetite.

Ripperger† considers the preparation as a very useful and easily assimilated remedy, free from any disturbing effect upon the digestive tract.

In my own experiments with Pepto-Mangan (Gude) I have exceeded the limits of its indications hitherto maintained, inasmuch as I became convinced that this preparation should not be confined especially to cases of chlorosis and anemia, but would effect improvement in other diseases attended with weakness and exhaustion, or at least maintain the nutrition of the patient, since the peptone which it contains acts as a nutrient and deserves consideration. On this point of view I based the first series of experiments, consisting of 11 cases,in which the general result was very satisfactory. These comprise 1 case of tabes with gastric crises, 1 case of obstinate vomiting in pregnancy, 1 case of esophageal cancer with severe stenosis, 4 cases of diabetes mellitus of slight degree, 3 cases of the uric acid diathesis with arthritis,

* Allgemeine Wiener medizinische Zeitung.

† New Yorker medizinische Wochenschrift, 1898, No. 12.

and, finally, 1 case of leukemia. The second series of observations related especially to cases of chlorosis and secondary anemia, the latter comprising 14 cases, so that altogether 25 experiments were made.

In the following I have made a selection from this number, and almost every case illustrates the remarkable value of the preparation.

J. P., aged 33 years, butcher's assistant, consulted me June 2, complaining of constant vomiting and very violent colicky pains which occurred soon after taking food of any kind. The vomited matter contained almost always the entire food ingested, and on one occasion a moderate quantity of black coagulated blood. Pressure upon the stomach was quite painful. The diagnosis of ulcer of the stomach, to which the symptoms pointed, was discarded after a more thorough examination revealed symptoms characteristic of a tabes dorsalis. The patient within a short time had become markedly emaciated, having lost eight kilos in weight. He had acquired syphilis 12 years previously during his military service. The attacks affecting the stomach therefore proved to be gastric crises. After they had diminished in frequency and intensity under the use of hot poultices and strict diet, Pepto-Mangan (Gude) was prescribed at the beginning of July. At first three tablespoonfuls were given daily, added to milk, and later, when it was found that the preparation was well tolerated, it was increased to six tablespoonfuls. After the sensitiveness of the stomach had gradually subsided the patient could be discharged from treatment in the middle of August, having regained his weight with the exception of a trifle, while the crises had completely ceased.

In a case of uncontrollable vomiting in an anemic woman, 24 years old, during her first pregnancy, pepto-mangan was administered in the quantity of three tablespoonfuls daily, to which were added small amounts of cold milk. Hot applications with the thermophor were also employed. After less than four weeks the patient was discharged from treatment improved, without any loss of weight.

Another observation relates to a case of inoperable cancer of the esophagus. The patient, 62 years old, had suffered since about one and one-half years from the neoplasm, but up to six weeks ago had been able to take, without any trouble, soft foods. Since that time, however, he had been able to swallow only small amounts of fluid. One morning, as usual, he had introduced a stomach tube himself, but during its withdrawal experienced violent pain. Since then he had constantly expectorated blood. Under the use of morphine injections and the application of the ice-bag to the thorax, rest upon the back, and complete abstinence from any food, his condition improved, and on the following day a nutritive enema, consisting of milk, eggs, and red wine, with the addition of four teaspoonfuls of Pepto-Mangan (Gude) and 20 drops of tincture of opium, was administered. On the next day the same was done. After the hemorrhage had permanently ceased, nutrition by enema was supplemented by administration per os of milk and pepto-mangan in small amounts, which were well tolerated. In this way it was found possible to keep up the nutrition for a considerable time in a comparatively satisfactory manner.

I am able also to report two cases of diseases of the metabolism, namely, one of diabetes mellitus of moderate degree and one of the uric acid diathesis. The subject of the former was a man 46 years old, who since two and one-half years had constantly excreted a variable quantity of sugar in the urine. He stated that while the amount at first was only 0.7 per cent, it had increased and finally reached 3.21 per cent. After being placed on exclusive animal diet there was always a gradual subsidence of the glycosuria, the sugar disappearing completely from the urine after about 14 days. In the course of time, however, he acquired an unconquerable repugnance toward any form of animal food, and the supply of albumen could not be augmented by the addition of nutritive preparations to milk, of which he took about a quart daily. Gude's Pepto-Mangan was administered regularly in quantities up to 6 tablespoonfuls daily, chiefly to relieve the marked anemia present, which it did excellently. Inasmuch as this preparation supplies not only iron and manganese but also peptones to the organism, the patient could be maintained in a vigorous condition during six weeks.

Another patient, 58 years old, who had suffered since four years with arthritis urica, had passed three months previously through an acute gouty attack, which yielded to iodide of potassium, the former attacks having been relieved by the salicylates. The diet, which had always been somewhat abundant, was

thoroughly regulated, and for a long time the patient took meat only at his midday meals, with the proportionate addition of green vegetables and some fruit, while his breakfast consisted of coffee with milk or thin cocoa, with two tablespoonfuls of pepto-mangan, and a roll, and his supper of butter, eggs, etc., and two tablespoonfuls of pepto-mangan. No recurrence of the acute gouty attack has taken place after a lapse of five months, and subjectively also the patient feels well under this regimen.

Another observation relates to a peasant girl, 24 years old, with leukemia. Examination of the blood showed that the number of erythrocytes had fallen to 1,600,000 to the cubic millimetre, while the number of leucocytes amounted to almost 90,000; poikilocytosis was also present. Among the leucocytes there were found about 6 per cent of eosinophile cells and numerous lymphocytes. The percentage of hemoglobin according to Fleischl's method was about 20 per cent. The spleen was much enlarged, its lower margin being palpable three fingers' width below the navel Besides the medicinal treatment with quinine and arsenic, Pepto-Mangan (Gude), at first three tablespoonfuls, later six tablespoonfuls, was added to the milk. The patient also received a mixed diet. At the end of two months she had gained 2¼ kilos in weight. If we consider that in severe leukemias the excretion of nitrogen is always increased, and that this patient before the administration of the iron preparation, in spite of an abundance of nourishment, constantly lost in weight, as shown by observations made every five days, we are forced to the conclusion that the improvement in her nutrition must be ascribed in great part to the abundant ingestion of easily absorbable albumen and the hematogenic power of the preparation administered.

Although from the cases cited above we are able to form a decision as to the action of this remedy, it may be further added that it fulfills its purpose in the majority of instances; for, aside from a marked case of phthisis with intestinal ulcers and amyloid changes in the internal organs, in which the profuse diarrhea was increased by the administration of the iron preparation, which therefore had to soon be discontinued, and aside from a case of severe diabetes, a considerable improvement in the general health of the patient could always be demonstrated clinically by determinations of the bodily weight, by the condition of the gastro-intestinal tract, and by microscopical examinations of the blood. The increase of the diarrhea in the above cases is attributable, in my opinion, perhaps to the too large quantity of the pepto-mangan administered. It is well known that all peptones and albumoses stimulate more or less the mucous membrane of the intestine, and therefore may give rise to frequent fluid evacuations. This is best avoided by keeping the daily and single doses within certain limits and not increasing them too rapidly. On the other hand, this property of the preparation can be utilized therapeutically, especially in cases attended with habitual and chronic constipation, particularly in chlorotic girls, in which the iron administered enhances the existing sluggishness of the bowels, as well as in neurasthenia and similar conditions.

Inasmuch as in pepto-mangan the nucleins are completely absent, it acts as a valuable auxiliary in the treatment of the uric acid diathesis, since, according to Kossel, all nucleins have the effect of increasing the formation of uric acid. Moreover, it is entirely free from extractive matters. While the latter ordinarily constitute a very agreeable addition to the diet, and their increased ingestion is desirable in some cases, on the other hand their effect is the more injurious in various diseases, especially those of the kidneys.

Up to 1870 it was the custom in all acute maladies, and especially those attended with a typical rise of the bodily temperature, to advise against the ingestion of albumen, because to it was attributed the increase of the fever. This idea had its origin in the experience that in various acute infectious diseases, as in typhoid, peritonitis, and acute exanthemata, and even during the period of convalescence, the admin-

istration of albuminous food, of course in the unsuitable form customary at that time, was followed by a sudden exacerbation of the temperature. This, according to our present knowledge, was certainly not due to the albuminous elements of the diet, but only to their form and character, which were not well adapted to the condition of the digestive organs in these maladies. On the other hand, Pepto-Mangan (Gude) can be resorted to safely in all these cases without any fear of inducing complications in the course of the disease. In my opinion, it has, in fact, certain advantages over the customary alimentation with milk, since the latter, owing to coagulation in the stomach, assumes a firmer consistence, while the pepto-mangan is undoubtedly absorbed to a great extent in the stomach.

At any rate, the preparation, owing to its abundance of peptone, has calorically a great nutritive value, since, according to the investigations of various authors (Zuntz, Ewald, Pollitzer, Adamkiewicz), the albumoses and peptones are capable of replacing albumen completely, and when given in appropriate doses are able to restrict, or even to arrest, the loss of fats, just like any other albumen. This is the more readily intelligible since the greater part of albuminous foods is absorbed in the form of albumoses and peptones, and reconverted into albumen by the intestinal mucous membrane and within the tissues.

If up to now I have described only cases which are intended to illustrate the utility of the preparation even in desperate conditions, I have done so in order to point out that in cases apparently beyond medical aid, and in others in which we despair of success, we should not stand by inactive. Thus, for example, in the above case of diabetes it was a matter of great importance that we were able by means of pepto-mangan to raise his nutrition, which, in consequence of his repugnance toward a meat diet, had become greatly reduced and was accompanied by pronounced anemia, to such a level that for a comparatively long period of time the patient was able to get along without any large consumption of meats.

What further incited me to report these cases was that the experiments so far made with pepto-mangan have been restricted, for the most part, to the field of iron preparations, of which an article by Dr. Roen* affords us a very comprehensive review. This author remarks very justly that most of the ferruginous preparations hitherto manufactured consist of albuminous material held in solution by an excessive amount of caustic soda, thus neutralizing the gastric juice, while, on the other hand, through their decomposition the irritating chloride of iron is produced; or they represent peptone combinations containing an excessive amount of mineral acids, and therefore are precipitated by the alkaline intestinal secretion and rendered less assimilable.

Pepto-mangan does not share in these disadvantages, and, moreover, owing to the presence of manganese, that excellent carrier of oxygen, is of the greatest value, especially in chlorosis, anemia, and allied conditions.

I take the liberty of reporting only two more cases from the remaining 14, both relating to chlorosis characterized by severe symptoms, and illustrating very graphically the prompt action of this chalybeate.

The first case was that of a girl, 18 years old, who presented a well-developed type of marked chlorosis. There was marked anemia of the general integument; the mucous membranes were very pale, and she suffered since the last fourteen days with persistent headache and buzzing in the head. This was accompanied by palpitation and a feeling of weakness, as well as pronounced edema of the lower extremities up to the middle of the leg. Her menstruation was very irregular and profuse. Examination of the blood showed a much reduced color index, 20 according to

* Medizinische-Chirurgisches Zeutralblatt, 1902, No. 38.

Fleischl's method. The number of red blood cells was reduced to 3,100,000, the white not being materially increased. Although the patient had taken the greatest variety of iron preparations, they were not well tolerated. I therefore decided to administer Pepto-Mangan (Gude), enjoining at the same time rest in bed, which seemed indicated, if for no other reason than that of the condition of the heart and the attacks of weakness. The patient received at first two tablespoonfuls and after a few days three tablespoonfuls of the pepto-mangan, and this amount in the third week was increased to five tablespoonfuls daily. The effect was truly surprising; without the least disturbance of the gastro-intestinal tract, considerable improvement of her entire condition had occurred at the end of four weeks, so that she was able to be up and about. She had a good appetite and menstruation was regular for the first time in months, while the cardiac palpitation, headache, and buzzing in the head, as well as the edema, had vanished. Examination of the blood showed 3,980,000 red blood corpuscles and a hemoglobin percentage of 50 (Fleischl). After another four weeks the patient was completely restored to health, with a hemoglobin percentage of 70 and an increase in the number of red blood cells to 4,200,000.

The second case of chlorosis related to a girl, 21 years old, who since the beginning of the disease had complained of marked disturbance of the digestive organs. She frequently vomited and suffered with gastric pains and an increasing feeling of aversion toward all food. In this case also an examination showed the presence of severe chlorosis, complicated with anemia and emaciation due to the much-reduced ingestion of food. This case was the more welcome to me because it afforded a crucial test as to whether pepto-mangan can really be taken without any disturbance of the gastro-intestinal tract. I administered at first very cautiously, only three teaspoonfuls of the preparation, and, as this was completely retained and seemed to cause no disturbances of any kind, I increased the quantity on the third day to two tablespoonfuls, and during the following days to four tablespoonfuls, which dose was not exceeded. The preparation, therefore, completely fulfilled my expectations. In the course of three weeks the gastric and intestinal troubles had disappeared, the patient regained her appetite and was able to take an abundance of food, so that her weight had soon reached its normal level, while simultaneously with the disappearance of the chlorotic condition a considerable improvement in the state of the blood ensued.

In conclusion I would only add that during the administration of the pepto-mangan no unpleasant by-effects have been observed and that the preparation has always been willingly taken.

DERANGED UTERINE FUNCTIONS.

By James A. Black, M. D., Hospital Department, Pennsylvania Reform School.

It is safe to say that to the average physician, who is confronted almost daily with the ordinary cases of suppressed and deranged uterine function, no other class of cases is so uniformly disappointing in results and yields so sparing a return for the care and time devoted to their conduct.

Patients suffering from disorders of this nature are usually drawn from the middle walk of life, and, by reason of the pressure of household duties or the performance of the daily tasks incidental to their vocation, are entirely unable, in the slightest degree, to assist, by proper rest or procedure, the action of the administered remedy.

Many of these patients, too, suffer in silence for months, and even when forced by the extremity of their sufferings to the physician, shrink from relating a complete history of their condition and absolutely refuse to submit to an examination. Authoritative medical teaching and experience unite in forcing upon the attendant a most pessimistic view of his efforts in behalf of these sufferers under such conditions.

It is in this class of practice, where almost everything depends upon the remedy alone, that a peculiarly aggravating condition of affairs. A limited list of remedies of demonstrated value is presented for selection, and I believe I am not wide of the mark in saying that, in the hands of most practitioners, no remedy or combination of remedies hitherto in general

use has been productive of anything but disappointment.

Some time ago my attention was drawn to Ergoapiol (Smith) as a combination of value in the treatment of a great variety of uterine disorders. Its exhibition in several cases in my hands yielded such happy results that I have used it repeatedly in a considerable variety of conditions, and with such uniformly good results that I am confirmed in the opinion that its introduction to the profession marks an era in modern therapeutics. In the treatment of irregular menstruation and attendant conditions I have found it superior to any other emmenagogue with which I am familiar, in the following important particulars:

1. It is prompt and certain in its action.
2. It is not nauseating and is not rejected by delicate stomachs.
3. It is absolutely innocuous.
4. It occasions no unpleasant after-effects.
5. It is convenient to dispense and administer.

The following clinical notes will afford a general idea of its action in a variety of cases:

Case I.—Mrs. —— came to me presenting the following symptoms incident to a delayed menstruation: Persistent headache of a neuralgic character; dull, aching pain in limbs and lumbar region; cramp-like pains in abdomen, and considerable nausea. The menstrual period was overdue seven days, but as yet there was no appearance of flow. Her periods had always been occasions of intense suffering, but had never before been delayed. I began the use of Ergoapiol (Smith), with some misgiving owing to the irritable condition of the stomach. One capsule every three hours was administered without any aggravation of the gastric distress. In twenty hours a normal menstruation was well under way; the flow was slightly increased over that observed on former occasions. The pains had subsided. Ergoapiol (Smith) was administered, one capsule three times a day during the menstrual period, which terminated in five days. The patient was instructed to return for a quantity of the remedy several days before the next menstrual period. She did so, and, following directions, took one capsule three times a day for three days before expected menstruation. She subsequently reported that during the period—lasting five days—there had been practically no pain, and that the amount of flow was, as far as she could judge, normal.

Case II.—Miss ——, aged thirty, had been a sufferer for years with dysmenorrhoea. For about three years had suffered with leucorrhoea, particularly annoying after each menstrual period. Had undergone treatment at different times for the leucorrhoea and dysmenorrhoea, but had never experienced permanent benefit. She had been obliged to spend the couple of days of each period in bed. She consulted me about one week before her period. Examination revealed a purulent discharge oozing from os cervix and a rather large uterus. There was no displacement. She was put upon Ergoapiol (Smith), one capsule three times a day. The onset occurred one day earlier than expected and was attended with considerable pain. The patient was, however, able to attend to her usual duties, a state of affairs such as had not been experienced for some years. At the onset of the flow Ergoapiol (Smith) was administered, one capsule every two hours. The effect was astonishing. In eight hours the pains had well-nigh subsided and there was practically no discomfort, except some pain in back.

Case III.—Miss ——, aged twenty-one, had suffered for two years with irregular and painful menstruation. Had commenced to menstruate when sixteen, menses being very scant, but regular and accompanied with but slight degree of suffering. Was never of a very robust physique, but in the main healthy. When about nineteen, considerable nervous trouble was inaugurated by grieving over a great bereavement, and the menses became more and more painful. The anguish became such a horror to her that she frequently resorted to morphine, partly to allay pain and partly to procure sleep. Fortunately she had not, as yet, contracted the habit, but the tendency was undoubtedly in that direction. When first consulted by her, examination was not granted. Menses appearing shortly afterward, was called upon to afford relief. Flow was very scanty and clotted. There were sleeplessness, terrific headache, pain in back, constipation, etc. Ergoapiol (Smith) was administered, one capsule every three hours.

Flow was considerably increased, there was a gradual lessening of all the suffering, and almost complete relief in twelve hours. This young woman has been placed upon Ergoapiol (Smith), one capsule twice daily for one week preceding appearance of menses,and has passed through several periods with very little suffering. An examination made recently showed a marked retroversion and very sensitive cervix. A properly applied supporter will doubtless work considerable benefit in her case, but it cannot be disputed that the comparatively easy menstruations occurring recently, in spite of the displacement, were due entirely to Ergoapiol.

Case IV.—Miss ——, aged eighteen, had always been regular in menstruating. Could get no history of any previous disorder within patient's knowledge. Contracted a heavy cold about time of menstrual epoch, and was much alarmed by non-appearance of flow. Discomfort was not marked. Ergoapiol (Smith), one capsule three times a day, was prescribed. Reported later that flow was established in twenty-four hours after treatment was commenced. The delay in this case was about four days.

Case V.—Mrs. ——, consulted me, giving the following history: Three months previously had had a profuse uterine hemorrhage occurring about the time of menstrual period. As she has for a number of years menstruated only at intervals of about six or seven weeks, the fact that menstruation had been suspended for six weeks before the date of trouble was not especially significant. The hemorrhage, which was at no time alarming, had continued for several days. Since that time there had been an almost constant wasting and at times a considerable flow. Her condition was practically invalid. Examination revealed a gaping os, a cervix exceedingly tender and abraded, and a large uterus. Before resorting to curettement it seemed advisable to try other measures. Ergoapiol (Smith), one capsule every three hours, was prescribed. In about twenty-four hours there was a decided increase in the discharge, which consisted of clots and considerable debris. There were some pains, of a cramp-like nature. The discharge began to grow less in about four days and ceased entirely in one week. There was a marked improvement in general condition. Local treatment entirely removed the tenderness and abraded condition of the cervix. Ergoapiol (Smith) was administered several days before next menstrual period and resulted in a very satisfactory period. In this case it appears to me the remedy saved the patient the ordeal of curettement, acting as a prompt uterine stimulant. Her condition locally and generally has since steadily improved.

NEWS, NOTES AND ANNOUNCEMENTS.

Aesculapian Club Outing and Election.—The Aesculapian Club enjoyed a very pleasant outing June 3, by a trip to Concord and an afternoon spent in visiting the historic places in that vicinity, and a dinner at Hotel Kendall, South Framingham, on their return, Thsi club, which is composed of physicians and their wives, has had an informal existence several years, but has been without constitution, by-laws, officers, or any formal organization, everything being done by unanimous consent.

On June 3rd, however, at the Old North Bridge in Concord, by the statue of the Minute Man, "Where once the embattled farmers stood, and fired the shot heard round the world," the organization of the club was perfected, and the following officers were elected: President, Dr. J. M. French of Milford; Vice-President, Dr. W. W. Browne of Blackstone; Secretary, Dr. W. L. Johnson of Uxbridge; Treasurer, Dr. N. C. B. Haviland of Holliston; Librarian, Dr. N. W. Sanborn of Bellingham.

This society includes members from three counties, and its official title is, The Aesculapian Club of Worcester, Middlesex and Norfolk Counties in Massachusetts. Its objects are social enjoyment and professional improvement.

Professional Unselfishness.—It might almost seem to a philosophical observer as if the leaders in this movement had unselfishly made up their minds to prove to men and women that if they had more common sense they would promptly abolish the medical profession

by taking away its *raison d'etre*. One seldom hears of a lawyer exhorting his neighbors to avoid litigation so that they may not require his services. Yet every reputable physician is expected not only to cure diseases, but to give his patients such hygienic advice as may prevent them from needing him again. This is a good deal to expect of human nature in individual cases; but the problem which is at the present moment most strenuously attacked by the medical men of Europe and America is how to reduce the number of their patients and the amount of their own income by 10 per cent at one fell swoop. At least one person out of every ten dies of pulmonary tuberculosis and other forms of tuberculosis, and it is this disease that physicians are now striving with all their might to exterminate utterly, or at least to limit as much as possible. Since tuberculosis is rarely contracted by the medical practitioner, his labors in striving to eliminate it from his practice accordingly stand as a remarkable exemplar of humanitarian altruism. —*N. Y. Evening Post.*

Medical Banquet.—An alumni reunion and banquet of Delta Mu fraternity of the U. V. M. Medical Department, was held Wednesday night, June 24, at the Hotel Burlington with an attendance of about fifty, practically all of whom were graduates, there being very few undergraduates present. The banquet was preceded by a half hour devoted to introductions and renewing acquaintances. The menu was an elaborate one and was well served. After the banquet post-prandial exercises were indulged in, Dr. J. N. Jenne '81, of this city acting as toastmaster. The programme was as follows:

"A Bit of Ancient History,"
W. D. Huntington, '81, Rochester.
"Country Comforts,"
J. S. Horner '92, West Pawlet.
"Base Ball in Medicine,"
J. M. Hackett '88, Champlain, N. Y.
"A Rolling Stone,"
John Gibson '98, St. Albans.
"Alcoholic Amaurosis,"
L. W. Flanders '85, Dover, N. H.
"Delta Mu,"
C. W. Willey '03, Burlington.

Among those from out of the city who were present were: Pettingill '83, Merritt '89, Sprague '89, Hawes '86, Weeks '90, McGuire '95, Stickney '94, Thorning '99, Sanborn '99, Hubbell '98, Holton '92, Dowling '92, Carruth '92, Gartland '93.

Prescribe Milk with Discretion.—In the selection of foods for the sick the preference has usually been given to milk. It has been considered the one perfect food. There are many exceptions to this rule. It is the ideal food for the young, especially for infants. For the adult it is, when used alone, wanting in many respects. The quantity necessary to be taken to nourish the body, that is, to furnish the proper amount of proteid, fat, and carbohydrate, would be so great that in many cases of disease of the stomach, when taken alone, the same trouble would arise which is found among the beer drinkers of breweries—dilatation of the stomach. Where four hundred grammes of carbohydrates, four hundred grammes of proteid, and one hundred grammes of fat are required to nourish a man, it is easy to compute the amount of milk necessary with only from twelve to thirteen per cent of solids to supply the nourishment necessary for the maintenance of health. Again, it does not agree with all peopde. It often causes nausea with extreme acidity and distress, from the coagulation of too large curds, thus prolonging digestion. Cooked with rice, it furnishes the most easily digested food, with the largest amount of nutrients contained in moderate bulk, of any combination of foods with which we are familiar.—*N. Y. Med. Jour.*

The Vermont Medical Monthly.

A JOURNAL OF REVIEW, REFORM AND PROGRESS IN THE MEDICAL SCIENCES.

Burlington, Vt., June 25, 1903.

EDITORIAL.

The Death of Dr. Love.

Love is dead!

No sadder news affecting a greater number of medical men has flashed over the wires for many a year than that which informed the medical profession on June 18, that Isaac N. Love was dead. No medical man in America was better known or more universally admired than I. N. Love. He was not Love of St. Louis, nor Love of New York—he was Love of America. In his relations with men he was a man,—genial, whole-souled,—a gentleman of culture, refinement and good fellowship,—a practitioner of erudition, intelligence and good judgment.

His heart was right and he was right and true in his heart. No higher praise can be given his life, so suddenly and unexpectedly brought to a close, than that he was true to his friends and honorable to his enemies. To his patients he was more than a doctor and invariably gave to those with whom he came in contact some of his own force of character. How noble a life may well be said of Love, of all men!

The Editor of The Vermont Medical Monthly cherishes as one of the bright things of life his intimate acquaintance with Dr. I. N. Love. It is only a short time ago that the following advice was given to the Editor by Love, in his characteristic way, at a delightful luncheon at the Lotus Club, New York City: "My boy, never mind the professional meanness of half the medical men you meet. Set your course with your conscience for a compass and let your professional brethren go hang. Wherever you go you will find dishonesty, deceit, and—dirt, and if you are at all successful and try to do things, you will be a mark for jealousy, lies and slander. But there will be flowers and birds and sunshine, and the world will be just as beautiful, when the mean men of our day are lined up in hell on the point of a darning needle. Therefore, work, play when you can, look up at the stars and remember that there is more good than bad in the world if you only look for it."

Ah, dear old Love, you have paid the last debt. You belong to another world now, but memory will always cling to you in spite of time and all its changes. Men who have met and known you are better for the meeting, and your optimism and good cheer have leavened many a loaf of discouragement and despair. We regret that the Reaper has cut you down thus early, but thank God you have lived and played your part.

The Therapy of Tuberculosis.

The excellent lecture of Dr. S. A. Knopf of New York City, delivered at the recent school for Health Officers, on the Treatment of Tuberculosis in Sanatoria, suggested many thoughts. Foremost was that in regard to the remarkable change that has taken place in the treatment of tuberculosis. Time was when everything was altitude and we packed every consumptive away to the high mountains as soon as we could get him to go. Without reason, altitude was made a fetich and it is not

necessary now to rehearse the harm and inconvenience done to realize our error.

Dr. Knopf's reply to a question in regard to the advantages of altitude shows the trend of expert opinion and at the same time will stand as a gem of diplomatic retort: "If you have altitude, use it. If you have not, you can do just as well without it."

Then again Dr. Knopf's remarks in regard to the use of creosote were interesting. He finds cereosote valuable in certain cases *in small doses,* but in his consultation work he more often finds that the drug does harm and is obliged to discontinue or curtail its use. It is only a short time since the journals were full of the almost specific influence of creosote in tuberculosis, and the enormous doses advised by many men, make one wonder how the victims of the creosote fad lived as long as they did. In a small percentage of tuberculous cases creosote is very valuable but when used it should always be combined with liberal quantities of common sense. These things embody only a few of the changes that are taking place in the management of tuberculosis, but they serve to illustrate this fact, that the accepted methods and theories of yesterday are the fallacies of to-day. The rise and fall of many medical methods and ideas should teach conservatism above all things.

MEDICAL ABSTRACTS.

Light as a Curative Agent.—Extensive experimentation is going in regarding the curative effects of light. The old-fashioned solarium is again cropping into use. Sunshine and dry atmosphere are extolled in the treatment of tuberculosis, and lastly strong light in the laboratory (concentrated rays) is used for the same purpose. The *Lancet,* in a recent number, remarks that in our conscious superiority to our forefathers we have been used to look with contempt on their ways of treating cases of small-pox by means of red light in the form of red blinds, curtains and coverlets, but with our present knowledge of the chemical and physical action of the different rays of the spectrum, and the influence of light and darkness on life's highest and lowest manifestations, we may have felt a suspicion that whatever the theory of the mediæval physician, their freaks may have had a scientific basis.

In a late number of the *Zeitschrift fur Krankepflige,* we find that it has been tried, and apparently with remarkable results, in the treatment of measles. A child 8 years old was stricken with measles. On the second day he was brought under the influence of red light. In three hours the rash disappeared, the fever subsided, and the child was apparently well, wanting daylight to play in. The red blinds were removed and daylight admitted to the room, but in three hours thereafter the medical man was again summoned and found the rash and fever had returned and the child was weak and prostrate. The red light was again resumed, the rash again disappeared in a little over two hours, as did the fever, this time permanently. In two more days the child was well in every respect.

NEWER REMEDIES.

Severe Reflex Pain.—J. H. Tilden, M. D., of Denver, in the June number of the *Chicago Medical Times,* in an article advocating the use of tampons in gynaecological practice, reports, among others, a case which was characterized by severe reflex symptoms and which had not yielded to the treatment accorded by two other practitioners. Dr. Tilden's procedure was, the introduction of a glycerine tampon and the administration of antikamnia in ten grain doses (two five-grain tablets) to relieve the pain. The tampon was removed each night at bedtime and followed with hot water injections. The patient on being discharged, remarked, that since following this

treatment she could run the sewing machine without the usual pain and tired feeling.

Amenorrhea.—A very frequent condition for which the practitioner is consulted is suppression of the menses owing to exposure, to a cold or to mental emotion. To restore the flow in these cases and to prevent the occurrence of uterine disease during the period of its re-establishment, the administration of Hayden's Viburnum Compound is very useful owing to its soothing effect upon the nervous system, its antispasmodic action, and its power of reducing congestion, thereby preventing inflammation. In cases of true amenorrhea, such as occur from change of climate, overwork, malnutrition, anemia, chlorosis, phthisis and other exhausting diseases, the systematic administration of Hayden's Viburnum Compound, in connection with general hygienic, dietetic and supportive treatment, is of great benefit. It will relieve the distressing symptoms occurring especially at the time when the menses are due, such as neuralgia, flashes of heat and cold, colicky pains in the abdomen and also promote the return of the flow owing to its tonic action upon the relaxed generative organs. If the amenorrhea be due to uterine disease this preparation will be found a most effivient adjunct to other measures. It is especially indicated in cases in which the absence of menstruation is due to a poor development of the uterus, being administered in connection with faradism, dilatation, massage and other measures.

Pain and its Remedy. By J. D. Albright, M. D., Philadelphia, Pa.—Believing that the bar in the way of the profession, in the use of opium, is its tendency to evil after-effects, and the harum-scarum idea that a little opium will induce the habit, and those terrible concomitants (?) I wish to call their attention to a preparation that I have long been using, and have not yet seen one case in which the habit was formed, nor ever had any complaint as to evil after-effects. This remedy is papine, a preparation of opium from which the narcotic and convulsive elements have been removed, rendering it a safe remedy for children, as well as for those of mature age. . . Up to a year ago I always gave chlorodyne tablets and viburnum for after-pains. Then I came across a case that refused to yield to them in the time I was accustomed to have them do so and I concluded to try papine. Its results, to make the story short, were such that I now never give anything else for after-pains, and they yield in about half the time that was required with the above named remedies.—*Medical Summary.*

Protected Ethpharmal Medicines.—I have no use whatever for any form of *patented* medicine. In the use of crude materials many vexatious things are encountered, if these can be eliminated much has been accomplished, and an excuse found for the use of protected ethpharmal medicines. So far as my experience goes it is a real advantage to the profession; it enables us to procure in a certain fixed form certain drug effects, and that is what we want. I think pharmacy has reached so high a standard by our best pharmaceutical chemists that the real drug effect is thoroughly brought out. I procured about a month ago an eight ounce vial of Sanmetto. I am perfectly familiar and for years have known the drugs and drug effects of the remedies said to be contained in Sanmetto. The announced composition, freely made known to the profession, has made amends for the name; protected or not as the case may chance to be. I use it for all kinds of irritation of the urinary tract. The sample is exactly what we get in the eight ounce bottle in our drug houses in this place,and I know it, so am willing to order

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- Gastric Ulcer
- Genito-Urinary Diseases (urethritis, cystitis, stricture, etc.)
- Hay Fever
- Hematemesis
- Hematuria
- Hemoptysis
- Intestinal Hemorrhage
- Iritis
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- Lupus
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Boscobel, Wis.

Not Opiates But Antiphlogistine.—Pain is the greatest instrument of torture with which the practitioner has to contend. It is the one symptom to which the laity attach the utmost importance. Absence of pain is to the patient always suggestive of improvement. Its presence, especially in uterine affections causes apprehension of operation and for relief of those cases who will not submit to operation and in inoperable conditions, antiphlogistine strongly recommends itself, not only as a palliative measure but an excellent remedial agent. This fact has been successfully demonstrated by the gynecologist. Its value in acute and chronic conditions of the ovary and uterus is prompt, permanent and certain.

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During menstruation the introduction of any medicinal agent into the vagina is contra-indicated and at this period the pain of catamenial irregularities can best be controlled by applying Antiphlogistine over the abdomen warm and thick and covering with cotton and a compress. This practice persisted in for several periods prevents headache, lumbar pain and other vicarious concomitant symptoms. Many women who have been physically incapacitated for a day or two each month have been permanently relieved by systematic use of Antiphlogistine at each menstrual illness. A potent influence is exerted over the sympathetic system which is so intimately associated with the physiological functions of the uterus that efferent stimulation neutralizes afferent irritation.

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An Old Friend's Endorsement.—In the "Reference Book of Practical Therapeutics," compiled by our old friend, Frank P. Foster, A. M., M. D., editor of *The New York Medical Journal,* we note the following: "Antikamnia Tablets have been much used and with very favorable results in neuralgia, influenza and various nervous disorders. As an analgesic they are characterized by promptness of action, with the advantage also of being free from any depressing effect on the heart." We are pleased at this expression of faith in the efficacy, promptness and absence of untoward after-effects of this most excellent remedy. We feel that the statement applies not only to Antikamnia Tablets, but to any of the tablet specialties offered to the medical profession by the Antikamnia Chemical Company, of St. Louis, Mo. Physicians desiring samples should write to this Company for them and they will be forwarded promptly, particularly if they mention the Vermont Medical Monthly.

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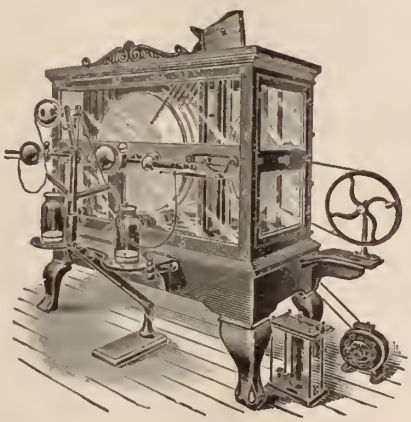

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This is an age of specialism and the best results secured in all departments of medicine to-day, are from the careful and systematic work of those who have followed one idea through good and bad report to the conclusion which leads to accurate results.

The readers of the Vermont Medical Monthly are requested to write to the Executive Offices of the Oppenheimer Institute, No. 170 Broadway, New York, for information in reference to their successful treatment of alcoholism and drug addiction, or if more convenient, to call at one of the Institutes for particulars as to terms and treatment.

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THE

Vermont Medical Monthly

Official Organ Vermont State Medical Society.

Vol. ix. No. 7.
Whole No. 103.

Burlington, Vt., July 25, 1903.

$1 per year.
Single copies, 15 cts.

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Entered as second class matter at Burlington, Vt., Post Office.

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The Vermont Medical Monthly

Vol. IX. July 25, 1903. No. 7.

ORIGINAL ARTICLES.

SOME OBSERVATIONS ON URINARY DIAGNOSIS.*

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When those of us who have been in practice for only two decades look back to our student days and recount the substantial additions which have, since then, been made to our means of diagnosticating disease, we cannot fail to marvel at the wonderful advancement which has taken place. Old methods have been revised and elaborated. Instruments of precision have been multiplied almost without number. The realm of clinical microscopy has been greatly extended. Bacteriology has thrown a flood of light upon a whole class of diseases. Modern chemistry has assisted in unfolding the mysteries of stomach affections. Haematology has solved many problems. Electro-diagnosis is of service to-day in a way and to a degree which was not dreamed of twenty years ago. Medicine, as a science and as an art, has grown more exact, and it has become more and more apparent that the physician, who wins the greatest and most lasting professional success, is he who is fitted to make fine distinctions in diagnosis.

Perhaps in no other branch of diagnosis has there been more marked progress than in that which pertains to diseases of the urinary system. The scope of urinary diagnosis has been widened. Standard theories have been revolutionized and methods of procedure have been vastly improved. In the old days it was customary to examine the urine only when a pathological process was suspected in some portion of the urinary tract. During more recent years, however, urinalysis has gradually come to be looked upon as an essential feature of all routine examinations. A constantly increasing number of physicians now regularly give the same attention to the urine as they do to the heart and lungs, regardless of what the patient's ailment may be. This every day examination of the urine, in all classes of disease as well as in apparent health, has brought to light many important facts and has broadened our conception concerning the significance of many test-tube findings.

No attempt will be made at this time to cover the whole field of urinary diagnosis. I desire to review with you some of the essentials of modern urinalysis and the diagnostic inferences which may be drawn from a few common urinary findings. If what I may say appears to you elementary and trite, please bear in mind that the object of this paper is to secure an interchange of views concerning practical every day methods.

Selection of the Specimen. So far as I know there is no difference of opinion as to the advisability of examining a part of the twenty-four hours' urine whenever it is practicable to do so. The properties of the urine vary to such a degree, during the different hours of the day, that reliance should not be placed on the product of a single urination. A convenient plan is to ask the patient to empty his bladder at a given hour, seven o'clock in the evening we will say, and throw the specimen away. The urine passed during the next twenty-four hours, including that voided at seven the next

* Read before the Franklin County Medical Society, May 17, 1903.

evening, is kept for examination. At each micturition the urine is poured into a previously sterilized two quart bottle and kept tightly corked. To guard against fermentative changes it is well to add an ounce of saturated boric acid solution.

If, for any reason, a sample of the twenty-four hours' urine cannot be obtained, that passed three or four hours after dinner is most suitable for diagnostic purposes. I have never been able to satisfactorily account for the popular idea that morning urine gives the best indication of the condition of the kidneys. We all know that, of all urines, that secreted during the night, when the body is at rest, is least likely to contain morbid products. It is not uncommon to find albumin or sugar after exercise and during digestion, when the morning urine gives no reaction with ordinary tests. In studying obscure cases it is sometimes advisable to examine the urine voided before breakfast, for purposes of comparison, but ordinarily that passed during the digestion of a full meal is preferable.

Quantity. Having obtained a part of the twenty-four hours' urine, we take note of the quantity voided. This is an important point in urinary diagnosis which I am sure is sometimes lost sight of. To measure the twenty-four hours' secretion calls for a little extra work on the part of the patient, and we are too much inclined to base our conclusions on his statements, which are usually of no value whatever. If he urinates frequently he thinks he is passing an increased amount, while if he empties his bladder only three or four times during the day and night, he will say that the kidneys are acting less freely than normal. We can get correct information only by actual measurement.

Some structural changes in the kidneys disturb the normal diurnal variation in the secretion of urine. In health a much larger quantity is discharged during the day than during the night, the maximum being reached in the afternoon and evening. In chronic Bright's disease the relative amounts passed during the day and night may be reversed. Consequently when a patient, whose urine is slightly albuminous, tells us that he gets up once or twice at night to pass his water, we will do well to measure separately the day and night volumes, and if it is found that the urine, passed from ten o'clock at night to ten in the morning, constantly approximates or exceeds the amount voided during the remaining twelve hours, we have a diagnostic sign of some importance.

Concentrated urine. Every physician knows how easy it is for some individuals, particularly those who lead sedentary lives, to fall into the habit of drinking too little water. As a result the urine becomes concentrated and the deposition of some of its crystalline ingredients, notably uric acid and calcium oxalate, is favored. In this way a mechanical irritation of the kidneys is set up, which may show itself by the presence of albumin, an excess of mucus and perhaps casts in the urine. An explanation is here offered of some of the mild or functional albuminurias with which we so often meet. The urine becomes irritating because of its concentrated condition, and relief is promptly afforded by the free use of water. Wood of Harvard says: "I see this form of albuminuria in apparently healthy persons more commonly than any other."

Reaction. It is well understood that, while in health, the twenty-four hours' urine is always acid, single specimens, particularly those passed three or four hours after a hearty meal, during the so-called alkaline tide, may be normally neutral or alkaline. The alkalinity under such circumstances is always due to potassium and sodium salts or fixed alkalies. On the other hand the alkaline reaction, which is abnormal and results from inflammatory disease of the bladder, is due to volatile alkali or ammonium carbonate. In urine testing,

therefore, we have not only to determine the reaction but, if it is alkaline, we must ascertain whether such reaction is physiological or pathological. This can be easily done by means of the litmus paper. If the red paper, which has been turned blue by the alkaline urine, retains its blue color on drying, the reaction is due to fixed alkali. If, however, the red color returns when the paper is dry, the alkali is volatile. Again, if the alkalinity is due to ammonium salt, the moistened red paper will be turned blue when held over the urine without coming in contact with it, while if the alkali is fixed, the blue color appears only after the paper is dipped in the urine.

Specific Gravity. The specific gravity of the twenty-four hours' urine is one of the most important factors in urinary diagnosis and prognosis. It is a measure of the solids eliminated. It tells us how the kidneys are doing their work. The specific gravity of a single specimen is of comparatively little value because of its wide variation from day to day and from hour to hour, but the true specific gravity, the specific gravity of the urine passed during the whole twenty-four hours, gives us about the best information we can get in regard to the excretory function of the kidneys. In dealing with organic renal disease we are too much inclined to base conclusions upon the amount of albumin and the number of casts. We are too apt to gauge progress by the showing of the test-tube and the microscope, losing sight of the fact that the cardinal points are really the quantity of urine and the specific gravity. The albumin and the casts throw light upon the nature of the pathological changes in the kidneys, but the daily output of urine and of solids gives us a far better idea concerning the condition of the patient.

Solids. To calculate the quantity of solid ingredients, multiply the last two figures of the specific gravity by the coefficient 2.33, and the product represents the number of grammes of solids in 1000 c. c. of urine. Or multiply the last two figures of the specific gravity by the number of ounces passed in twenty-four hours, and the product by 1.1. The result will show the number of grains of total solids.

Before drawing inferences from the quantity of solids, it is well to extend our observation over two or three days in order to ascertain the average output, and we must also take into account the age of the patient, his weight, diet and the exercise taken.

It is no doubt true that the condition of the patient can be better judged from the total solids excreted than from the quantity of any single ingredient of the urine. We no longer look to urea as the sole cause of uraemia, but it constitutes about one-half of the solids and it represents about eighty-five percent of the nitrogen eliminated by the kidneys. For these reasons it is many times important to know the amount excreted. This can be quickly determined by means of the Doremus ureometer.

Albumin. Simply to enumerate the tests which have been favorably mentioned during recent years for the detection of albumin in the urine, would be a burdensome task. The fact that so many new reagents have been and are being suggested is convincing evidence that the profession is not fully satisfied with the older methods, that experience has shown them to be not infallible. That they are imperfect we are all doubtless prepared to admit, but thus far it has not been demonstrated that the newer tests better meet the requirements of the physician. Some of them are unquestionably very sensitive, but unfortunately they react with other substances, which may appear in the urine, besides albumin, and, for this reason, they are not to be relied upon.

With the means now at our disposal it cannot be regarded an easy matter to detect small amounts of albumin. Of course if a considerable quantity is present, any of the tests will

respond at once and in an unmistakable manner, but if there is a trace merely, to discover it and to be sure that the reaction is not due to nucleo-albumin or something else of minor clinical importance requires the exercise of a good deal of care. He will be most successful who, in all cases of doubt, employs two or three different tests, who thoroughly familiarizes himself with them and studies well the precautions which must be observed in order to get the best results. The three tests which have seemed to me most satisfactory are the heat and nitric acid, Heller's and the ferrocyanide, and it has been my habit to employ them as follows: Care is first taken that the test-tube is sparklingly clean. It is clearly impossible to recognize a faint cloudiness through a dirty glass. The urine is filtered to render it perfectly transparent. This is quickly done by passing it through ordinary Swedish filter paper.

Heat and Nitric Acid Test. If the urine is not distinctly acid add a few drops of acetic acid, then fill the test-tube about two-thirds full of the acidulated filtered urine and, after boiling the upper part only, carefully examine in a good light and against a black background. Any lack of transparency is thus detected in the boiled layer on comparing it with the transparent urine below. A cloudiness which manifests itself after boiling in this way, and which is not entirely cleared up by the addition of a few drops of nitric acid, is due to albumin. If the test-tube is clean, if the urine is perfectly clear and acid in reaction before boiling and if, after the test is applied, we can be sure that there is no diminution of transparency, it is safe to conclude that albumin is not present. I will not presume to say that this is the most delicate test we have, but greater familiarity with it, and more confidence in my ability to utilize its full sensitiveness, lead me to place most reliance upon it. When it gives a seeming reaction and in doubtful cases, both the Heller's and the ferrocyanide tests are used as checks.

Heller's. In performing Heller's test, a conical glass is used instead of a test-tube. This is filled one-half or two-thirds full of the filtered urine, and the nitric acid is carefully introduced to the bottom of the glass by means of a pipette. It should be borne in mind that, if the percentage of albumin is very small, there may be no response with Heller's test until after standing twenty to thirty minutes.

Ferrocyanide Test. The ferrocyanide test is applied by filling a test-tube about one-half full of the filtered urine and adding about a half dram of potassium ferrocyanide solution (1 to 20). After mixing thoroughly, by inverting the test-tube two or three times, add a few drops of acetic acid. If albumin is present the whole mixture becomes cloudy or milky. If the urine is albuminous, to a degree sufficient to be of clinical importance, there should be a reaction with each of these tests when properly applied.

The quantity of albumin may be quickly determined by the Purdy centrifugal method. Results can be secured by this process in four or five minutes, which are believed to be just as accurate as those shown by the Esbach albuminometer after standing twenty-four hours.

Clinical Significance. Having discovered albumin in the urine, how shall we decide in regard to its significance? We know that it may be symptomatic of those renal lesions which are commonly included under the general term Bright's disease, that it may also appear in connection with and as a result of a great variety of extra renal affections, and that it is not infrequently present in apparent health. Albuminuria in itself, therefore, cannot be looked upon as pathognomonic of any one disease or of any single class of diseases. In order to properly interpret its meaning, we must give attention to the urinary symptoms with which it is associated, as well as the gen-

eral condition of the patient. I shall at this time refer only to those features of the urine which appear to throw light upon the origin of the albuminuria.

(1) The amount of albumin present gives but little assistance in reaching a conclusion. Of course a very large percentage of albumin is usually evidence of Bright's disease of the acute variety, but a small or moderate amount is not diagnostic. While it is true that, in the so-called functional albuminurias, the quantity is small, it is equally certain that, in some forms of chronic nephritis, there may be only a trace. The fact, therefore, that the urine is only slightly albuminous cannot be taken as a necessarily favorable sign.

(2) The continuous presence of albumin at every examination and at all times of day points rather more strongly toward an organic cause than does the albuminuria which comes and goes. Too much stress should not, however, be laid on this feature. The albuminuria of Bright's disease may be intermittent or occasional, and subsequent developments may show that a continuous albuminuria is mild and temporary.

(3) The duration of the albuminuria is of importance in diagnosis. The longer it lasts the greater is the likelihood of its being of serious import. If it continues for several months it is an almost certain indication of renal disease. Most of the cases reported, in which albuminuria has persisted for years without apparent impairment of health, are undoubtedly genuine nephritis. We sometimes forget that Bright's disease may run a latent course and extend over a period of several years. Cabot and White of Boston, on collecting data bearing upon the prognosis of chronic nephritis, found that the average duration of 332 cases was nineteen months. But ninety-one cases of long duration were reported to them. Twenty-seven cases lasted from ten to fifteen years, sixteen from fifteen to twenty years and six over twenty years. Dr. Pfaff has under observation a patient who had had nephritis for twenty-five years. Dr. Wharton Sinkler of Philadelphia reported two cases, one lasting twenty-five years. The other patient was still living and had had the disease for twenty years. Dr. Isaac Adler of New York, had a patient whose urine contained albumin, granular and fatty casts, who had showed evidences of the disease for twenty-six years. Dr. Alfred Stengel had two patients, one having had the disease ten and the other twelve years. Dr. Tyson of Philadelphia, reported a death from Bright's disease twenty-nine years after a uraemic convulsion. The apparent maintenance of health up to the normal standard, with long continued albuminuria, is, therefore, not proof of the absence of nephritis.

(4) If the albuminous urine is of high specific gravity, if the daily quantity of urine is normal or below, if the solids are relatively increased, if perhaps a few hyaline or granular casts appear, if, on standing, there is a deposit of urates, uric acid or calcium oxlate crystals with an excess of mucus and, if other evidences of nephritis are absent, the albumin may be accounted for on the ground of renal congestion, due to the local irritating effects of the crystalline ingredients to which I have just referred. These irritating products may be deposited because of the concentrated condition of the urine, or because of over production from mal-assimilation. Disappearance of the albumin may be expected to follow the free use of diluent drinks and a carefully regulated diet.

(5) *Casts.* A few years ago it would have been said that the presence of both albumin and casts in the urine was a sure indication of kidney disease. It was thought that cast formation was always secondary to a renal lesion. To-day it is well understood that the temporary appearance of a few hya-

line casts is of no more diagnostic importance than is a trace of albumin. In fact the same conditions which give rise to the one may produce the other. Circulatory disturbances in the kidneys, occasioned by excessive muscular exertion, cold bathing, etc., have repeatedly been found to excite the appearance of hyaline and even granular casts, as well as albumin. In such cases, however, the casts are few in number, and they are present in the urine only temporarily. Hyaline or granular casts in large numbers, epithelial casts, hyaline or granular casts, which contain fatty granules, and waxy casts are always indicative of structural changes in the kidneys. The same may be said of the continuous presence of any variety of casts.

(6) *Epithelial Cells.* We are told that the parenchyma of the kidney, the renal pelvis, the ureter, the bladder and the urethra are each provided with a special form of epithelium, and that the appearance in the sediment of these different varieties of cells is of assistance in locating urinary lesions. Now I respectfully submit that in the majority of instances it is absolutely impossible for the average observer to get information from the microscopic study of these cells, which will aid him in making his diagnosis. When we think to what an extent the form of the cell may be changed by the reaction and other conditions of the urine, and that the small round cell, on the diagnostic value of which so much stress has been laid, may not only come from the uriniferous tubules, but from the deeper layers of the pelvic and bladder mucous membranes, from the prostate, the seminal passages and the male urethra, we are sure to appreciate some of the difficulties met with in attempts at differentiation.

(7) *Renal Insufficiency.* A condition of the urine, which is a material aid in determining the significance of albuminuria, is that which is characterized by a reduction of solids. The passage of an increased volume of albuminous urine of low specific gravity usually denotes organic impairment of the kidneys. The functional albuminurias are not attended with diminished excretion of solids, and when it is found that the total solids are lessened, when the twenty-four hours' urine is above the normal, when the night urine equals or exceeds that voided during the day, an inflammatory or degenerative process in the kidneys may be safely inferred.

So much has been said and written of late, concerning the mild forms of albuminuria, we so frequently have it brought to our notice that the exciting cause may be some very slight and insignificant ailment, that there is real danger of our coming to look too lightly upon this condition. We need to remind ourselves occasionally that albuminuria is never physiological. It never appears in perfect health. It is always a danger signal. It always denotes a temporary or permanent departure from the normal standard, and it is the duty of the physician to search out the cause. This may be by no means an easy task, and time is often an essential factor in diagnosis, but, until the problem is solved, the patient should be kept under observation and his urine frequently and carefully examined.

Sugar. For the detection of sugar in the urine some of the copper tests are probably used more frequently than any others. They are easily applied and they react with very small percentages of sugar. Unfortunately, however, other urinary products may reduce cupric oxide and, for this reason, the practitioner will sometimes be misled if he relies exclusively upon the copper tests.

As the common tests for albumin and sugar are ordinarily performed, it is undoubtedly true that traces of albumin are frequently overlooked, while many innocent urines are unjustly accused of containing sugar. In the one case we do not secure the full value of the test and, in the other, we mistake other reducing substances for glucose.

Before applying any test for sugar, if albumin is present it should be precipitated by boiling and removed by filtration. My own practice is to first use Fehling's test. One of its objectionable features is the well known instability of the solution. This difficulty has been overcome by keeping in separate bottles the copper and the alkaline solutions, and making a fresh mixture for each examination. The test solution is first boiled and, if it remains unchanged, a cubic centimeter of urine is added, and the mixture is again heated but not boiled. The test-tube is then set aside and allowed to cool. When it has become cold, if there is no yellow or red sub-oxide precipitate, the urine is considered free from sugar. The solution is not boiled after the addition of the urine, because boiling is more likely to bring about a reduction with uric acid, urates, creatinin and other substances, which have the power to change Fehling's solution. The reaction with sugar is said to take place before the boiling point is reached, while the other reducing substances require a higher temperature. Even with this precaution, if there is an apparent sugar reaction, other confirmatory tests should be applied. Nylander's modification of the bismuth test or the fermentation test may be conveniently used for this purpose. It is only after using two or three different tests that definite conclusions can be reached in doubtful cases.

Significance. When an unmistakable sugar reaction is detected, what diagnostic inferences are to be drawn from it? In other words, what, according to our present knowledge, is the significance of glycosuria? If the sugar is present in large amount, if there is marked polyuria, increased thirst and impairment of the general health, a decision is easily reached, but, on the other hand, if the other diabetic symptoms are absent, if the patient is apparently in good health, if the quantity of sugar is small, the problem is much more difficult.

We may classify all glycosurias as (1) those which are expressive of diabetes mellitus, (2) those which are associated with other diseases, notably the acute infections, diseases of the heart and lungs, cirrhosis of the liver, organic nervous affections, neurasthenia, inebriety, head injuries, stomach disorders, etc., and (3) mild or functional. The first class can be recognized by the association of the glycosuria with the group of diabetic symptoms to which I have referred. Sugar in the urine alone, without polyuria, thirst or impaired health, does not indicate diabetes mellitus. In the second class a diagnosis is based upon the presence of the acute or chronic diseases which may cause glycosuria, and the absence of diabetic symptoms. Functional glycosuria has many causes. Sugar may appear in the urine temporarily after the over ingestion of starchy and saccharine foods, after sudden mental shock and nervous excitement, after severe muscular exertion and after over indulgence in alcoholics. These are the more common causes, but many cases are met with which are exceedingly obscure. It is difficult or impossible to ascertain the cause. Under such circumstances we can only keep the patient under observation and be on the alert to recognize the earliest manifestations of disease. The great practical lesson we need to learn is that sugar is not present in healthy urine, neither is it always an indication of diabetes. Like albumin it tells us that something is wrong. A diagnosis depends upon the study of the individual case and a wide survey of all the attending circumstances.

QUINSY.

By William F. Waugh, M. D., Chicago, Ill.

Many remedies will abort some quinsies, some will abort most cases, none will abort all. If the microbe invasion is still superficial, any good antiseptic application will settle it, peroxide of hydrogen, chlorinated soda, saturated

salicylic acid solution, tincture of chloride of iron, glycerin and tannic acid, washes and gargles innumerable have been applied with success. The secret lies in using them strong enough or often enough, and applying them to the entire affected surface. Ordinarily gargling barely reaches back to the soft palate. The best application is nascent chlorine. Put in a 4 oz. bottle a dram of powdered potassium chlorate, add a dram of strong hydrochloric acid, and when the disengaged chlorine fumes rise fill the bottle with water. A teaspoonful of this may be given at first every hour. If three doses fail to abort the attack it has penetrated too deeply into the tonsillar crypts for local applications to reach it, but the same remedy diluted answers admirably as an adjuvant, keeping the throat clean and aseptic, and preventing the possibility of diphtheritic superinfection.

Mackenzie aborted quinsies with lozenges containing resin of guaiac, two grains each. I suppose the pharmacies still contain "quinsy balls," or sal prunelle, which sometimes succeeded. One was allowed to dissolve in the mouth as a lozenge. *Hare* recommended sodium salicylate in doses of five grains. Sodium benzoate has been used with success.

There are two ways of treating the malady, as an infection and as a simple inflammation. Looking at it as a microbic invasion the remedy is calcium sulphide, of which an adult can take one-half to two grains every half hour. It is doubtful if any micro-organism can continue its work in the human body saturated with this agent.

As an inflammation, the principles that govern disturbances of the circulatory equilibrium anywhere are to be applied. Relax the vasomotor tension by veratrine, or aconitine amorphous, or both if need be, gr. 1-134 each, and restore the tonicity of the paretic vasomotors in the inflamed region by digitalin (Germanic) gr. 1-67, or strychnine arsenate gr. 1-134, or both, and give these agents together every half or quarter hour until the pulse approaches normal or the fever breaks, and convalescence, or even the "jugulation" of the threatened suppuration is assured.

Keep the bowels free with saline laxatives, and let the diet be mild, non-stimulant. Quinsy may occur in anemics, but is most common in uricacidemics. Veratrine is needed if renal elimination is defective, or if the fever runs high, while aconitine is preferable in other cases, if the pain in the throat is severe. Ice and ice cream often relieve the pain and tension in the inflamed areas. Hot mustard foot baths may prove useful.

With the alimentary canal empty and aseptic, the eliminant apparatus working freely, the circulatory equilibrium restored, and the blood so saturated with calcium sulphide that the breath and perspiration exhale the odor of sulphuretted hydrogen, there is little danger of suppuration occurring. But if it has already occurred I know of no treatment that will restore life to dead cells.

Mackinac Island.

"WHAT SHOULD BE THE REQUISITE FOR RAISING THE QUARANTINE IN DIPHTHERIA?" *

By G. G. Marshall, M. D., Wallingford, Vt.

In order that this question may be intelligently answered, it is necessary that we have a proper understanding of the nature of this disease in its various conditions, and a definite idea of its etiology.

The object of the quarantine being to prevent the primary case from infecting others, it is evident that quarantine should not be released until the danger of infection, either directly or indirectly, is removed. To determine when this point is reached the absence of the Klebs-Loffler bacilli, from the throat and other mucous surfaces of the patient and of the patient's attendants should be demonstrated,

* Read at the annual meeting of the Rutland County Medical and Surgical Society, July 14, 1903.

and the rooms and articles which have been exposed to the infectious germs disinfected, the patients and attendants washed, and fresh clothes donned; then, and not until then, should quarantine be removed.

Usually with the separation of the false membrane, that is after from four to eight days, the diphtheria bacilli rapidly disappear. The New York health board (Annual Vol. 1-95) reports as follows: "In 245 of 405 cases the D. B. disappeared within three days after complete separation of the false membrane; in 160 cases the B. persisted in 103 cases for seven days; in 16 cases for fifteen days, in 4 for three weeks, and in 3 for five weeks. Many of these the patients were apparently well many days before the infectious agent had disappeared from the throat."

Northrop & Bovaird state that, "With the separation of the false membrane the purulent discharge from the nose and mouth gradually cease, but a catarrhal secretion may continue for weeks afterwards, such a catarrhal secretion still contains virulent bacilli."

In a series of 800 cases observed by MacCallum, the time which elapsed before two consecutive negative cultures were gotten from the nose and throat, averaged one week, with an outside limit of 47 days. Shaffer has once found the K. L. B. in the throat six months after all diphtheria symptoms were gone. These observers have noticed that the B. is found longest in those diphtheria patients having enlarged tonsils and adenoids.

Thus it will be seen from these reports that there is a wide range in the time of the disappearance of the bacilli from the throat of the diphtheria patient, and of course there must be a corresponding difference in the quarantine restriction. But the patient is not the only source of danger, and should not be the only guide in regulating the quarantine. It is perhaps the exception, especially in rural practice, that a perfect isolation of the patient from other members of the family is maintained. Indeed, with the best of intentions and constant care it will be found difficult to maintain this isolation through a course of two or more weeks; food and fresh clothing have to be carried to and from the patient, and it would be a rare case indeed where no other members of the family were exposed. The other members may not, and very likely will not, take the disease.

Rotch, in an article on this subject, says: "There is no true diphtheria where the Klebs-Loffler bacillus is not present, but its presence in a healthy throat does not constitute the disease diphtheria, although the individual may be the source of infection to others." In the same chapter he says: "The local lesions produced by the K. L. B. may be merely a catarrhal inflammation, or those of a follicular tonsilitis." Quoting again from Northrup & Bovaird we read: "The intensity of the local action of the B. varies greatly, and it has been found that the D. B. may be the cause of simple inflammatory processes, formerly designated as catarrhal, which present no appearance of false membrane." The same authors in concluding state: "That these mild cases are quite as dangerous to others as severe ones and should, for the safety of the community, be subjected to strict quarantine. It is therefore essential to accurate work and proper care, as well as proper prophylaxis, that cultures should be made from all cases of sore throat."

Para states that the most malignant bacillus he has yet met with was obtained from an apparently mild case.

Koplik states: "In catarrhal diphtheria there may be no formation of membrane, the fauces showing only an angina of varying severity. In some cases there is only the picture of a follicular, or lacunar amygdalitis. Macroscopically there is nothing to show that the process is diphtheria."

Francis P. Denny, in *The Boston Medical*

and Surgical Journal, Nov. 22, 1900, summarizes as follows: "First, diphtheria B. are seldom found in the throats of those who have not been exposed to diphtheria; second, the B. are more frequently found in those who have been exposed, especially those living under poor hygienic conditions or in institutions; third, healthy individuals with virulent B. in their throat can spread the disease. They are just as dangerous as mild or convalescent cases of diphtheria, and ought therefore to be detected and isolated; fourth, cultures ought to be made among those who have been exposed to diphtheria."

"It has long been known that the results of bacteriology and of clinical medicine were not in accord so far as the question of diphtheria goes, many persons whose cultures have been pronounced 'positive' having no evidence of diphtheria in the clinical sense. And of course isolation on a *priori* grounds must often, to them, have seemed a hardship. It is therefore of great importance to determine whether such persons are dangerous to others, and to what extent. This is what Dr. G. S. Graham Smith has attempted. In the *Journal of Hygiene* for April, 1903, he discusses the question of the distribution of the Klebs-Loffler and Hoffman bacillus in the throats of those who have been in contact with diphtheritics ("contacts") and in those of normal persons. His conclusions are, in brief, that the Klebs-Loffler bacillus have been found in a considerable proportion of persons who have been in contact with cases of diphtheria, or with infected persons. Such persons have been shown to be a grave danger to public health, especially when they are frequenting schools or institutions, and they constitute the usual channel by which the *disease* is spread. Very satisfactory results have followed the isolation of convalescents from the disease and of *infected "contacts"* until two consecutive negative cultures have been obtained. Carefully conducted investigations among healthy persons who have not been in contact with cases of diphtheria or with infected *"contacts"* have shown that virulent diphtheria bacilli are very rarely found in the mouths of the normal population, they being actually found only three times in 1,511 examinations. This fact renders the discovery and isolation of infected persons a practical possibility, and offers a fair prospect of discovering and isolating the majority of them in any outbreak."

Hellbner admitted 20 infants into a diphtheria ward, six of whom showed the bacilli before entering and 14 did not. Of these 14 all afterwards showed the D. B. in their throats varying from a period of a few days to several weeks. He states that the B. often remained for several weeks and even months (one case 2½ mo.), in an indolent condition, although in several cases they declared themselves in a virulent manner.

The foregoing quotations are given for the purpose of demonstrating that children, and even adults, exposed to diphtheria are liable to have the K. L. B. in their throats, even though they may show nothing but red and inflamed throats or a follicular tonsilitis, or indeed without presenting any symptoms. Nor should we be surprised at these circumstances, when W. H. Park, *Med. Record,* Aug. 18, '94, reports finding 22 virulent cultures of Loffler B. out of 330 non-diphtheritic, and so far as known, unexposed throats.

The conclusion of all the foregoing is that they who are in more or less direct contact with a diphtheritic patient may have the bacilli in their throats, and are a source of danger to others though they do not have diphtheria themselves.

Hence before releasing a house from quarantine, I believe it to be a practical and conservative course to first demonstrate the absence of the bacilli in the throats of other members of the family, unless we are sure that iso-

lation of the patient has been complete. It has happened in my experience that after a culture free from bacilli had been obtained from the patient, and the house disinfected, that within a few days a second member of the family developed the disease. Only a few months ago, soon after I had released a home from quarantine, the mother, who had taken care of the child through its sickness, and who showed no symptoms of the disease at the time of disinfection, developed a moderately severe attack of diphtheria. In this case there must have been a period of about a week during which this family was a source of danger.

I recall another case which happened in my practice within two years. The mother of four children had diphtheria and recovered, and a negative culture was obtained. The house was disinfected and freed from quarantine. In the course of a few weeks an infant child developed membranous croup; the first culture did not show the B., but a second one did. The child recovered and a negative culture was obtained, and quarantine was again raised. In a few days the father developed a very painful sore on his hand from what had been a simple wound. As the wound looked very suspicious, I took a culture from it and the report showed D. B. to be present. This patient was one of unusual danger, as he was a farmer, and up to the time I saw him, was doing his own milking.

Many times when the first culture does not show the B., a second or a third one should be taken. The necessity of this precaution is especially true in cases of laryngeal involvement. I call to mind an incident which illustrates this. A mother, who was also a grandmother, living with daughter and grand-children, developed a laryngitis, which was also complicated by pneumonia. This woman died; cause of death being given as laryngitis. A few days later an infant grand-child developed membranous croup and died; an older brother and the mother of the child developed tonsilar diphtheria in the course of a few days. Here was an instance of a patient contracting and dying of laryngeal diphtheria with no quarantine. As this is a case that might happen under similar circumstances at any time, we should be reminded that most cases of membranous croup are diphtheritic, and should not be released from quarantine until we are positive it is not due to D. B.

It sometimes happens that diphtheria is so mild that no medical aid is called, or if so, not until some complication has arisen, and the throat symptoms may have then disappeared or be overlooked. I will cite a case illustrative of this point which came under my observation.

In December, 1899, in the family of X. in Bridgeport, Conn., the mother and a child two years old had each a sore throat, and both recovered without employing a physician; next a child four years of age had a sore throat, but was not thought very sick until a few hours before death, when a doctor was summoned. The doctor found the child suffering from acute nephritis, from which it soon died. The mother of the child then brings the body to her home in Wallingford, Vt. The railroad transportation certificate assigned the cause of death as acute nephritis. In the Wallingford home there were, besides the grand parents and an aunt, two children, both of whom came down with diphtheria in a few days after the arrival of the body. The mother's sister, with her husband and their child were also present when the body was brought home. All three of these contracted diphtheria and the child died. The two children in the home where the body was taken recovered, the house was disinfected and quarantine released. After this, one of the members of this family, the aunt, stopped to warm herself at a neighbor's, while she was on her way to visit some friends. In this home where the aunt stopped to warm herself, there

developed in a few days three cases of diphtheria, two of which were in children, and one of these died.

This series illustrates two things; first, a mild case of diphtheria which was overlooked, developed a fatal nephritis, and no quarantine was made at all; second, either the second focus of infection was not thoroughly disinfected, or it was done too soon.

Again it must not be forgotten that scarlet fever is quite often complicated with diphtheria. One author has reported finding the D. B. in 53% in a series of 142 scarlet fever patients.

I have the history of a girl eight years of age who was in the American School for the Deaf at Hartford, Conn., in January, 1896. Here she had scarlet fever, which was followed by nasal diphtheria. She was taken to the City Hospital, where she remained for seven or eight weeks. The girl was allowed to return to her home in Wallingford the last day of February. On the 5th of March I was called to see her brother, five years of age, whom I found with a well developed diphtheria. The boy died March 11th. A few days after the first boy was taken with diphtheria, his brother, about two years older, and his mother, each developed the disease. These two recovered. Here was a case of diphtheria following scarlet fever and the germs of the latter persisting for several weeks after apparent recovery. The nasal discharge continued for some time after the girl's return home, but there was no culture made, as this was before the establishment of our State Laboratory.

In the case of death of a patient suffering from diphtheria, other members of the family should be known to be free from the K. L. B. before quarantine is raised.

Experiments carried on in the Boston health department show that in very nearly one-third of the patients released on the evidence of a single negative culture, the K. L. B. is still present (Med. Record, Oct. 15, 1898). It is not only necessary to take cultures from the throat but one from the nose should also be made.

It may not belong to the domain of this paper to speak of disinfection, yet a word on the point may be timely. My experience has convinced me that to thoroughly disinfect the average house after a case of diphtheria, with the family living in it, calls for more care than is frequently given. If only one or two rooms which can be vacated and tightly closed for 24 hours are infected, the question might be a simple one. But many times, and perhaps in the majority of cases, the patient has inhabited half or all of the house before the true nature of the disease is known.

The care of the patient, in my practice, has always devolved on one or more members of the family. If it is the mother, she has other duties which call her to other parts of the house, and so it often happens that before the two to four weeks of quarantine are over, nearly the whole house has been infected. If the family is small and the house conveniently arranged, little difficulty may be experienced. But with a large family and limited room it is no easy task to see that every room is shut tight for 24 hours, and to do less than this, is only to give a sense of false security. The recent experiments by Dr. Stone of our State Laboratory have demonstrated that not less than 20 oz. of 40% formaldehyde solution completely evaporated in an air-tight room of 1000 cubic feet for 24 hours is necessary to destroy the D.B. He has also demonstrated that it requires double the amount stated as being necessary by the manufacturers of the solid forms of formaldehyde to be efficient. If this be true with Dr. Stone's experiments where he could perfectly control the escape of the gas, what may we expect of our work, where large rooms and halls, which often can be only poorly closed, are to be fumigated; add to this the fact that

the germs are not on the surface of a smooth glass, but are scattered among clothing, books, and the like, and not only this, but we must have the room ready in 12 hours for a sleeping apartment. These are only a few of the difficulties which must be successfully overcome to make a house safe to be released from quarantine.

In concluding, then, we emphasize the following: First, that the K. L. B. generally disappears from the throat in from three to five days after complete separation of false membrane, but they may persist for days and even for months in rare cases, longest in those suffering from enlarged tonsils and adenoids.

Second—That two negative cultures taken on consecutive days should be obtained from both throat and nose.

Third—That those exposed to diphtheria often have the K. L. B. in the throat, though they may appear to have only a simple sore throat, or even no symptoms at all, yet such persons are a source of danger to others.

Fourth—That extra care be taken in all cases of laryngitis, as the D. B. may not be found in the first culture, though they may be present in the larynx.

And fifth—That it requires a considerable and a definite amount of a given gas together with a definite length of time to destroy the B.

From these conclusions we may determine when quarantine should be raised in cases of diphtheria.

DIFFERENTIATION OF TYPHOID FROM COLON BACILLI.—Philip Hanson Hiss (*Progressive Medicine*) states that in simple agar media the typhoid bacillus develops in from twelve to eighteen hours into colonies marked by fringing threads, whereas the colon bacillus grows into larger colonies without threads.

SPECIAL THERAPEUTIC ARTICLES.

IMPAIRED DIGESTION OF INFANTS—PARTICULARLY BOTTLE-FED BABIES.

By F. H. Munroe, M. D., Newark, N. J.

The first few months of a baby's existence are fraught with much anxiety to both mother and physician. The stomach, just beginning the functions for which it was created, is somewhat loth to accept the changed conditions; it frequently rebels at having to perform the act of digestion as it should, and rejects the food committed to its care. Sometimes the cause of this rejection may be over-feeding, but much more frequently it is due to hyperacidity caused by fermentative changes in the food itself.

Particularly is this true of bottle-fed babies, and in the trials of food necessary to discover the one that best agrees with the baby, much time is lost and much worry is caused.

The very nature of artificially prepared foods predisposes to their rapid fermentation, and the progress of digestion is begun before the food leaves the laboratory. Added to this condition is that of slight uncleanliness, which frequently exists in spite of the persistent use of boiling water in the bottle, tube and nipple. Even a strong solution of borax or bi-carbonate of soda is not sufficient to thoroughly remove the particles of food, and prevent the excessive fermentation and its sequelae, namely, colic, vomiting and diarrhoea.

The only rational method of treating this dreaded condition is to assist nature in her efforts to establish a normal process of digestion, and overcome the too active fermentation taking place in the stomach and intestines. Investigation has shown that these abnormal conditions may be readily overcome, and normal conditions restored by the internal administration of Glyco-Thymoline in small doses, and its further use in cleansing the tube, bottle and nipple.

Ten drops of Glyco-Thymoline added to each two ounces of feeding will usually be sufficient to correct hyperacidity and prevent diarrhoea, but larger dosage is necessary in cases where diarrhoea has already set in.

That Glyco-Thymoline does all that is claimed for it in this class of cases was conclusively proven to me last summer by the results I obtained in three cases of fermentative indigestion, which for some time gave me considerable trouble.

Case I.—An infant; fourteen months old; fed on a modified cow's milk, suffered from vomiting after feeding, eructations of gas and colic, which persisted until relieved by the passing of wind; vomited matter very sour smelling. The diarrhoeal movements were attended by pain and contained mucus of a greenish color—all the symptoms pointed toward an intestinal fermentative indigestion.

I had used several remedies in this case, with indifferent results, when my mind recalled the peculiar action of Glyco-Thymoline on engorged and inflamed mucous membranes, and I immediately prescribed it, ordering ten drops to be put into each two ounces of food, the bottle and nipple to be washed with a 25% solution, and the nipples, when not in use, to be kept soaked in Glyco-Thymoline of full strength.

The effect was immediate. Within twelve hours there was a decided improvement, and within twenty-four hours all the serious symptoms had entirely disappeared and a normal condition was restored.

Case I.—Child, almost two years old. Fed on milk, cereals and carefully selected diet. The symptoms much the same as in the above described case, but the diarrhoea was more severe and tenesmus and pain more marked, with bloody stools, apparently a severe dysentery. Microscopical examination of the stools showed the presence of a fungus of the yeast plant variety.

The colon was flushed twice daily with Glyco-Thymoline solution, two tablespoonfuls to a pint of water, by high rectal tube, and a teaspoonful of Glyco-Thymoline by mouth every four to six hours. This was followed by marked improvement in every way.

I have given Glyco-Thymoline internally and by rectum in other cases, but the above are good samples of what Kress & Owen's preparation will do. It has become one of my "sheet anchors" in the treatment of intestinal disorders, both in babies and older people.

COUNTRY SURGERY.

By F. E. Burgevin, M. D., Spiro, I. T.

Reprinted from *The Surgical Clinic*, March, 1903.

Having been requested to furnish some notes of my surgical cases for the *Surgical Clinic*, I respond with pleasure to the call of duty, a labor of love, as it were. Here at Spiro in the Indian Territory, we do not possess the same facilities for operating as are enjoyed by the surgeons of Chicago, but excepting a few victims of railroad accidents who were promptly shipped to the railroad hospital at Kansas City, under care of the chief surgeon, I have not had to send away many surgical cases. As a rule we do our own surgery, and while we cannot show as brilliant results as Senn, Ochsner or Morris, we "get there just the same." I have not yet been so unfortunate as to lose one of my surgical cases. Of course that is more luck than skill.

I will here illustrate by a few emergency cases just how we do our surgical work, that the younger and more timid brethren may take heart. Remember we have not the resources of a hospital to fall back upon, and are not overburdened with instruments or appliances.

Case I. Purulent hepatitis. Mrs. T., 29, one child, 4. for three weeks had been under the care of another physician, who had diagnosed appendicitis and advised an operation,

which was refused. I found a large tumor in the right hypochondriac region, 18 inches in circumference, reaching from the upper edge of the liver to within one inch of McBirney's point; firm, symmetrical, tender on pressure, no discoloration or fluctuation, considerable pain not entirely relieved by opiates, temperature ranging from 102 to 103.5, pulse 100 to 112, face flushed and anxious, history of chills and fever, with gradual onset of present symptoms complex.

Diagnosis, abscess of the liver, by exclusion. She grew steadily worse in spite of our best efforts, and they consented to an operation. My associate and I put her under chloroform, and an explanatory incision was made the full length of the tumor, about five inches, dissecting down to the abscess cavity through the superimposed tissues, feeling our way, so to speak, as we both realized that we were treading on holy ground. However, the abscess, which originated in the superior lobe of the liver, had been pretty well walled off from the peritoneal cavity. We evacuated about a quart of greenish pus, then attaching a small nozzle to a two-quart fountain syringe we scoured out that same cavity, first with a gallon of plain hot water, then with a hot solution of Hydrozone, which was continued until foaming ceased. The cavity was then packed with iodoform gauze, the wound brought together with catgut, leaving an inch open at the lower end for drainage; the edges cleaned with pure Hydrozone, then dusted thickly with boric acid. Gauze and a bandage completed the dressing.

The alarming symptoms that presented were met with hypos of glonoin and strychnine. Calcium sulphide was given a free hand from the beginning. We removed the gauze on the third day, repeated the washing with hot solution of Hydrozone and dressed as before; not a drop of pus was seen after that, and healing was rapid. She had no more pain or fever after the operation and made a remarkable recovery.

Case II. Boy, 15, jumped off a train while in motion and was thrown against a side track, cutting a deep gash in the forehead over the right eye. An hour later I found him comatose, pupils contracted, insensible to light, pulse thready and fluttering, considerable hemorrhage. Strychine and glonoin brought about reaction, the wound was carefully cleansed according to my usual method with Hydrozone, stitched together and dusted over with iodophyll. Reaction was met by a cold hood, aconitine and eliminants. The boy was soon well.

These cases are taken in the order as they occurred, and seem to show what we have been doing in this line recently, and how we country practitioners handle emergency work.

In another report I will give an account of some of our surgical procedures for the relief of chronic diseased states, and what we have been able to accomplish in that direction.

NEWS, NOTES AND ANNOUNCEMENTS.

A Longer Course.—The course of study at the University of Vermont Med. Dept. has been increased to seven months. This will be a distinct advantage to the students and is a movement in harmony with the progress being made by other leading medical colleges.

Burlington and Chittenden County Clinical Society.—A regular meeting was held at their rooms, 162 College street, Friday, July 3, 1903, at 8.30 P. M. Following was the program:

Diphtheria—Etiology and Pathology,
Dr. B. H. Stone.
Clinical Symptoms and Differential Diagnosis,
Dr. S. E. Maynard.
Treatment,
Dr. J. N. Jenne.

A Soliloquy.—A married editor soliloquizes thus of the gentler sex: "There is gladness in her gladness when she's glad, and there is sadness in her sadness when she's sad; but the gladness of her gladness and the sadness of her sadness are nothing to her madness when she's mad."—*The London Tit-Bits.*

The *Indian Lancet* for August 25, 1902, says that it has remained for an Italian woman to break all maternity records. She has, in the course of nineteen years of wedlock, became the mother of sixty-two children. This extraordinary statement is vouched for by many credible witnesses, who testify to its truth in a petition now before the Italian government, asking for the woman a yearly pension of $360. Of these children 59 are boys and three girls. Eleven times in succession, in nine years, the prolific female gave birth to triplets, three times four boys arrived at one birth, and once five boys and a girl. The other twelve were born singly, but very close together. The woman is a native of Nocera, a little village near Naples, and at fifty-seven is, of course, almost incapable of gaining her livehood.

Remedy for Mal De Mer.—I have sailed the seas over for half a century, gentlemen," said Captain Cochrane to a group upon the deck of his ship; "when any of you begin to feel qualmish, come to me. I will give you the best remedy I know of."

"What is it?" asked two or three hesitatingly.

"A mint julep."

"Why?" asked the others, restlessly.

"Because it tastes just as good coming up as it does going down."

Atlantic City, N. J., is gradually developing into an all-year-round health resort and its very favorable winter climate is doubtless due to the nearness of the gulf stream.

One fact that demonstrates the growing importance of this resort is the fact that the Oppenheimer Institute has recently opened a branch at that place, and it is their intention to keep it open the year round.

Patients who are now being or who may hereafter be treated at their Institutes in New York, Philadelphia, Detroit or Pittsburg, will likely find it quite convenient to spend part of the time they are under treatment at Atlantic City.

The Vermont Medical Monthly.

A JOURNAL OF REVIEW, REFORM AND PROGRESS IN THE MEDICAL SCIENCES.

BURLINGTON, VT., July 25, 1903.

EDITORIAL.

The Physician's Hardest Problem.

In beginning his career the young physician finds his hardest problems to be those of diagnosis and treatment. But as the years give him opportunities for observation and experience he begins to realize that the problems of disease *per se* are as nothing compared with those presented by each individual patient's habits, character and disposition.

In his college course he is taught to regard each disease as a pathologic entity. In his practice he finds that few diseases present classical aspects and that pathologic conditions are almost invariably modifications or variations of a type. When a physician awakes to this all-important fact his real usefulness as a practitioner of medicine just begins. From now on he will individualize his cases and adapt his treatment to conditions as he finds them in each patient. He will recognize, therefore, how important a bearing habits, disposition and environment, to say nothing of heredity, have on the symptoms of the disease he is called upon to treat, and henceforth, if he is wise, he will treat his patients and not their disease. It is easy to give drugs for each ailment, but it is not easy to correct the errors of diet, hygiene, etc., the influences of temperament and of environment that modify each disease. Herein lies the physician's greatest problem. Patients will take medicine when they will not take advice and too often it is advice they need and not medicine.

The physician whose force and character make his advice sought after and followed is the one who accomplishes the most. He cannot ignore drugs, for they have an important place, but his success depends on the extent to which he can dominate his patient and correct the omissions, errors and excesses of their lives. The measure in which he does this forms the solution of his greatest problem.

Child Labor in Vermont.

There are stringent laws in Vermont against the evils of child labor, but any one who will stand at the exits of almost all of the large mills in the vicinity of Burlington will have grave doubts arise as to the proper enforcement of these laws. One concern in particular has been notorious for having little children in their employ, and the only wonder is that the better class of residents have not called a halt long before this.

Child labor is one of the most despicable phases of human greed and avarice. It presents problems in a community that one generation cannot possibly solve. It not only weakens mind and body during a child's growing period, but it fosters crime and ignorance. Physicians are constantly meeting its baneful effects, and if there is no one else to fight this curse, let the medical profession not prove cowardly nor false to a duty that is so evident.

MEDICAL ABSTRACTS.

Function of Water in the Body.—Some one has asked, "What would be the cause of death of a person who drank no water?" This subject has been studied considerably; animals

have been experimented upon, and it is found that without water they lose their power to eliminate the natural poisons; they must have water in order to eliminate them, otherwise the secretions become too dense. Without water the amount of urea which should be secreted becomes diminished, and so with the other secretions. We need water, not only to dissolve the food and carry it along, but we need it to dissolve and carry out of the system the poisonous and worn-out material of the body, after it has served its purpose. Water forms a circulating medium for carrying substances back and forth in the system, conveying nourishment to the various parts of the body, bringing back the used-up material and carrying it out by way of the excretory ducts. The amount of water daily required is from two to three pints. In very hot weather a larger amount is needed, as much water is lost by perspiration. If one's diet consists largely of the juices of fruits, the quantity of water may be considerably diminished.—*Good Health.*

Weight in Pulmonary Tuberculosis.—Lawrason Brown (*American Medicine*, April 25, 1903), believes that toxine absorption in the tuberculous area causes reduced assimilation and fever. Loss of weight is, in all probability, due to this. It is not the amount eaten, but the amount assimilated, that is of value to the consumptive. Carefully regulated rest and exercise are of most importance as regards the bodily weight in pulmonary tuberculosis. Forced muscular activity is always injurious. Assimilation is often markedly increased by change of residence or of climate. Excessive gain in weight may be injurious. The gain in weight is usually first evident on the chest; next upon the abdomen in men and on the hips in women. A quick, constant and continuous loss of weight indicates as surely as any other phenomenon that a patient is rapidly losing ground. A gain of a few pounds is of little value in prognosis, but, if the gain is constant and continuous over a period of two months, the patient is probably improving. The weight gained affords no sure data for prognosis, but, on the whole, patients who gain over 20 pounds do better than those who gain less. Sunshine and dryness are not necessary factors of gain in weight. Cold weather stimulates assimilation and gain in weight more than warm.

Small-Pox—Red-Light Treatment of.—Small-pox is essentially a cold weather disease, when there is but little direct sunlight; hence it is probable that exposure to diffuse winter daylight could not produce any effect on the skin. The predilection for the face and extremities which the eruption often displays is ascribed to the greater vascularity. Again, if irritation of the skin takes place after the appearance of the eruption, it does not increase the number of lesions or otherwise unfavorably influence the eruption. If Finsen's theory that the exclusion of chemical rays prevented inflammation were correct, the negro ought to suffer much less severely than the white man, as he has been given by nature the best possible protection against the injurious influence of the actinic rays of the sun. As to pitting, it is less determined by any special treatment than by the vaccinal condition of the patient and the severity of the disease. Even an attack in the unvaccinated may leave only mild scars. The writer's experience, however, is limited to two cases in young adults who were exposed on the third day, before the lesion had become vesicular. One case died and the other recovered, but with most disfiguring scars.—J. F. Schamburg (*Journal of the American Medical Association*, May 2, 1903).

Perineal Section for Stricture of the Urethra.—G. Frank Lydston believes that

perineal section offers a permanent cure in a majority of cases when thoroughly done, involving division of all fibroid tissue, both on the floor and roof of the canal, and, when necessary, the excision of encircling rings and nodules of fibroid tissue. He believes that strictures are frequently tortured into recurrence after perineal section by the too assiduous use of sounds. In traumatic stricture, in which complete relief from symptoms cannot be obtained by the sound, perineal section should be performed, and if adentitious tissue be excessive, it should be excised. Irritable and resilent strictures in the bulbo-membranous region frequently require perineal section, because of the pain, spasm, hemorrhage and fever which is apt to follow the introduction of a sound. Stricture, complicated by fistulas or severe cystitis, demands perineal section. In impermeable stricture, when the urethra cannot be found in the perineum except by tedious and extensive dissection, it is far better to make a supra-pubic cystomy and perform retrograde catheterization.—(*American Medicine*, Feb. 22, 1902.)

BOOK REVIEWS.

International Clinics.—A quarterly of illustrated chemical lectures and especially prepared original articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopedics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Laryngology, Hygiene, and other topics of interest to students and practitioners by leading members of the medical profession throughout the world. Edited by A. O. J. Kelly, A. M., M. D. Volume I, 13th Series 1903. Philadelphia. J. B. Lippincott Company. pp. 306.

This is unquestionably one of the best quarterly publications presented to the medical profession. It has a long list of able contributors and the articles are noteworthy and highly instructive. It is ably edited and put forth in pleasing form. Few progressive physicians can afford to be without it for reference and collateral reading.

Diseases of the Bronchi.—By Dr. F. A. Hoffmann, of Liepsic. Diseases of the Pleura. By Dr. O. Rosenbach, of Berlin. Pneumonia. By Dr. F. Aufrecht, of Magdeburg. Edited, with additions, by John H. Musser, M. D., Professor of Clinical Medicine, University of Pennsylvania. Handsome octavo volume of 1030 pages, illustrated, including 7 full-page colored lithographic plates. Philadelphia and London: W. B. Saunders & Co., 1902. Cloth, $5.00 net; Half Morocco, $6.00 net.

This, the fourth volume to be issued of Saunders' American Edition of Nothnagel's Practice, fulfils all expectations. The eminent authors of the valuable monographs which comprise this volume had, by their breadth of learning, their exhaustive research, and extensive practical experience, made their essays almost complete as originally written. Nevertheless, the author in the light of recent research, has made numerous valuable additions, so that the Amercian edition represents the present state of our knowledge on the subjects under discussion. Among other things, these additions include new matter on the anatomy and physiology of the bronchi; on foreign bodies in the tubes; on the pathology, bacteriology, and treatment of bronchitis, and the recent researches on bronchietctasis and on eosinophilia in asthma.

Much new matter has been incorporated into the section on pneumonia, including the recent work of Hutchinson and others on the blood and urine in that disease. In the Pleurisy section will be found an account of the latest bacteriologic studies, and references to the work of Morse on the leucocytes in pleurisy, to that of Williams and others on X-ray diagnosis, and to the Litten phenomenon. The work in every particular is thoroughly up-to-date, and no criticism is possible but praise.

NEWER REMEDIES.

ITEM.—The Maltine Company has published a very convenient and valuable chart of the principal poisons and their antidotes, which will be promptly sent to physicians and to hospitals, dispensaries, training schools for nurses and kindred institutions on application. Address, The Maltine Company, 8th Avenue and 13th Street, Brooklyn, N. Y.

MELANCHOLIA, INSOMNIA AND GENERAL LOWERING OF NERVE POWER.—In a very forceful and exceedingly interesting paper on this subject, published in the *Cincinnati Lancet-Clinic,* Dr. T. D. Fink of Louisville, Ky., writes the following: "I am convinced that there is no other remedy so useful and attended with such satisfactory results in the treatment of melancholia with vasomotor disturbances, anemic headache, emotional distress, and active delusions of apprehension and distrust as Antikamnia Tablets. These tablets also increase the appetite and arterial tension, promote digestion, and are particularly serviceable in relieving the persistent headache which accompanies nervous asthenia. In neurasthenia, in mild hysteroid affections, in the various neuralgias, particularly ovarian, and in the nervous tremor so often seen in confirmed drunkards, they are of peculiar service. Patients who suffer from irritable or weak heart, needing at times an analgesic, can take them without untoward after-effects, knowing that the heart is being fortified. In delirium tremens, they relieve when there is great restlessness with insomnia and general lowering of the nerve power. The pain of locomotor ataxia yields to treatment with Antikamnia Tablets in a remarkable degree, their analgesic power being of a peculiar kind, in that they will relieve painful affections due to pathological conditions of the peripheral nerves, as neuritis, etc., also lumbago, sciatica and myalgia. In chronic catarrh of the stomach, with its often accompanying headaches, in cardiac dropsy, and in ascites, they are of decided benefit."

SPASMODIC SUMMER COMPLAINT.—At this season when intestinal troubles are so prevalent, accompanied by the usual manifestation, abdominal cramps, etc., nothing seems to relieve the distressing condition so promptly as Hayden's Viburnum Compound, a true and safe anti-spasmodic. Give two teaspoonfuls of "H. V. C." in six of hot water every twenty minutes until relief is afforded. Be sure the genuine "H. V. C."only is administered.

SANMETTO IN DIFFICULT CASES OF CYSTITIS, PROSTATITIS, INCONTINENCE, IMPOTENCY AND HEMATURIA.—I have used Sanmetto very extensively in my practice for years, and as evidence of my perfect satisfaction will say that I continue to prescribe it in all difficult cases. In cystitis, prostatitis, incontinence, impotency and many cases of hematuria I use Sanmetto with assurance of perfect success. In my female practice I find it the remedy par excellence, especially as a sexual tonic and a mammary rebuilder. I shall continue its use in typical cases.

O. L. HUDSON, M. D.

Princeton, Ind.

TREATMENT OF ECZEMA OF THE SCALP.—Parker pleads for more patience and perseverance in the treatment of this troublesome affection. So many physicians prescribe time or pronounce the condition hopeless that parents often discredit the physician who promises recovery within a reasonable time. The first measure in successful treatment is a thorough washing and shaving of the head, Castile soap and much water of a temperature not less than 100 F. should be used. The same

water should not touch the head twice and pledgets of absorbent cotton are to be used to remove the crusts. When cleansed the head should be dried with a clean soft towel. During treatment the pillow-case should be consigned to the wash-tub each morning and a clean one put into its place. These are not over particular but imperative details, if favorable results are desired. Jugglery in prescriptions cannot avail and rigid hygienic measures, extending to all the surroundings, must accompany medical treatment. The second step is in the case of nursing infants to treat the morbid constitutional condition, generally found in the mother. The alterative, iodia, is nearly always applicable and in severe cases should be administered to both mother and child. If the irritability attending the eruption requires special treatment, bromidia should be given. Some children will require an easily assimilated iron tonic. The bowels must be kept open with a mild aperient given in the early morning. Locally boroglyceride is the best ointment. Ecthol is also a remedy of much value, being a powerful corrector of depraved conditions in fluids and tissues. It is employed diluted, according to the severity of the case, and sprinkled upon a thin cap of surgeons' cotton. The cap should be renewed, and the old one burned, daily.—*Medical News.*

Marked Benefit.—In a case of phthisis, where the nervous symptoms were such as to greatly interfere with the quiet of the patient, I have used Neurilla with marked benefit.

A. S. PARKER, M. D.

Clinton, Wis.

Chronic Abscesses.—For cold or scrofulous abscesses Abbott advises iron iodine, grain 1-6 every hour when awake; also iodoform to stimulate the absorbents. If there is a continual discharge, he gives arsenic iodide, grain 1-67 four times a day, sometimes with sulphide of arsenic. It is important to keep the emunctories flushed.

For Urticaria.—A very grateful lotion, says Crocker, consists of one and a half drams of salicylic acid, one dram of borax and one dram of glycerin, mixed and dissolved with the aid of heat. This can then be diluted with glycerin, alcohol or water to any extent. One ounce of the mixture, one ounce of alcohol, and water to eight ounces is a good proportion.

Placenta Previa.— Grandin and Jarman give this advice: Keep careful watch of pregnancy; in case of slight hemorrhage, make patient rest in bed; if hemorrhage is at all profuse or placenta presenting, empty uterus after dilating by hand, preceded if needed by incision of the cervix; use uterine tamponade at once when organ does not contract.

An Interesting and Excellent Example from the Coast of Maine.—A professional call up on the Maine coast in mid-winter at Ogonquit, York county, furnishes many delightful opportunities for enjoying some of the pleasures of a country doctor's life. On a case of ugly, persistent, nagging cough, in a case of broncho-pneumonia, I had the pleasure of suggesting Glyco-Heroin (Smith) to good advantage. The attending physician, Dr. J. W. Gordon of Ogonquit, one of the able and busy medical men of Maine, related to me the details of a very aged patient who was almost dead from exhaustion with a case of irritable cough, due to chronic bronchitis, complicated by hiccoughs, that everything had failed to relieve. The Glyco-Heroin (Smith), in teaspoonful doses, relieved the cough and cured the hiccough magically and permanently; patient was soon able to take nourishment and is recovering rapidly.—From *The Medical Mirror,* March, 1903.

The following interesting article appears in the December issue of the

"Monthly Cyclopaedia of Practical Medicine,"

Edited by Dr. Chas. E. De M. Sajous.

The remarkable and long-continued popularity of the Maltine preparations is an excellent testimony to their worth. A fleeting popularity, achieved by some fictitious methods, is never of substantial value. The Maltine preparations, however, are made with such care, none but the choicest materials being used, their own intrinsic merits are so notable, and their uniformity of composition and results is so great that they invariably give perfect satisfaction to those who employ them in the wide range of affections to which they are adapted.

In the first place, Maltine itself possesses signal nutritive properties. It contains important alimentary principles which are easily digested and absorbed. It is of pleasant taste, acceptable to the most fastidious palates. Its nutritive qualities exist in concentrated form which is high recommendation in many cases of wasting illness. Maltine promotes muscular energy and is a source of fat. It is of decided service in cases of debility accompanying or following many forms of chronic disease. During convalescence from a tedious illness which has destroyed the appetite and reduced the digestive power Maltine is one of the best agents at our command. This remedy excites appetite, provides for its own complete digestion, and puts back upon the bones the flesh of which they have been robbed. It likewise increases strength. It exerts a soothing effect upon the mucous membrane of the air-passages.

This is, indeed, a rare combination of qualities. But with plain Maltine the tale of usefulness is only begun. With therapeutical advantage and pharmaceutical skill the manufacturers have made Maltine a basis of a series of admirable medicinal combinations. Of these, one of the most deservedly prized is that which contains codliver-oil.

Oleum morrhuæ is in certain important pathological conditions of inestimable service. It is more than a medicine; it is a food. Its taste, nevertheless, is much against its use. It often nauseates and as frequently causes indigestion. Theoretically we meet with innumerable cases in which we would like to give codliver-oil, or even attempt to do so, but find our efforts foiled. We have the mortification of being obliged to suspend the remedy, of which, perhaps, we had hoped so much. In such emergencies let us not forget Maltine with Codliver-oil. Herein we have an association of condensed foods. By their peculiar process the manufacturers are able to produce a combination of Maltine and Codliver-oil which is palatable and acceptable to the palate and stomach.

Those who have taken Maltine with Codliver-oil unanimously and gladly bear witness that this preparation excites no disgust and causes no interference with the digestive process. The Maltine serves as a corrective to the repugnant qualities of the oil. This combination has a wide range of usefulness. A wide-spread conception—it should rather be called misconception—is that codliver-oil is only prescribed for consumption. They are alarmed if codliver-oil is ordered for them, and think that they must be in serious danger, if not in a fatal condition. But this is not the case. All physicians esteem codliver-oil for its value in a host of affections, some of which have no relation with tuberculosis. A prolonged depression of the vital powers will give origin to many diverse manifestations, in all of which Maltine with Codliver-oil is a precious remedy. In rachitis, scrofula, marasmus, in many chronic diseases of the skin, chronic rheumatism, rheumatoid arthritis, neuralgia,

chorea, chronic bronchitis, emphysema, caries, necrosis, and during convalescence from scarlatina and measles this preparation is of marked benefit. Undoubtedly, also, it is of value in the various forms of tuberculosis.

A second preparation to which we may call attention—and with particular appositeness at this season of the year—is called Malto-yerbine.

This, as its name implies, is a combination of Maltine with eriodictyon, or yerba santa. The leaves of this plant are fragrant, aromatic, and sweetish. Yerba santa is a highly esteemed remedy in affections of the air-passages, such as laryngitis, chronic bronchitis, asthma, and whooping-cough. An association of such an agent with Maltine is, therefore, of much promise in the management of bronchial and pulmonary affections. Malto-yerbine is an excellent means by which to disguise the bitter and persistent taste of quinine. As in countless instances we desire to administer quinine where Malto-yerbine is indicated, this incidental property is by no means to be despised.

Maltine is also put up in combination with iron, phosphates, hypophosphites, etc. Of the extensive range of these unions there is scarcely space to dwell upon this occasion. Nor would there seem to be much need. The physiological effects of iron and phosphorus, their importance as integral constituents of blood and nervous tissue open up vast vistas of therapeutical applicability: in anæmia, chlorosis, amenorrhœa, neurasthenia, and other diseases of the nervous system, as well as in prolonged debility from many causes.

The Maltine line of preparations have been before the medical public for many years. In the progress of time very many medicinal preparations or combinations have been devised, manufactured and praised. Many have had their little day and long ago perished and have been forgotten. But Maltine, like the brook in the poem, "goes on forever." This conspicuous success has been won by the exercise of chemical skill, sound business judgment, and strict commercial integrity. These are the qualities upon which lasting success is based in any department of human activity. The properties of the remedial agents of which we have briefly written are inherent in their nature. They are the same to-day as they were at the beginning of time. They will remain identical to the end of time. If, therefore, they are prepared and united with the same scrupulous attention to every detail, even the slightest, we can see no limit to the perpetual popularity of this line of preparations.

The uniformity of composition of these articles is standard. Every step of the operations by which they are elaborated is supervised by those who have had a special training in this occupation, superadded to an extensive general knowledge of chemistry. The only aspect of the business which is capable of variation is that which relates to the utilization of new and improved methods. The manufacturers of Maltine are progressive. If any mechanical invention or chemical discovery can be applied to the improvement of the process of manufacture, it is at once adopted. In other respects the proprietors adhere to the methods which originally built up a large business and which have insured its continued prosperity for so many years.

The history of such a business career is full of encouragement. Faithfulness and diligence have received a sure and abundant reward. The interests of the concern have grown in many directions, all of which, however, have a relationship to the central pursuit. The conclusion of the whole matter is that the physician can always be sure that whenever he prescribes any of the Maltine preparations he will receive exactly what is ordered and that the composition and quality is invariable. No man can ask more of any product. In the treatment of the sick one of the chief essentials—we had well-nigh said *the* chief essential—is that he shall receive exactly what had been ordered.

Conducted upon such principles, the Maltine Company has thriven exceedingly; but in the midst of its prosperity and popularity has never forgotten the painstaking and straightforward methods by which it rose to eminence. It is undoubtedly true that, unless guided constantly by such principles, any business will ultimately fall into trouble. Competition is so keen that if a manufacturing house maintains a prominent position for a long succession of years it must assuredly have thoroughly deserved its success.

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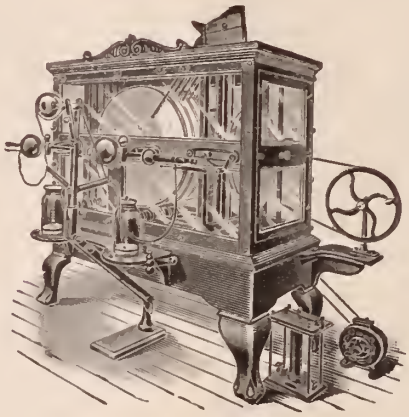

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Vermont Medical Monthly

Official Organ Vermont State Medical Society.

Vol. Ix. No. 8. Whole No. 104 | Burlington, Vt., August 25, 1903. | $1 per year. Single copies, 15 cts.

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The Vermont Medical Monthly

Vol. IX. August 25, 1903. No. 8.

ORIGINAL ARTICLES.

ADIPOSIS DOLOROSA, (Dercum.) WITH THE REPORT OF A CASE.

By H. C. Gordinier, M. D. Troy, N. Y.

Adiposis dolorosa may be defined as a peculiar form of dystrophy, resembling somewhat myxedema, occasioned by special deposits of fats, more or less symmetrically distributed, which are characterized by a peculiar elastic or fibrous feel as if a bunch of worms were beneath the skin and which deposits are tender on pressure or movement. Pain also precedes and continues during the progression of the disease of an intermittent neuralgic-like type.

The first case of this disease was described by Dercum in 1888 as a case of subcutaneous connective tissue dystrophy with symtoms resembling myxedema.[1]

In 1891 Henry reported before the Philadelphia Neurological Society a case similar to Dercum's, as one of myxedematoid dystrophy and proposed for the condition the name paratrophy.[2]

In a later communication, Dercum reports a third case, together with his first one and the one of Henry's, describing them as "three cases of hitherto unclassified affection resembling in its gross appearances, obesity; but associated with special nervous symptoms," and giving them the name of Adiposis Dolorosa.

Since the publication of Dercum's and Henry's cases, a case has been reported by Ewald[3]; one by Vitaut[4]; one by Fere[5]; three by Spiller[6]; two by Eshner[7]; one by Guidiceandrea[8]; and one by Alger[9]. In a text-book of nervous diseases by American authors, Collins refers to six cases of Peterson and Loveland, and one under his own observation[10]. In the *Philadelphia Medical Journal* for March, 1902, Dercum reported two typical cases, one of which occured in a male.

At the twenty-sixth meeting of the American Neurological Association, Dercum referred to his original case and gave the results of the autopsy, together with an exhaustive study of the microscopical findings. At the same meeting C. W. Burr reported a case of adiposis dolorosa with a complete autopsy. These two cases are the only ones with autopsies and microscopical examinations recorded in literature. They will be referred to again in discussing the etiology and pathology of this interesting and peculiar disease.

Symptomatology.—The fully developed cases of adiposis dolorosa are usually short in stature, stout and apparently very obese; weighing from 225 to 300 pounds or more, with a peculiar myxedematous-like apppearance but without thickening of the skin, special loss of hair, reduction of temperature, or change in the hands or feet. The skin is white, soft, pliable and of a rather unctous feel. The deposits of fat have often started just before or with a rather early and abrupt cessation of menstruation. They are more or less uniformally distributed throughout the body sparing the hands and feet; but have as seats of predilection the shoulders and arms, folds of axillae, mamma, abdomen, buttocks, back and calves. The deposits of fat are tender on manipulation, have a peculiar boggy, elastic or fibrous feel, do not pit on pressure and have

*Read at the 89th annual meeting of the Vermont State Medical Society.

the feel first described by Dercum, as if a bunch of worms were placed beneath the skin, not unlike that of a vericocele.

During the progression of the disease, and often preceding it, neuralgic-like pains are common; these usually stop when the disease ceases to progress. Most patients are exceedingly nervous, are very weak and suffer from dyspnoea. The heart sounds are feeble and valvular. The muscular element of the first sound being faint or absent. In some cases, muscle and nerve tenderness exists and patches of anaesthesia are often present. Occasionally they are excessively sensitive to all forms of external stimuli (hyperaesthesia.) Often they are unable to walk or stand.

In most cases the thyroid gland was not palpable; this may be due to atrophy, or as in my case to the mechanical hindrance occasioned by large depositions of fat in the subcutaneuos tissues of the neck. The blood presents nothing abnormal. The urine is usually normal, though with an occasional high specific gravity.

The pathology of adiposis dolorosa remained in absolute obscurity until the publication of the post mortem and microscopic findings in the case of Dercum's and Burr's, and while thse cases, together with the two previously published without microscopic examinations in Dercum's original article (*American Journal of the Medical Sciences*, November, 1892) have elucidated some of the problems connected with the pathology of this obscure disease, the exact causative factor in its production still remains unsolved.

The two cases above referred to, while somewhat at variance with one another, in regard to the findings, are in the main very similar. Hence, owing to their great interest pathologically, will be reported here in full.

Autopsy of Dercum's Case.—The body is that of a woman, weighing probably 300 pounds. There is an excessive deposit of fat in the subcutaneous tissue. It is especially marked over the arms, shoulders, back, and to a less extent over the abdomen and thighs. The hair of the pubis is scant, and there is almost none in the axillae.

In the median line the abdominal fat is 5 cm. in depth. In the epigastric region a small nodule of fat about an inch in diameter is found imbeded it, but separated from, the general subcutaneous fat, like an independent lipoma. Several such ncapsulated imbedded lipomata were found in various situations; for instance, the back and the right thigh. On opening the abdomen the intestines are well distended with gas; the omentum is filled with fat; the liver extends 2 cm. below the costal margin on the right side; the thorax is well formed; the ribs are well ossified.

Pleural adhesions exists on both sides; the left pleura shows firm adhesions anteriorly and posteriorly. The right pleura shows the same conditions as the left.

The parietal layer of the pericardium is covered by a thick layer of fat; the pericardial sac contains 35 cc. of clear straw-colored fluid. The sub-pericardial fat of the heart is very abundant. On opening the right side of the heart, large currant jelly flat clots are found in the right auricle and ventricle. The left side of the heart contains little blood. The heart muscle is friable and of a yellowish color; the wall of the left ventricle measures 2½ cm.; of the right ventricle ½ cm. The aortic valves are slightly thickened; the right auricula-ventricular opening admits three fingers; the left two. The remaining openings and valves are normal.

The left lung on section shows marked oedema, no tubercles are found. The pigmentation is slight. The right lung also shows extensive oedema. The spleen measures 17 x7½x2½ cm. The capsule is wrinkle; the pulp is soft and dark red in color.

Left kidney is surrounded by a thick layer

of fat. The ureter is single. The kidney measures 14x6x3 cm. On the surface, projecting outwards, are seen a number of cysts. The capsule strips with difficulty, and the surface is granular. The surface of the kidney is greasy. The cortex is encreased comprising only one-half of the kidney structure. The color of the anterior surface is yellowish red. The cortex is lighter than the medullary structure. The right kidney measures 13x7x3 cm., and closely resembles its fellow.

The suprarenals are apparently normal. The stomach is rather small; walls are not thickened; mucosa shows some post-mortem change. The pancreas is surrounded by much fat. Section shows no gross change.

The liver measures 29x20x5 cm.; surface is finely granular; edges are irregular and rounded; the knife meets with a good deal of resistance. Color of cut surface is reddish-yellow brown. The bile duct is patulous. The bladder and uterus are normal. The brain, cord and membranes reveal nothing abnormal. The thyroid gland is quite small.

The microscopical examination included a study of the fatty tissue, the peripheral nerves, the spinal cord and brain, the pituitary body and the thyroid gland. The fatty tissue in itself presented nothing to distinguish it from ordinary fat. This was not, however, the case with the peripheral nerves found in it. These presented the undoubted, evidences of an interstitial neuritis, evidenced by a marked diminution and atrophy of nerve fibres, together with a marked proliferation of the perineurium and edoneurium. No changes were observed in the large nerve trunks.

The spinal cord presents some change in the upper thoracis and lower cervical regions. There is a slight degeneration in the columns of Goll. This change is most marked in the upper thoracic region. The lumbar cord fails to reveal any changes.

Various portions of the brain examined, reveal no change save unusual pigmentation of the cortical cells. The pituitary body presents nothing abnormal. The acini and the cells composing them present an absolutely normal appearance.

A study of the sections from the thyroid gland shows it to be made up of three or four different kinds of secreting tissue. In the first place, there are large acini distended with colloid material. These large acini vary in size, and their contents vary also in density. The larger acini are globular in shape, while some of the smaller ones are elongated or angular in form. The limits of these acini are clearly indicated by blood vessels, which occupy their walls. The epithelium is a single layer, which covers uniformly the peripheries of the acini. Contrasted with these there is another kind of secreting tissue, which is very solid, and in which the acini are made out with great difficulty. They consist of cells filling interspaces of the stroma, and the blood vessels supplying these acini can only be made out in exceptional instances. The lumina of these acini when they can be made out, are usually very small. There is here a complete abscence of colloid material. In other portions acini are observed which are a transition between the more solid nests of cells and the large vesicles which contain the colloid material. In addition, there is a third form of acinus, which is of peculiar interest in that the acini present plications or papillary outgrowths of their walls. These plications or outgrowths project into the lumina of the affected acini, which contain, as a rule, colloid material of lighter staining qualities than the larger vesicles. The epithelium of these last mentioned acini appears at times to be slightly higher than the normal cubical epithelium of the other vesicles. Finally, in some areas, solid masses of cells resembling lymphoid cells

are seen, but these are probably young solid acini, like the small acini described above, though the limits of these acini are irregular, because of the absence of preserved blood in the surrounding vessels and of the absence of definite interstitial framework.

Autopsy of Burr's Case.—The fat revealed, on gross examination, a peculiar, fibrous character, it being firmer than the normal subcutaneous fat, and showing here and there encapsulated areas softer and less yellow in color. These isolated areas of fat varied in size from a pea to a hazelnut and were surrounded by a distinct fibrous capsule. There appeared to be no connection between this fat and the firmer fat imbedded in the fibrous structure surrounding the fatty nodes. These nodules were not immediately beneath the skin, but deeper in the subcutaneous fat, and could not have been distinguished by papation. On microscopic examination the firmer masses treated with connective stains revealed a marked increase of this tissue, whereas the fatty nodule was normal in this regard, but an artery which ran through it was distended and its coats were thickened. We were unable to find any nerves in the fatty nodules, but in the surrounding fat and in the underlying muscles the smaller nerve branches showed a high grade of interstitial neuritis. In the muscles this was associated with a granular fatty degeneration of the muscle fiber, the granules staining black with osmic acid. The interstitial changes in the fat of the nerves were more marked. The nerve fibers, when present, were few in number and surrounded by a dense connective tissue. In the nerve filaments in the muscle the conective tissue was decidedly increased, but there were more normal nerve fibers present than in the fat.

The ulnar, median, sciatic, peroneal and tibial nerves were examined. The Marchi, Weigert and carmine stains revealed no degeneration. In the sciatic nerves fewer nerve fibers were present than usual, and there was an infiltration of fat, most marked in the central areas, which gave to the fresh nerve a semi-gelatinous consistance.

The Brain.—A glioma the size of a walnut occupied the seat of the pituitary body and embraced the optic chiasm and nerves. The tumor extended into the interior of the brain, grew through the aqueduct of Sylvius, completely filling it and filtrating its walls to a slight degree, and filled up the upper area of the fourth ventricle. There was marked internal hydrocephalus.

The spinal cord showed a considerable grade of hydromyelia, extending down to the dorsal region. The external lateral group of cells of the anterior horn showed a light grade of chromatolysis.

In the right lobe of the thyroid gland there was a spherical concretion as large as a hickory nut. The gland was normal in size. On microscopic examination colloid degeneration with atrophy and absence of the secreting cells in many acini was found. There were many areas of small round cell infiltration and indication of an active inflammatory process were present everywhere. The muscles showed marked degeneration with osmic acid method. It was probably secondary to degeneration of the nerves, as a medium grade of interstitial neuritis of the intramuscular nerve bundles was present.

There was acute parenchymatous nephritis with slight low-grade intestitial change. There was marked fatty infiltration of the liver.

The ovaries were examined by Dr. H. L. Williams, who reported as follows: "Surface smooth; no inflammation apparent. Tunica albunigea appears very much thickened, salerotic and hyaline. The deeper tissue of the stroma is dense and contains large numbers of primordial Graafian follicles, and in the connective tissue

beneath the ovarian stroma are large numbers of blood vessels with well-developed muscular walls. Scattered here and there through the stroma are a number of corpora fibrosa and also a few small cystic Graafian follicles. Projecting from a surface in one portion is a small body the size of a split pea, the tissue of which is directly connected. Its surface is smooth, but inflamed, and it contains a short distance below the surface, a number of undeveloped Graafian follicles, and just at the surface a small cystic follicle. The specimen is a small, typically sclerotic ovary."

To summarize the pathological findings in these two case, we have an atrophy of the true secretory structure of the thyroid gland in each case examined microscopically, while in the two cases of Dercum before referred to, without microscopic examination, the thyroid gland was diseased in each. In one gland was noted as "Small, indurated and infiltrated by calcareous matter in both lobes," and in the other as larger than normal, harder to the feel and much calcified, especially the right lobe.

An interstitial neuritis was found in each case involving the nerves of the subcutaneous fat, as well as those within the muscles. The spinal cord in the case of Dercum's showed a slight degeneration in the columns of Goll, most marked in the upper thoracic region. The cord of the case reported by Burr showed considerable degree of hydromyelia extending down to the dorsal region. The external lateral group of cells of the anterior horn showed a slight grade of chromatolysis. The brain showed nothing abnormal in Dercum's case, save unusual pigmentation of the cortical cells. In the brain of Burr's case a glioma the size of a walnut was found occupying the seat of the pituitary body and embraced the optic chiasm and nerves. The fat in Dercum's case presented no special change. In Burr's case, however, it showed a peculiar fibrous character, rich in connective tissue and hence much firmer than normal. It also presented areas varying from the size of a pea to a hazelnut, which were soft, less yellow in color and encapsulated.

In addition there was found in the case of Burr's typically sclerotic ovaries. That which is most interesting in all of these cases, pathologically, is the diseased condition of the thyroid gland. The pertinent question arises can we associate a causal relation between the loss of function of the thyroid gland and the production of the symptoms of adiposis dolorosa. It a well established fact that disease of the thyroid gland produces marked changes in the nutrition of the body, resulting in myxedema and cretinism. And in this connection is to be emphasized the fact that while adiposis dolorosa is a distinct clinical entity, it presents more than a superficial resemblance to myxedemea, and like that disease it is often improved or cured by the administration of thyroid extract.

May not then a perversion of function of the thyroid gland result as suggested by Dercum, in some substance being thrown in the circulation, which, "at one and the same time prevents the proper oxidation of the hydrocarbons of the food and tissues, and also acted as a cause of neuritis and nerve degeneration.

In Burr's case it is interesting to note that in addition to the involvement of the thyroid body the pituitary body was destroyed by a glioma and both ovaries were selerosed. Disease of the pituitary body is commonly attended by an alteration in the nutrition of the osseous system, resulting in the disease known as Acromegalia. In no instance of this disease has an overgrowth of fat been produced, resembling at all adiposis dolorosa. Hence this condition was probably a mere coincidence, which explains in Burr's case the cerebral symptoms, together with the loss of vision and optic neuritis.

The selerosed condition of the ovaries found

in the case is very interesting because of the well known fact that removal of both ovaries or testicles is commonly followed by an overproduction of fat. Women at the menopause frequently become obese and artificially induced menopause is often followed by an overgrowth of fat. Spayed animals are usually very fat, and eunuchs are commonly obese.

In conclusion it may be stated that it is idle to further speculate as to the etiology of the affection, as many more cases must be carefully studied, both clinically and pathologifully studied, both clinically and pathologbe established to explain the symptoms of this strange disease. It is interesting to note that of all the cases that have been reported only four have been observed in the male, these Ewald, Vitaut, Fere and Dercum's last case.

Mrs. E. B., age 43, white, native of the United States, occupation housewife, entered the Samaritan Hospital, Dec. 3rd, 1900, complaining of cough, pains in the legs and inability to walk. Her father died of some form of paralysis; mother is dead, cause unknown. Has no brothers or sisters; no tuberculosis in family. No distinct neurotic family history obtainable. Patient had la grippe two years ago, otherwise has always been healthy. First menstruated at thirteen; flow moderate in amount and always regular up to the spring of 1899, since which time menstruation has ceased. Has had four healthy children and two miscarriages, each at the third month of gestation. After childbearing increased somewhat in weight but never weighed more than 150 pounds. In 1896 began to gain flesh very rapidly and when last weighed, which was in the autumn of 1900, her weighth was 225 pounds. She denied absolutely any veneral disease, and the most careful examination failed to elicit any evidence of syphilis. She acknowledged an occasional alcoholic excess chiefly in the form of beer or ale. She perspires freely in hot weather and is exceedingly sensitive to cold, of shortness of breath on the slightest exertion, as going up stairs or the like.

Examination.—Patient is short and stout and apparently very fleshy, her height is 61 inches, her circumference at level of umbilicus 52 inches, and at level of the third rib 43 inches. She weighs 250 pounds. The chest is massive but otherwise normal, there is no deformity or rigidity of spine. Pupils midwide and equal, respond to light and accommodation, movements of eyeballs normal; vision perfect, no change in optic discs. Heard watch three feet away from each ear; smell and taste normal; movements of facial muscles, as well as those of mastication and deglutition normal. Tongue normal in size, rather livid in color, protruded straight, and presented a slight whitish coating in center.

Lips not thickened, nose flattened and retracted at base. The patient has a myxedematous appearance, her expression is heavy and vacant, and there exists over each malar eminence a distinct dark reddish flush. The skin of the face or other parts of the body, however, is not at all infiltrated or thickened, and is rather soft and unctous to the feel. The hands and feet, which are normal in appearance, are in strong contrast to the rest of the body. There is no paucity of hair on the scalp, eyebrows, lids or in the axillae, but the hair is rather coarse and stiff, no seborrhoeal like scales exist on scalp or skin. She has a double chin, together with great tranverse folds of fat involving the skin and subjacent tissues of the neck. In the region of each parotid gland are enlargements apparently due to deposits of subcutaneous fat, which have a distinctly fibrous and elastic feel. The skin everywhere is easily movable on the underlying structure, and none of these fat deposits pit on pressure; they are, however, quite tender when handled. The ears are not infiltrated nor is the skin covering them thick-

ened. The shoulders and arms are truly enormous, due to deposits of large masses of fat in the tissues about them, masses of fat thrown into huge folds are seen on each side hanging from the arms into the axillae, forming for the latter greatly accentuated anterior and posterior folds. When one grasps any of the above described folds, there is a feeling "so aptly described by Dercum," as if a bunch of worms were thrust beneath the skin. Extending from a large mass of fat in the right axillary region is a distinct tumor-like swelling (Lipoma), globular in shape, having the above described feel and very tender on pressure. The mammae are very large and are evidently the seat of special collections of fat, having a fibrous and elastic feel. The true glandular structure of each breast is evidently atrophied. The abdomen is large, pendulous and very prominent, it is in fact truly enormous. In the folds of the mamma and where the folds of the skin glide upon one another, very delicate silvery lines exist resembling the linea albicantiae; several small areas of atrophy are seen in the skin covering the chest and abdomen, a slight umbilical hernia is present, easily reducable.

The upper extremities can be moved in all directions, but movements of flexion and extension are easily overcome and the grasp of each hand is very weak. Sensation is normal and there exists no muscle or nerve tenderness.

The lower extremities are very large. The circumference of the upper third of each thigh is 27 inches, of middle of calf 15 inches and around each ankle at the articulation 9½ inches. They resemble on casual inspection those of a case of elephantiasis. Slight oedema along each tibia exists. Wen patient attempts to move the limbs, much pain is excited,which she refers chiefly to the knee joints, although they present no evidence of pathological change. Tenderness exists of the quadriceps extensor muscles, as well as those of the calf. The feet rest in a position of over extension. When asked to raise the limbs, they are lifted just above the level of the bed, but she is unable to sustain them in this position but a short time, when they fall as if paralyzed. The anterior crural and peronei nerves are tender on pressure. There is marked hyperaesthesia, she being exceedingly sensitive to the pin prick. No thermic or tactile anaesthesia. Muscular sense normal. No tenderness of tibiae or other bones. Patella, plantar, umbilical and epigastric reflexes absent. Bladder and rectum normal.

Electrical reactions are normal in the muscles of upper limbs. In lower limbs the tibialis anticus, vasti and calf muscles respond to the galvanic current, 30 cells in circuit(chl. silver battery) in a slow, worm-like manner, they respond as readily to the negative as positive pole. The same muscles did not respond to a faradic current, whose strength would produce a prompt reaction on a normal individual.

The thyroid gland was not palpable; this may be due to its being surrounded by an enormous amount of fat. The patient was unable to walk or stand alone without assistance. Apart from being forgetful, her mental condition was good. Her speech processes were perfect, and she could write as well as usual.

The heart sounds are distant and feeble, the muscular element of the first sound was almost nil, the apex beat was not visible or palpable. Owing to the huge mammary glands it was impossible to delineate the area of cardiac dullness. Liver dullness reaches to free border of ribs, its upper border in the mammillary lines was not definable. No splenic tumor present. Lungs negative. No free fluid in abdomen, a few dilated veins course over the abdomen.

Urine.—Specific gravity, 1020, alkaline, some albumen, few pus cells, no casts or blood.

Feb. 17th, 1901, specific gravity 1030, urates and phosphates, no blood, pus, albumen or casts.

Blood.—Red 5,090,000, cells presented nothing abnormal. White 9,375.

No one who was familiar with the literature of the disease and had seen the photographs of Dercum's original cases, could have failed to make the correct diagnosis in this case. It was evident from the history and physical examination, that she was also suffering from a mild degree of acute multiple neuritis, and the subsequent history of the case bears out this diagnosis.

Her history while in the hospital was uneventful. She remained about five months, during which time she received electricity, massage, a restricted diet and thyroid extract. She improved very much in regard to her ability to stand and walk and all pain and tenderness of the main nerve trunks or the muscles mentioned in the history entirely disappeared, but her weight did not decrease, and the general pain and tenderness of the deposits of fat were the same as when she entered.

(1) Dercum. University Med. Mag., Dec., 1888.
(2) Henry. Journal of Nervous and Mental Diseases, March, 1891.
(3) Ewald. Berl. Klin Wochenschrift, Jan. 21. 1895.
(4) Vitant. Maladie de Dercum Lyon Med., 1901.
(5) Fere. Revue de Medicine, 1901—vol. iv.
(6) Spiller. Medical News, Feb. 26, 1898.
(7) Eshner. Phil. Med. Jour., Oct. 8, 1898.
(8) Guidiceandrea.
(9) Alger, E. M. Medical News. Jan. 19, 1901.
(10) Collins. Text-book of Nervous Diseases, Phila., 1895.

Tonsillotomy Rash.—Wyatt Wingrave (*American Year Book of Medicine and Surgery*) reports 34 cases in which this rash appeared. It may be papular, roseolous or erythematous, lasting two or three days, and is found most frequently on the neck, chest and abdomen. It was sometimes associated with intense itching.

CONSERVATIVE GYNECOLOGY.*

By A. Lapthorn Smith, B. A., M. D. M. K. C., and English Professor of Gynecology in the University of Vermont, Surgeon-in-Chief Samaritan Hospital for Women, Montreal.

Conservative Gynecology.—Dr. Lapthorn Smith of Montreal, thought that in many cases what was called conservative gynecology should rather be termed incomplete work; and that in no department of surgery was it more necessary to be thorough than in this. He has seen so many disappointing results in his own and in other's hands,from trying to make half an operation do when the condition present called for a whole one, that he felt less and less inclined to risk the success of the operation and his own reputation by doing anything less than was necessary.

In about a dozen cases he had been obliged to open the abdomen a second time to remove the other ovary which had appeared healthy at the first operation, so that after having treated a patient for at least a year by every possible local and general means without relief, and if her condition warrants an operation at all, he endeavors to obtain her consent to his doing what he thinks best for the complete success of the operation. If both ovaries are cystic or sclerotic he removes both. In about twenty cases he has left a small piece of the better ovary and one tube in order to keep up menstruation, and these cases so far have been satisfactory. Two or three have since become pregnant and several others have menstruated. In one case he adopted the suggestion of Dr. Howitt of Guelph, which was to scarify the thickened cortex of the ovary through to the stroma, when the tension is immediately relieved, and the incisions become open spaces. Although the space is filled up with exudation

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*Abstract of paper read before the Can. Medical Association, London, Aug. 25, 1903. Published in full in Can. Lancet for September.

which eventually becomes scar tissue, still it never compresses the ovarian nerve tissue so much as the sclerosed capsule of the ovary. He also thought there was a future for Dr. Robert Morris's suggestion to introduce a piece of healthy ovary into a slit in the back of the broad ligament and holding it there with a stitch. Dr. Morris says that every one of the cases on which he has tried this ovarian grafting has menstruated and one has become pregnant. The author was not in favor of ignipuncture on account of the cicatrix which always follows burns and which is especially dangerous when situated in tissue so rich in nerves. He has saved diseased tubes and repaired torn ones, and even left in the half of a tube after opening it up; but none of the cases turned out satisfactorily, and two died from infection of the peritoneum.

He was in favor of leaving the uterus even when both tubes and ovaries have to be removed, because it helps to keep the arch of the pelvis supported, and besides it is useful for the purpose of suspending the fallen vagina and bladder. As he has observed, this latter condition following a number of operations for the removal of large pus tubes leaving a large space into which the uterus dropped, it is his custom in nearly every case to perform ventrofixation after removing the tubal abscesses. In vaginal hysterectomy he leaves the ovaries and tubes in all cases except those in which the uterus is the seat of advanced cancer. When a patient has many diseased conditions which can not be cured without an operation, he endeavors in every case to perform all the operations necessary at one sitting With good nurses and well-trained assistants he had many times done dilatation, curetting, repair of cervix, anterior and posterior removal of both ovaries and tubes, ventrofaction and removal of the vermiform appendix in an hour and twenty minutes. By tying all arteries before cutting them and the use of hermstals, not more than four ounces of blood need be lost, nor more than four ounces of A. C. E. mixture need be used.

TWO CASES OF NORMAL PREGNANCY FOLLOWING OPERATIONS FOR EXTRA UTERINE PREGNANCY.

By Francis D. Donoghue, M. D., Instructor in Clinical Surgery, Tufts Medical School, Boston, Mass.

The fact that a woman who has recovered from an extra uterine pregnancy is liable to a similar accident in the proportion, according to Pestalozza, Sens and Varnier, of one in four, makes the report of cases of normal pregnancy following operation for extra pregnancy of interest. Two cases of normal pregnancy and confinement, one occurring after a vaginal operation and the other after an abdominal, the past summer, seemed worthy of record and of interest to believers in conservative pelvic surgery that seems so necessary if we are to do our part in preventing "race suicide."

The cases of extra uterine pregnancy group themselves naturally into (a) the cases in which the tube is ruptured, or aborted, and (b), the cases diagnosed before rupture. The first group also divides into cases of pelvic or broad ligament hematocele and free hemorrhage into the abdominal cavity. Hematocele into the broad ligament or slowly forming pelvic hematocele can well be watched and operated upon, or not, as the conditions warrant. Cases in which the hemorrhage stops after the formation of a moderate sized hematocele can well be treated expectantly. The dangers of expectant treatment are renewed bleeding, and the clot becoming septic. When the hematocele becomes septic, operation through the

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*Read by invitation before the Celtic Medical Society of New York, Academy of Medicine, New York, April 23, 1903.

vagina seems to offer the best chances of recovery. Hemorrhage into the abdominal cavity demands entirely different treatment. The signs are unmistakable, a sudden, sharp pain, faintness, pallor, weak, or no pulse, and dullness, rapidly developing in flanks. In these cases operation at once is indicated and necessary without intravenous saline infusion or if the pulse is extremely feeble or absent, *after* infusion. Waiting for reaction from the shock is dangerous, *as reaction may never come.* In these cases it is usually sufficient to tie off the offending tube and close cavity without drainage to obtain recovery. The other tube should invariably be left, or if markedly diseased should be resected, condition of the patient permitting, and left with a newly formed ostium.

All cases, it would seem, should be carefully watched after recovering from operation for an extra uterine pregnancy. As with an increasing number of reported results normal pregnancy, it appears, is many more times apt to occur than a repetition of an extra uterine, we would seem to be doing right when we conserve the pelvic organs of our patients with a view to future pregnancy, but careful watch should be kept for the slightest deviation from normal menstruation after operation.

The question of election by the patient, of the treatment desired has been discussed, not so much in this connection as in the case where Cesarian Section is indicated for marked pelvic obstructions.

A consideration of the rights of a patient to choose a treatment for herself opens up a question so broad that it can not be satisfactorily considered in one paper, even of considerable length. However, if we concede that the patient has the right to elect that she shall not again be exposed to the danger of repeated extra uterine pregnancy, or to a pregnancy that makes a serious operation necessary, if a living child is to be obtained, and if she may demand as her right that some mechanical obstacle be placed in the way of future childbearing, will we not also be obliged to concede that she may demand relief from any childbearing, if she decides that it is accompanied by more danger than she is willing to risk?

SPECIAL THERAPEUTIC ARTICLES.

LATER OBSERVATIONS ON THE TREATMENT OF RHEUMATISM.*

By W. C. Barnes, M. D., Mulberry Grove, Illinois.

Some months ago I had the pleasure of presenting a paper before you on the treatment of rheumatism, and at this time I thought you might be interested in some later observations on the same subject. As you are aware, we are still much in the dark as to the cause of rheumatic disorders, and this is shown by a perusal of such standard text-books as Osler's, Whittaker's, Flint's, and Ander's. Like myself, however, I know that you are chiefly interested in the best way of relieving and curing these cases, and thereby earn the gratitude of your patients. Anything that will contribute to this object will, I am sure, prove of interest to you.

Since presenting my former paper I have been making some experiments with a new local antirheumatic, which is named mesotan. It is a yellowish liquid, containing about 72 per cent. of salicylic acid in combination with a new base, which greatly increases its power of absorption; in other words, it is said that the application of mesotan is speedily followed by the appearance of salicylic acid in the urine, showing that it has been rapidly taken up by the system. It is therefore possible by means of mesotan to bring the action of salicylic acid directly to bear upon the affected tissues with-

*Read before the Bond County Medical Society.

out the necessity of saturating the system by its internal administration. In the less severe forms of rheumatism, especially of the muscular variety, it may be sufficient to produce a cure, but more often it is to be regarded as an aid to the internal use of the salicylates or aspirin. The latter, as you know from my former paper, I have completely substituted for the former.

I generally prescribe a two ounce mixture of mesotan, consisting of one ounce of the drug and one ounce of olive oil, and order a dram of the mixture to be lightly rubbed in over the affected surface. In about ten minutes you will find that there is a warm feeling all over the area of its application, and then a little more may be applied where the pain is most intense. After the pain begins to subside it may be applied with more friction, as I believe in the beneficial effect of a good massage. Another application is made after one or two hours, and you will now find that the patient will not object to the rubbing, for the pain will be gone.

Let me illustrate my present plan of treatment by giving you the histories of a few cases recently observed by me.

Case I. A little girl, 13 years old, who had been subject to articular rheumatism from an early age, was attacked with swelling and pain in all the joints, so that she could not bear to be touched or moved. I gave her 5 grains of aspirin and prepared a solution of equal parts of mesotan and olive oil, two ounces, and had it rubbed in well over the joints. The aspirin was continued every three hours and the mesotan applied once every ten hours. In two hours after the first application of mesotan she was easier, and in 12 hours was entirely without pain. This treatment was kept up for four days and on the fifh day she attended school. A year ago I treated this same case with aspirin alone. I had to give two doses of morphine, 1/8 grain, before the pain could be allayed, and then it took eleven days for her to go about.

Case II. Mr. V., aged 74 years, affected with muscular rheumatism, complained of pain in the limbs, which were so painful that he could not sleep. He had to cover his limbs with a blanket to keep warm even in summer. He had been using a liniment for the past four years, containing equal parts of ether, ammonia, and oil of sassafras (hot liniment). I gave him a two ounce mixture of mesotan, and had him rub a little on his limbs at bedtime. He reported to me that a few minutes after its application he felt a warm, pleasant feeling and slept well that night. He resorts to mesotan now every second night, and to use his own words, "sleeps like a baby."

Case III. Miss T., aged 19, was first seen by me about 12 months ago. At that time I found her in such extreme agony with rheumatism in the left shoulder, that I was compelled to give her 1/2 grain of morphine, and then placed her on ten grains of aspirin every three hours. She made a good recovery after seven days. I was called lately to see this same girl, and found her in about the same condition, only the pain was in the right arm and both lower limbs. I applied some mesotan to the painful area myself, and prescribed ten grains of aspirin, every three hours, and a mixture of mesotan and olive oil, equal parts, two ounces, to be rubbed in every night. This patient was about in the yard on the third day, well and hearty as ever.

Case IV. A boy, 13 years old, had a painful swelling of the ankles and knee joints; temperature 102 1/2°, could not sleep. I applied one drachm of the mesotan mixture and wrapped the affected parts in flannel. I called on him the next morning and found the swelling all gone, and the pain nearly so. Mesotan was reapplied, and the boy was able to play in the yard the next day.

Case V. Mrs. P., aged 45 years, suffered

intense pain in the ankles and knees, so severe that she could bear only a sheet upon her. Mesotan, 1 drachm to the ounce of olive oil, was applied and in three hours she was entirely without pain, and was able to sit up in two days.

Case VI. I was called in consultation with Dr. P. in county east of us, and found Mr. C., 45 years of age, suffering with intense pain of rheumatic character. He had been confined to his bed for ten days and had been taking antirheumatic treatment of all kinds. The temperature was 102½°; the skin dry and harsh; the ankles, knees, and hands swollen considerably. I advised giving him 10 grains of aspirin every three hours and the application of mesotan 25 per cent. in oil. My advice was followed, and when I called the next afternoon with Dr. P., we found our patient propped up in bed; no fever; great beads of perspiration on his forehead. He smiled as we came in, and said, "I guess I do not need you fellows now." He was out feeding his stock on the third day.

I could add a large number of other cases in which I have been equally successful, but these will suffice as my time is limited.

In conclusion permit me to say that the treatment described comes nearer to being a specific than any other in rheumatism, and I think that the vast majority of cases can be aborted or cut short by th use of mesotan externally and aspirin internally. At least, this has been my experience, and since adopting this treatment I have never had to resort to morphine,although I have tested it in more than 30 cases, some of them of marked severity. In several instances where the patient could only be turned with a sheet on account of the pain, they were able to move themselves after one or two applications.

COUGH IN PULMONARY PHTHISIS.

By J. Leffingwell Hatch, B. Sc., M. D., F. R. M. S., London.

As broods silence back of sound, so also stands designer back of design, and the logical mind of man has ever thus traced a presumptive relation between the thing observed and its supposed origin, and called them respectively cause and effect.

Thus in medicine we look from symptoms to a cause, and if post mortem we find a definite lesion we too often jump to the conclusion that it must be the very thing we are looking for, and are apt to forget that back of this change of structure lingers the first real cause in perverted physiologic function.

One of the best known and oldest symptoms, and one which occurs from diverse causes, is cough, and this, with another, almost as common and well known, dyspnea, go hand in hand among the various affections of the respiratory organs.

In pulmonary phthisis cough is usually the first symptom manifest and lasts throughout the disease but the cause is not the same in each stage and consequently requires careful study and varying treatment in the different stages.

The earliest physiologic altercation is a hyperemia usually occurring at the apices. This congestion of the capillaries is the causal irritation that brings about the cough reflexly through he medium of the nervous system. Here a nerve depressant and vaso-motor is indicated rather than an analgesic and expectorant.

In the next stage of consolidation the hepatized tissue acts as a foreign body and likewise reflexly brings about a useless cough in the vain effort to get rid of itself. In this stage resolution should be established by means of

an alterative and the nerves quieted by a sedative.

In the third stage where the tissue has undergone cheesy degeneration and broken down, it really is a foreign body that causes the cough, which can only be relieved by its removal, hence we give stimulating expectorants in combination with sedatives and analgesics to relieve the nervous spasms and consequent pain.

The sum total of the forces of a consumptive is at the most a low figure, and we try to keep this up by a high diet that often deranges other organs, whereas regard to the conservation of force by lessening the cough will give the same result without detriment to other emunctories.

To allay cough, then, has been the aim of therapeutists from time immemorial, and of the different concoctions and mixtures that have been vaunted and foisted upon long-suffering humanity their name is legion.

Probably the greatest boon that ever came to us in the form of medicine was opium, and some form or other of this drug has been and always will be used to a great extent as an ingredient in every cough mixture.

Of the Alkaloids of opium, morphia has probably been the most popular until recent years, when codein has claimed considerable attention and threatened to usurp its place; but since the discovery of heroin, by Prof. H. Dresser, of Elberfeld, Germany, in 1898, this has been made impossible, and the new analgesic after careful study both in Europe and America has found great favor among practitioners, especially in diseases of the respiratory organs.

In the fall of 1900 my attention was called to Glyco-Heroin (Smith), and I tried a sample bottle on a patient with such gratifying results that I determined to make further observations.

What these results were, the clinical record below tells more graphically than worded phrases of description could hope to do.

It does not nauseate, and can be given in teaspoonful doses as often as every two hours to adults, dose of course being graduated in children according to the age, although they tolerate heroin where opium would produce untoward results.

The greatest advantage this preparation has over all other lies in the fact that it does not contain anything that deranges the stomach, and can be given indefinitely without the patient turning against it.

The majority of cough-mixtures contain sugar, which is bound to undergo more or less fermentation; opium, which constipates and affects respiration, and belladonna, which checks the secretions, so that if they are able to lull the patient into oblivion of his condition for a few hours on account of the large amount of narcotic they contain, he awakes to find a stagnation of secretions with renewed paroxysms of coughing, and "pushing the mustard to fanaticism" for further relief he eventually becomes a slave to opium.

I have used Glyco-Heroin (Smith) now in over 50 cases, with the unvarying result that it relieved the cough, reduced the temperature, increased the volume of respiration, and allayed the night sweats, while at the same time it did not derange the stomach or cause constipation, did not produce vertigo nor nausea, never weakened the respiration, nor caused deleterious effects upon the heart, so that I can frankly say that without doubt we have in this compound the ideal cough mixture for the cough of phthisis pulmonalis.

The cases that I here quote I have selected from a series of fifty-three, with the idea of not citing cases so near alike as to produce monotonous repetition, no matter how gratifying the results.

As has been well said of this preparation, it is not only a true pharmaceutical product but an ethical one as well, and one that the physician can use understandingly, as its composition and physiologic action are well known.

Unfortunately all good things are sooner or later imitated, and something put forward as just as good but cheaper, and Glyco-Heroin (Smith) is no exception to this rule, so if results are not satisfactory, substitution must be at the bottom of it.

Observation One.—Mrs. Marie B., aged 32, father living in good health, mother died several years ago, does not know cause of death.

She was thin, and her complexion was of a muddy yellow color when first examined. Weight 122½ pounds; pulse, 100; temperature, 100°F. Respirations, 36 and difficult.

She had a fairly good appetite, but was constipated. She menstruated regularly, but has coughed and expectorated for two or three years. Sputum analyzed showed the presence of tubercle bacilli. She had a pleurisy eight years ago, the result of a cold, both lungs were affected since then, crepitant rales throughout, and areas of congestion here and there.

Her sputum had been tinged with blood but she has never had any hemorrhages.

I gave her an emulsion of cod liver oil, and Glyco-Heroin (Smith) in teaspoonful doses every two hours. The cough was relieved from the first, and after four months had entirely disappeared. The lungs cleared up, no more rales or areas of congestion, and she gained ten pounds in weight.

Observation Two.—Miss E. M., aged 32, unmarried. Had been ill six months before coming to me for treatment, and a diagnosis of tubercular laryngitis had been already established by someone else.

There was dullness on percussion over nearly the entire area of both upper lobes of the lungs, she had night sweats, fever, and a persistent cough, raising considerable. She was pale and emaciated, highly excitable and nervous; pulse 110, temperature 102° F., respirations 26.

Microscopic examination of the sputum revealed the presence of the tubercle bacilli.

On laryngoscopy I found an extensive ulcerative process on the posterior wall of the larynx just above the vocal cords, and both epiglottidian folds were congested and swollen.

Besides the local treatment for her throat trouble and constitutional care I gave her Glyco-Heroin (Smith), one teaspoonful to be taken every two hours.

There was marked improvement after the first twenty-four hours, and she said she had slept well through the night, had coughed scarcely at all, freedom from which distressing symptom she had not enjoyed for months.

The temperature gradually went down to normal, the night sweats ceased, and in little over one month's time the cough had left her entirely. The ulcer in the larynx was finally healed, which relieved her hitherto painful deglutition; besides this she gained flesh and strength, due, undoubtedly, to the conservation of force which the mitigation of the cough afforded.

Observation Three.—Mrs. I. T., aged 35, had one sister who was tuberculous. She had been ill for over ten years when she came to me; previous to her bad feelings she had been operated on for prolapsus uteri; about five years ago first noticed that her abdomen was increasing in size. This proved to be due to a fibroid tumor which grew to such an extent that her abdomen measured thirty-seven inches in circumference. She had coughed for about six years, but her aspect was fairly good; she weighed 137 pounds, but was nervous and impressionable; respirations were 20, pulse, 83, temperature, 101.1° F.

Physical examination revealed numerous moist rales on the right side, and her sputum on microscopic examination showed the tubercle bacilli.

She was given Glyco-Heroin (Smith) in conjunction with constitutional treatment, and received local electrical treatment from the hands of a specialist. At the end of eight months her abdominal measurement was reduced to thirty-three inches, cough and expectoration had entirely disappeared, as well as the moist rales, and he rtemperature, pulse, and respiration became normal.

Whether her cough was entirely due to lung trouble or was partially due to the uterine difficulty I was unable to determine, but granting both factors as a cause Glyco-Heroin (Smith) cured it.

An Interesting Clinical Case.—X, a white woman, twenty-two years of age, was taken into the hospital on account of syphilitic skin disease (roseola papula); a blennorrhagic vaginitis of most violent description with strong congestion of the mucous membranes of the vagina. The latter was of a violent hue, somewhat brittle, and yielded abundant secretion of a greenish yellow pus,which showed under bacteriological examination abundant colonies typical of gonococcus, diplococcus and other varieties of bacteria. The gonococci infection reached to the neck of the uterus whose tissues suffered from the same degeneration as the vagina. Above the mouth of the neck,—from which a greenish yellow and somewhat thick pus oozed—was a syphilitic ulcer of the size of a dime, clean at the bottom, livid in color and rather deep.

Upon careful examination, the patient was found to be pregnant in the third month, and, from the start, was subjected to energetic treatment as a serious case.

Under the treament employed she improved rather well; but, though the blennorrhagia was not cured, the syphilitic manifestations of the skin disappeared, and the ulcer at the neck improved somewhat, until confinement which took place at the eighth month, five months after her admission.

The confinement was normal. However, the patient was attacked by a great flux and suffered a complete laceration of the right side of the neck; an incomplete laceration of the left side; an incomplete laceration of the rear wall of the vagina; and a two-thirds laceration of the perinæum. The placenta was removed at once; ample warm washes of a 1% solution of permanganate of potash were applied and the uterus was stimulated by massage, but remained inert. All this was reported to me by the house physician. I arrived at the hospital four hours later in company with the well-known gynecologist, Dr. Mendez Capote, who, upon having examined the patient, decidto sew up the lacterations. He washed uot the vagina and uterine cavity completely; adjusted with the scissors the edges of the lacerated tissues; sewed up the wounds and touched the ulcer at the neck with the cauterizer; then he gave another wash and plugged with iodoform gauze.

When the patient was on the operating table she had fever, 38.4° C. At 5 p. m. the fever was at 39° ;then the vaginal plug was taken out and a great intra-uterine wash of a one-half per cent. solution of permanganate was applied very hot in a quantity of five liters. The fever was at 40° throughout the night, and washes were given every four hours.

The following day, at 8 a. m., temperature 40°, same local treatment. The fever lasted all day, falling to 39° by the wash, but rose again to 40°.

The day thereafter, fever at 41°; same treatment with more vaginal washes of bichloride of mercury, before the uterine washes; the fever keeps on at 41°.

On the next day at 8 a. m., (temperature

41.5°), I took out the stitches made on the day of confinement, washed well both uterus and vagina, dried the latter with carbolated cotton and conveyed into the uterine cavity eight grammes of pure Hydrozone, taking care that this liquid should flow towards the vagina, into which I poured about 60 grammes of the same liquid and drained the uterus with simple gauze saturated in Hydrozone, while the vagina was drained by the same means.

From that time on the fever declined slowly, and at 6 p. m., it was apyretic. The fever did not return and the patient's cure proceeds without further difficulty.

This case, which is interesting by itself, proves of great value in setting forth two points; viz.:

1. That, although the intra-uterine injections of pure Hydrozone may be dangerous, it can be applied if care is taken to keep the neck dilated as much as possible.

2. That in this case the superiority of Hydrozone over the other treatments of puerperal septicæmia, in connection with gonococcia, is indisputable; and that this splendid result should encourage repetition of its application.*—Dr. Matias Duque, Director of the San Antonio Hospital, Section of Hygiene. Abstract from the *Revista Medica Cubana,* April 15, 1903.

* The son of the patient suffered from blennorrhagia in the eyes. He was treated with ¼% solution of permanganate and instillations of pure Hydrozone twice daily, alternating with cauterizations of 40% solution of nitrate of silver; and he kept his sight.

NEWS, NOTES AND ANNOUNCEMENTS.

Medical Editors in Newspaper Offices.—The newspaper accounts of the operations performed by famous foreign surgeons that have visited and are visiting this country have, in many instances, been entirely erroneous, and unjust to the visitors and to our American surgeons. The visiting surgeons have been credited with having performed operations that had never before been done in the United States, although they had never made such a claim for themselves. Such statements bring the visitors into disfavor with their American colleagues, and also lessen the respect in which our surgeons are held by the public. It appears to us that a reputable newspaper should have sufficient pride not to print accounts of operations that are the product of the uncontrolled mind of the imaginative reporter without submitting them to a medical man for revision. If it is impossible—and it seems that it is—to prevent the lay publication of medical items, every newspaper should have attached to its editorial staff a competent physician who, as medical editor, should revise all articles pertaining to professional subjects. Newspaper science would then, to some extent, be relieved from the contempt in which it is at present held. Every self-respecting newspaper should feel as much pride in accounts of medical matters as in those of financial, real estate, or other affairs.—*American Medicine.*

Management of Premature Labor.—The usual precautions taken in normal cases should be observed, says E. P. Davis, with special care to avoid rupture of the membranes. When dilatation is but partly complete, use elastic bag or intra-uterine tampon of aseptic gauze. If placenta is retained, antiseptic delay may be practised until spontaneous expulsion, if no hemorrhage occurs. If bleeding is present, anesthetise, dilate uterus and remove placenta completely.—*Medical Herald.*

Suicide.—Dr. Patrick C. Lodge of Naugatuck, Conn., committed suicide recently. Dr. Lodge was a graduate of the University of Vermont Medical Department, class of 1898. A few years ago he entered into an unfortu-

nate discussion with his brother physicians in regard to small pox and was expelled from the local Medical Society. While in college Dr. Lodge was a character, but possessed of much will and more than ordinary intelligence.

The Vermont State Tuberculosis Commission were entertained recently at the Champlain Open Air Sanitarium, at South Hero, Vt. The equipment and location of the Sanitarium were quite satisfactory to the Commission.

A New Departure.—In these days when a gullible public prescribes for itself from the patent medicines on the frieze of the trolley-cars, or takes the profitable substitution that the druggist passes over the counter, it is no wonder that physicians feel a bit out of sympathy with the venders of drugs, and make unfavorable comparisons between the commercialism of the men who supply medicines and the science of the medical profession that prescribes them.

But we should never forget that were it not for the great manufacturers and importers of drugs we might still cull our own herbs, and use our own mortars and pestles. An an indication of the aid that such houses may be to physicians, we call attention to the colored plates of pathogenic organisms that have been prepared for the profession by the house of M. J. Breitenbach Co., the importers of Gude's Pepto-Mangan.

No text-book and no one work on pathogenic bacteria contains such a number of excellent diagnostic illustrations, nor such beautiful examples of lithographic art, as these.

Many physicians are too far from libraries and laboratories to be able to put into practice the training of their college days. They need just such a set of reference plates to be able to make microscopical examinations. The recognition of this need and the care that has been taken to fill it shows a spirit of enterprise in this firm that we wish might serve as an example to others. For, if, instead of advertising to the public, the manufacturers of drugs would make such valuable contributions to science as lies in their power, there might be more sympathy between them and physicians.

The full set of sixty cuts has been prepared to send to any physician who writes for them, from the firm of M. J. Breitenbach Co., New York.

Management of Fever.—A. A. Eshner (*Journal of American Medical Association*, July 11, 1903) questions a distinction between fever and pyrexia. We cannot recognize a febrile process in the absence of elevation of temperature, or if pyrexia occurs in the absence of fever. The rapid pulse, increased respiration, circulatory, secretory, and metabolic changes may be due to the underlying morbid state or to the pyrexia or to both. The problem therefore is to remove the causative factors and restore metabolic equilibrium. If the process is specific often little or nothing can be done to fulfil the first indication, but some form of elimination or evacuation should be instituted, as emesis, catharsis, diaphoresis, diuresis, enteroclysis, hypodermoclysis, intravenous transfusion. Reduction of temperature when excessive or long-continued may be accomplished by means of cold, wet or dry, with drugs to sustain respiration and the nervous system when needed. The diet should be easily assimilable.

In a case of Chorea, patient unable to sleep at night, I used Neurilla in conjunction with other tonics, and after two months' treatment, the patient made a good recovery. I believe Neurilla is one of the best nerve calmatives I have ever used, and I shall continue to prescribe it.

J. H. Pearce, M. D.

Finger, Miss.

The Vermont Medical Monthly.

A JOURNAL OF REVIEW, REFORM AND PROGRESS IN THE MEDICAL SCIENCES.

BURLINGTON, VT., AUGUST 25, 1903.

EDITORIAL.

MALPRACTICE SUITS.

Someone has said that no medical man is justly famous until he becomes the defendant in a malpractice suit. This statement is probably based on the fact that a man is seldom sued for malpractice until he achieves prominence in his profession. The incapable, unimportant physician is almost never called upon to defend his honor, ability or reputation, for the very good reason that is evident to all,—he has none to defend. It is almost invariably the medical man of recognized ability and prominence who is attacked, and the attack almost always has revenge as an animus. Therefore it always assumes the aspect of blackmail to those who are familiar with all the facts.

The forthcoming suit that has been instigated against Dr. P. E. McSweeney, a prominent physician of Burlington, is another instance of what medical men are called upon to suffer at the hands of their enemies. Because a female patient did not get complete relief from all her pains through removal of her appendix during an attack of appendicitis, Dr. McSweeney is forced at much expense to defend his ability, reputation and hard earned savings in a court of law.

Those who are familiar with the facts in this case recognize the true animus for the suit and know that Dr. McSweeney gave to his patient full measure of skill and attention. He did not contract to restore her health nor insure her for the rest of her life against pain or possible sickness. Even had he done so the contract would have been void for the reason that such a result would have been beyond his or any one else's ability. All he agreed to do was to give her the benefit of the skill and ability at his command in relieving her of the disease afflicting her at the time the operation was performed or deemed necessary. She accepted his services and thus recognized his ability and skill. Her contract was to undergo the recognized dangers of the operation, (which were less, however,than to let her malady progress), and to take the providential chances of other complications or accidents. Dr. McSweeney agreed to use all the skill, ability and resources at his command to restore her to health, meet all complications and avert all accidents, and those who are familiar with the case know that he did so. Had the case been reviewed by competent authority as to fact and justice, and judgment passed on its basis for action, we feel confident that it would never have come to trial.

In the meantime Dr. McSweeney has the sympathy and support of his colleagues, who trust he may win, and defeat his enemies.

MEDICAL ABSTRACTS.

Acute Mercurial Poisoning from Intra-uterine Injection.—Dr. W. McGregor Young reported the following case at the Obstetrical and Gynæcological Society of the North of England (*Lancet,* June 6, 1903):

The case was complicated by retention of a piece of placenta in utero. The delicate anæmic patient had been ill more or less

throughout her fourth pregnancy. Retention of the placenta after delivery with forceps necessitated manual removal, which was followed by an intra-uterine douche of a 1 in 3,000 solution of biniodide of mercury followed by one of plain water. On the tenth day there set in indications of sepsis and a bit of placenta was removed from the uterus. Later the classical symptoms of acute mercurial poisoning became well marked. Further exploration of the uterus disclosed another piece of placenta which was removed. By the nineteenth day the patient was progressing well, but a recurrence of the mercurial symptoms took place. Ultimately the patient made a good recovery. Salivation and stomatitis were absent throughout, but there were soreness and stiffness of the jaws preventing mastication, severe headache, coppery taste in the mouth, and severe purging and tenesmus. Solutions made by the dissolving of compressed drugs are apt to be imperfectly mixed is used hurriedly, the solution at the bottom of the vessel being much stronger than that higher up in the same vessel.—*Review of Reviews.*

Breast-milk and Cows' Milk.—Breast-milk and cows' milk are both acid. The litmus test for milk is unreliable, because of the variation in the quality of litmus-paper, and the litmus taking part in the reaction and not acting as an indicator. The effect of adding lime-water or bicarbonate of soda to feedings is to retard or inhibit the formation of curds by rennet. The teaching that lime-water, bicarbonate of sodium, or bicarbonate of potassium should be added to fresh milk or feedings simply because they are antacids, is erroneous. The addition to milk or feedings of alkalies or salts that become alkaline in solution is an empirical method of aiding digestion by preventing the formation of dense curds that would slowly leave the stomach and be difficult of digestion in the intestine.—C. G. Kerley, A. H. Gieschen, and George T. Myers (*Medical Record,* August 8, 1903).

BOOK NOTICES.

Tuberculosis.—Recast from Lectures Delivered at Rush Medical College, in affiliation with the University of Chicago. By Norman Bridge, A. M., M. D., Emeritus Professor of Medicine in Rush Medical College; Member of the Association of American Physicians. Handsome 12mo volume of 302 pages, illustrated. Philadelphia, New York, London: W. B. Saunders & Company, 1903. Cloth, $1.50 net.

In this excellent work the practical side of the care and management of those sick with the various non-surgical forms of tuberculosis has been concisely stated. Full consideration has been given to prophylaxis,an all-important phase of the subject that has heretofore been much neglected. There are also chapters upon the Bacillus of Tuberculosis; on the Pathology, Etiology, Symptoms, Physical Signs, Diagnosis, and Prognosis of the disease, each treated in the judicious and thorough manner to be expected in a work by such a well-known authority as Dr. Bridge. Treatment is accorded unusual space, there being chapters upon Hygienic Treatment, Management of the Diseased Lung, Climatic Treatment, Medicinal and Local Treatments, Special Treatments, besides a chapter devoted to the subject of Sanatoria. The work is a most valuable one, and worthy of consideration.

Variola, Vaccination, Varicella, Cholera, Erysipelas, Whooping Cough, Hay Fever.—Variola (including Vaccination). By Dr. H. Immermann, of Basle. Varicella. By Dr. Th. von Jurgensen, of Tubingen. Cholera Asiactica and Cholera Nostras. By Dr. C. Liebermeister, of Tubingen. Erysipelas and Erysipeloid. By Dr. H. Lenhartz, of Hamburg. Whooping Cough and Hay Fever. By Dr. G. Sticker, of Giessen.

Edited, with additions, by Sir J. W. Moore, B. A., M. D., F. R. C. I. P., Professor of the Practice of Medicine, Royal College of Surgeons, Ireland. Handsome octavo volume of 682 pages, illustrated. Philadelphia and London: W. B. Saunders & Co., 1902. Cloth, $5.00 net; Half Morocco, $6.00 net.

The articles included in this volume treat of a number of diseases second to none in importance, whether regarded from the standpoint of Preventive Medicine or as the cause of widespread sickness and death. Although the excellence of the German work and the detailed and comprehensive manner in which the respective authors had dealt with their several subjects left comparatively little to be added, the editor has not hesitated to amend the text whenever necessary, and has also embodied the results of his personal experiences, gained during a varied practice extending over thirty-three years.

One of the most timely articles included in the work is that on Variola, including Vaccination and Variolation. Dr. Immermann's monographs on these subjects, now of vital interest, especially in the United States and Great Britain, have probably never been equaled for circumstance of detail and masterly argument.

The other articles, each by a German specialist of recognized authority, are also skillful expositions of the particular diseases under discussion. The entire volume being edited by a specialist of acknowledged ability, the work, it will be seen, has been brought precisely down to date. It is, indeed, a magnificent contribution to the literature of medicine.

A Text-Book of Obstetrics.—Fourth Edition, Enlarged and Thoroughly Revised. By Barton Cooke Hirst, M. D., Professor of Obstetrics in the University of Pennsylvania. Handsome octavo, 900 pages, with 746 illustrations, 39 of them in colors. Philadelphia, New York, London: W. B. Saunders & Company, 1903. Cloth, $5.00 net; Sheep or Half Morocco, $6.00 net.

In revising his work for this edition, the author has spared no pains to make the book reflect the latest knowledge on the subject. He has even described and illustrated the method of using the "Neumann-Ehrenfest Kliseometer." His perfect familiarity and extensive experience with diseases of women is shown in the careful and minute manner in which he describes the various methods of treatment. As most all the diseases of women are the consequences or complications of childbirth, their preventive treatment at least is in the hands of the obstetrician, and the physician in general practice must be equally well informed in both branches of gynecology. The specialist in obstetrics must be an expert in the surgical treatment of all diseases of women. Even a specialist who confines his work entirely to this treatment, must at least have served a long apprenticeship in practical obstetrics, and have mastered its science to be adequately prepared for his work. From the glimpse we have obtained of Dr. Hirst's knowledge of diseases of women, we wait anxiously for his new work on the subject. In this present work every page has been altered and bettered in some way. More aattention has been given than in the previous editions to the diseases of the genital organs associated with or following childbirth, and this we think, is an excellent improvement. Many of the old illustrations have been replaced by better ones, and there have been added besides a number entirely new. The work treats the subject from a clinical standpoint, the author ever keeping in mind that the aim of all medical literature is to cure.

The American Pocket Medical Dictionary.—Fourth Revised Edition, Greatly Enlarged. Edited by W. A. Newman Dorland, M. D., Assistant Obstetrician to the Hospital of the University of Pennsylvania. Containing the pronunciation and definition of the principal words used in medicine and kindred sciences, with 566 pages and 64 extensive tables. Philadelphia, New York,

London: W. B. Saunders & Company, 1903. Flexible leather, with gold edges, $1.00 net; with thumb index, $1.25 net.

In this little work, now in its fourth edition, we have a pocket dictionary equaled by none on the market. It is a wonder to us how the editor has gotten so much information in such a small space. In this edition several thousand of the newest terms that have appeared in recent medical literature have been added, and the entire work subjected to a careful revision. Since the work has come to us for review, we have had many occasions to refer to it for definitions of new words, and in no instance have we been disappointed. We believe that the work in its new form will meet more fully than ever a real demand on the part of physicians and students.

The American Illustrated Medical Dictionary.—Third Edition, Thoroughly Revised. For Practitioners and Students. A Complete Dictionary of the Terms used in Medicine, Surgery, Dentistry, Pharmacy, Chemistry, and the kindred branches, including much collateral information of an encyclopedic character, together with new and elaborate tables of Arteries, Muscles, Nerves, Veins, etc.; of Bacilli, Bacteria, Micrococci, Streptococci; Eponymic Tables of Diseases, Operations, Signs and Symptoms, Stains, Tests, Methods of Treatment, etc., etc. By W. A. Newman Dorland, A. M., M. D., editor of the "American Pocket Medical Dictionary." Handsome large octavo, nearly 800 pages, bound in full flexible leather. Philadelphia, New York, London: W. B. Saunders & Company, 1903. Price, $4.50 net; with thumb index $5.00 net.

The rapid exhaustion of two large editions cannot but be a gratifying proof to the editor and publishers that this excellent work meets the varied needs of physicians and students better than any other dictionary on the market.

In this the third edition several hundreds of new terms that have been added to the vocabulary of medical sciences have been incorporated and clearly defined. The entire work, moreover, has evidently been subjected to a careful revision, and many of the tables, notably those of Acids, Bacteria, Stains, Tests, Methods of Treatment, etc., have been amplified, and their practical value greatly increased. It is only by such constant and careful revision that a medical dictionary can hope to reflect the progress of medical science, and the usefulness of this work by this present revision has been very largely extended.

NEWER REMEDIES.

Menorrhagia.—Menorrhagia is frequently dependent upon a condition of subinvolution of the uterus, resulting later in endometritis, and it is in these cases that the value of Hayden's Viburnum Compound is particularly recognized. Under its administration the uterine congestion is relieved, the relaxed tissues restored to a normal tone and the flooding promptly checked. If there is profuse hemorrhage from the uterus in consequence of the presence of tumors, such as polypi, fibroids, or malignant growth, the administration of Hayden's Viburnum Compound is indicated, in order to lessen the flow until such a time as the removal of the tumor can be accomplished. Aside from its hemostatic qualities, this preparation furthermore relieves the accompanying pain and renders the patient more comfortable. During the climacteric patients often are troubled with flooding, and if this be not due to the presence of malignant or other diseases, which must be carefully sought for, it can be greatly relieved by the continued administration of Hayden's Viburnum Compound.

Displacement of the Uterus.—Many cases have been recently reported of success in treating displacement by first reducing the inflammation which led to the enlargement and subsequent displacement of the organ.

Versions and flexions often originate in inflammation of the parenchyma of the womb, pelvic peritonitis, and diseases of the appendages. The result of hot water douches followed by the astringent, antiseptic alterative Medicated Uterine Wafers (Micajah & Co.) is in some cases marvelous.

Bovinine in Consumption.—From the prevailing belief, which was almost a despair, the recent knowledge that Consumption is curable is rapidly disseminating.

This is not due to any miraculous medical specific that has appeared, or ever will appear; nor to climate alone, for cases originate in California, Colorado, the Riviera, and the most noted resorts of the Swiss Alps; but it is accomplished by the rapid restoration of tissue-waste with nutrition that contains all the elements of the human body, in right proportions and ready for immediate assimilation, to enable the system to build faster than the malady can break down.

While it has been abundantly proven that the *tubercle bacilli* is often the means of perpetuating Consumption, it never has been satisfactorily demonstrated that it is the sole cause of the disease. No doubt every human being in the civilized world is sooner or later exposed to this germ, but only a small minority are susceptible to its infection. The great majority are immune by virtue of normal vigor, normal nutrition, which does not furnish the nourishing nidus for this bacillus.

The long and feverish search for a drug that shall demonstrate its right to be called a specific has been almost abandoned. The thousand and one alleged "cures" or specifics for Consumption have all proved cruel delusions. Tuberculin is a sorry example. Creosote, Cod Liver Oil, Guaiacol, and all their derivations and modifications have signally failed. Recent searchers have confined their efforts mainly to the field of antagonizing serums, but instead of reaching favorable results, it looks as though the whole serum theory would, ere long, be abandoned as a mistake.

There is no positive cure for Consumption outside of an element or influence that restores normal nutrition,that enriches the blood and builds the tissues. This being accomplished, Nature does the curing. The sooner we all accept this demonstrated fact that general vital recuperation, by whatever means it may be accomplished, is the only cure that is scientific, that has ever been known or ever will be known, the less time we will lose in conducting the battle royal with this fatal scourge.

Patients who die of Tuberculosis, *starve to death*. Those who recover from Tuberculosis are *fed to health*—cured by feeding. Feeding, however, is not necessarily nourishing, no more than eating is assimilating. Thousands of victims of this wasting disease starve with stomachs full, and plenty more within reach. There is no dearth of elegant and costly viands —it is availability they lack. They call for an exhibition of vito-chemic force which the consumptive's stomach does not possess. Bovinine does nothing of the kind. It is living tissue pabulum in natural solution and instantly available. It responds at once to the demands of the starving organism.

Life nourishes life, cell rebuilds cell, and the life of all cells is the circulating, vivifying fluid, the sap in the tree, the blood in the animal. Plants transmute crude inorganic matter into organic forms: animals take up vegetable organisms and advance them to a higher stage. Each advance is an intensification, a rise in the vital scale, a further refinement of cell structure and cell function.

Bovinine quickly and permanently restores the broken constitution of the consumptive by supplying the vitalized protoplasm, living cells, ready for instant appropriation, without taxing the digestive system. It builds up the de-

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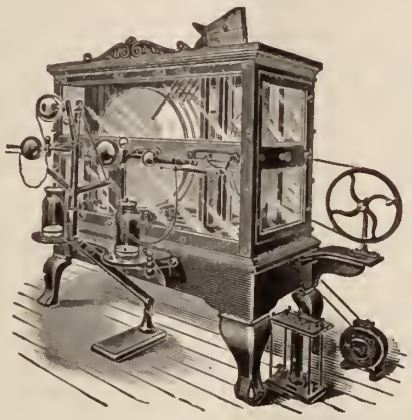

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THE

Vermont Medical Monthly

Official Organ Vermont State Medical Society.

Vol. ix. No. 9. Whole No. 105. | Burlington, Vt., Sept. 25, 1903. | $1 per year. Single copies, 15 cts.

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Entered as second class matter at Burlington, Vt., Post Office.

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The Vermont Medical Monthly

Vol. IX. September 25, 1903. No. 9.

ORIGINAL ARTICLES.

CASE OF RETROVERSION WITH FIXATION, APPENDICITIS AND FLOATING KIDNEY; NECESSITATING VENTRO-FIXATION, REMOVAL OF THE TUBES and OVARIES AND FIXATION of the RIGHT KIDNEY AT ONE SITTING.

By A. Lapthorn Smith, B. A., M. D., M. R. C. S., England.

Gynecologist to the Western General Hospital and to the Montreal Dispensary; Surgeon-in-chief of the Samaritan Hospital, and Consulting Gynecologist to the Women's Hospital; Professor of Gynecology in the University of Vermont, and Professor of Clinical Gynecology in Bishop's University, Montreal.

Mrs. W. H. S., 46 years of age, consulted me on the 11th of March of this year on account of general nervous breakdown, the result of some pelvic trouble dating from the birth of her only child, twenty-four years ago. She was of English and Scotch parentage, but was born in Canada, and first began to menstruate at the age of seventeen. This was painful until her marriage at twenty-four. Her child was born a year later, but it was a seven months child. When five months pregnant she had a flooding but went on to seven months when she was delivered. The labor was long and painful, lasting from Saturday to Wednesday. She was very ill afterwards and remained in bed for three weeks. Her husband was a farmer, but she was unable to do any work of that kind, being weak and so despondent that she often wished to commit suicide, so her husband sold the farm and bought a house in the village. She struggled along for a few years until she was no longer able to do her housework and then they sold the house and took to boarding. After a few years she was unable to come to her meals and in spite of the best efforts of several first-rate physicians, who told her that her uterus was retroversed and that her ovaries were glued down in the pelvis, she became a chronic sufferer. Intercourse was so painful that she could not sleep all night after it. She kept getting thinner all the time and her sight began to fail. She was frequently taken with pain and cramps on the right side from kidney to appendix region. She could not sleep and her bowels would go four days without a movement and sometimes a week. Her water was very red and scanty, smelled strong and was painful on being passed. She also suffered very much from headaches. Her troubles were very much aggravated about a year ago by a sixty-four mile ride in one day, when she was taken ill and had to remain in bed a week. Her tongue was always coated and she had a bad taste and whenever she ate anything she would have a terrible pain in her stomach. One doctor who attended her for three weeks for peritonitis, also thought that she had a tape-worm, but Doctor Tomkins, she says, diagnosed the true condition, having told her that she had appendicitis and displaced kidney. From March until September she was under treatment for constipation and general weakness, but by the first of September she was well enough to come in from the country and entered the Samaritan Hospital. On examination, the uterus was found

to be retroverted and firmly fixed, the ovaries exceedingly tender and lying under the uterus in Douglas' *cul-de-sac,* the abdominal wall tense and tender teuder under McBurney's point, and the right kidney was prolapsed nearly as low as the crest of the ilium. I decided to remedy all these conditions at one sitting, as it would have been useless doing only one of the operations, leaving several other things still to be done; besides which, it is very difficult to induce women to submit to a second operation. I began by fixing the floating kidney; placing a wooden block under the left side so as to lengthen the space between the ribs and the ilium, I cut down on the kidney, opened the capsule for the length of two inches and stitched the latter to the transversalis fascia, by six interrupted black silk ligatures. Then the divided muscles were brought together with catgut, after which the skin was closed with a running black silk ligature. She was then placed on my Trendelenberg table, and the vermiform appendix, which was very long and thick with catarrhal inflammation, was removed by the method which I introduced six years ago, of cutting the appendix off flush with the caecum and then sewing the caecum up with three rows of fine black silk. Before that all operators used to tie the appendix about a quarter of an inch from the caecum and cauterize the stump. But by that method faecal fistulae were very frequent (though not always reported), as one might expect they would be frequent when they tied secreting mucous surfaces together, which would never unite.

The uterus was detached from the sacrum and the ovaries and tubes were separated with great difficulty from their adhesions and they were brought up and tied off. As the ovaries had lost their usefulness and were very hard, and as the tubes were completely sealed by many attacks of peritonitis, the ovaries and tubes were removed. The raw edge of the broad ligament was hemmed with fine black silk, just as a handkerchief is sewed, so as to turn it forwards in order to prevent the intestines from adhering to it.

The uterus was sewed to the abdominal wall with chromicised catgut, and as the front of the fundus was raw from being adherent to the sacrum, it did not require to be scarified. The abdominal incision was closed with silk worm gut, through and through stitches.

The most interesting thing about the case was the almost immediate amelioration of all the symptoms. After the first two days the pain in the kidney region, appendix region and the region of the ovaries completely left her. She became gay and cheerful, meeting every one with a smile; all her despondent and suicidal tendencies disappeared and on picking up a book a few days later she found that she could read without glasses and without difficulty, which she had not done for years. During the twenty-eight following days she had no headache and her bowels moved regularly, and when her husband came to take her home he was at once struck by the great change in her expression; as he said, she looked twenty years younger.

Remarks.—Many cases like this have been sent to me by former pupils and other friends, and no cases give greater satisfaction to all concerned, and yet many such women are at present in the insane asylums; many others will soon be going there, while there are still hundreds more of them filling the sad role of chronic invalids throughout the country, a drag and a damper upon their husbands and children; they might in one short hour and twenty minutes be restored to health and happiness, as this and several hundred other women have been. It remains with the family physician to recognize the cause and insist upon the remedy.

248 Bishop St., Montreal.

A NEW THERMOPHILIA.

Dell B. Allen, Ph. B., Medical Department, University of Vermont.

Source—Renal Pus.

Morphology—An aerobic bacillus about one-half the size of a red blood cell, non-motile, no flagellæ, spores which stain easily with Loeffler's. The organism itself stains with watery dyes, Loeffler's and Gram's.

The peculiar and characteristic action of this interesting bacillus is its reaction to heat. In Bouillon at 37° C. there was no appreciable change, even after ten days' growth. Each inoculation, however, would give a growth on agar agar which was very slight and could be seen only by transmitted light. Then it appeared simply as an outline as no body of the growth could be seen. This same lack of growth could be noticed through all experiments. No growth on gelatin plate, none in tubes, none on potato and no change in milk.

In attempting to kill the organism and determine its thermal death point, I discovered its characteristic action. It did not begin to grow until the temperature had been raised to 60° C. Its most luxuriant growth was at 75 C., and it dies at 90 C.

After inoculating a tube of Bouillon, I subjected it to 75° C. for ten minutes, then placed it in the incubator at 37° C. for twenty-four hours. Growth appears as a thick, tough pellicle, studded with white spots, floating on the surface. The liquid was unchanged. One of these tubes was accidentally left for three months. It then appeared as a dark brown liquid, the pellicle had grown thicker and tougher until it was as solid as a stone and sank to the bottom of the tube.

An inoculation from the Bouillon at 75° C. to agar agar, in twenty-four hours shows a growth covering the whole exposed surface of agar and limited only by the sides of the test tube. This is oleaginous, sebaceous and pearl gray with a marked lustre. No change in media, not transparent and not raised.

There was no change in milk at 37° C. I inoculated milk from a Bouillon tube at 60° C. This I raised to 75° and get the following reaction: Hard curd, mostly in one large mass, whey is separated from curd and is slightly turbid. Curd not affected by boiling.

There is no formation of gas either before or after heating. It is non-pathogenic for guinea pig.

SPECIAL THERAPEUTIC ARTICLES.

ATROPHIC NASAL CATARRH.

I. R. McCready, M. D., Grand Rapids, Mich.

In the treatment of nasal diseases, there is a class of cases that receives but little attention either from the practitioner, or the authority, i. e. Atrophic Nasal Catarrh. The characteristic odor and complications following should lead us to exert our every effort to its amelioration.

There are two distince forms of the atrophic process that we have to deal with, fetid rhinitis, and dry anterior rhinitis. In dry anterior rhinitis the posterior walls of the pharynx are extremely dry, and in places shiny, and lack the elevations of the follicles and glands characteristic of other forms of catarrh. The atrophy of the mucous membrane and of the underlying structures, formation of fetid, tenacious secretions, the attacking of the serous glands, and reduction of their secretions, to a minimum. The secretions of the mucous glands cling to the surface of the nose. The extension of the atrophy into the olfactory region, attacks the terminal fibers of the olfactory nerves, causing loss of smell.

Ulcerations are rarely found, but when they do occur, are usually on the cartilaginous

septum. Habitual nose bleed can in many cases be traced to this affection.

The treatment of atrophic rhinitis consists of the removal of the secretion, and disinfection of the nasal passages, together with the stimulation of the serous glands to normal action.

In the writer's hands a routine treatment covering the ordinary case presented for treatment, is as follows:

After a thorough examination of the affected field, the writer irrigates the anterior nasal passages with Glyco-Thymoline, one part to water three parts, at a temperature of normal blood heat, the K. & O. nasal douche or a compressed air atomiger being employed. Then by aid of a post-nasal syringe, about four ounces of the solution are used through the post-nasal space, entering through the mouth.

Ichthyol glycerine in the proportion of one ounce of Ichthyol to eight ounces of glycerine is now painted over the membranes by aid of a pledget of cotton, and allowed to absorb. A bland unirritating oil is now sprayed into the nares thoroughly. The most satisfactory protective oil being composed of a petroleum base with eucalyptus, menthol and camphor.

The patient is given a supply of Glyco-Thymoline and instructed to clear the nares with it, by the aid of a Bermingham or Keck douche, twice daily.

The office treatment should consist of daily, or every second day, applications of the indicated remedies. Insufflation of mild powders have been recommended, but the writer finds them a dismal failure.

Alterative treatment, tonics, etc., together with hygienic precautions are recommended. Calcium sulphide in sufficient quantities to produce saturation has proved of marked benefit. Exposure to dust, etc., is to be avoided. Tobacco is contra-indicated in all cases.

ORGANIC IRON MEDICATION IN SECONDARY ANAEMIAS.

A CLINICAL AND HEMATOLOGICAL STUDY.

By Lino S. Chibas, M. D.,
Senior Assistant House Physician, Columbus Hospital, New York,
AND
G. A. De Santos Saxe, M. D.,
Assistant Pathologist to the Columbus Hospital, New York.

A great deal has been written in recent years on the value of the various new organic iron compounds in the treatment of anæmia, and our only excuse for the presentation of this report is that every new series of clinical observations, made with due conservatism and accurately recorded, is of value in confirming or disproving some fact or theory in medicine.

The problem of treating secondary anæmias is an interesting one. In each case there is, in the first place, the primary factor, be it loss of blood through hemorrhage, spontaneous or trumatic; or be it the lowering of the functional activity of the blood-forming organs wrought by disease somewhere in the body, or by the action of toxins; or the direct destruction of the red cells and their hemoglobin in the circulating blood by some more violent toxic agency.

The first question, therefore, is how to remove the primary factor, or, at least, how to arrest its influence on the state of the blood. The second is, how to improve the state of the blood, so as to give it a new lease of life by increasing the amount of hemoglobin—that prime agent of oxygen exchange—and the number of red cells, the carriers of this agent.

In each individual case of secondary anæmia there are different obstacles to be overcome as regards the primary factor, and therefore the

treatment of the primary disease varies; but the therapy of the secondary condition is alike in all cases. Iron and its assistant, manganese, are the specifics to which we must have recourse—of that there has long since been no doubt—but the form of iron that should be used for this purpose is another question.

The problem as to the exact site and mode of absorption of iron which is administered therapeutically has occupied pharmacologists for a number of years, and a great deal has been written on the subject, and yet, there is still no agreement even as regards some of the essential points of this question. Is iron absorbed at all in the inorganic state? If so, in what form and in what quantities? What form of iron is most readily absorbed? How does iron act if it is not absorbed, or if only infinitesimal amounts, totally inadequate for the needs of the body, enter the plasma and are taken up by the molecules of hemoglobin? All these questions have been discussed and rediscussed, but as yet, as Hammarsten[1] says: "The action of the iron salts is obscure."

In a clinical article we are not called upon to go into details in discussing the various phases of the question as to the absorption and mode of action of the iron salts, but a few words may be said to show the present status of the subject.

Whether iron compounds of the inorganic group are absorbed at all, is a question of subsidiary interest in the present inquiry. There are two diametrically opposite views on this question. Bunge and his pupils[2] say that inorganic iron salts are not absorbed in any amount, however small, and that Blaud's pills and similar preparations act only by combining with the hydrogen sulphide and the alkaline sulphides of the intestine, thus preventing the decomposition of the organic compounds of iron existing in our food, especially in vegetables, and so permitting the absorption of these compounds into the blood. The opposite view is held by Quincke[3] and others, but the balance of evidence is in favor of Bunge's hypothesis.[4] The well-known fact that enormous doses of iron are required to produce appreciable effects in chlorosis supports this theory. Thus, if a woman takes six grains of reduced iron three times a day (eighteen grains daily), it will take weeks to restore her to the normal condition if her hemoglobin has fallen to 50 per cent. And yet, the entire amount of iron in the blood of a normal woman of average weight is only thirty grains, so that if the inorganic iron were absorbed, as some observers claim, a few days would suffice to restore the balance of hemoglobin and red cells.

On the other hand, organic iron compounds, especially such as are composed of iron with a proteid substance that resembles as closely as possible the proteids of the food as they occur in the intestine (e. g. peptones), are undoubtedly absorbed into the blood in sufficient amounts to produce a comparatively speedy therapeutic effect in anæmia, without injuring, as the inorganic compounds often do, the epithelial covering of the stomach and intestine, and thus causing gastro-intestinal symptoms summarized under the two general headings of dyspepsia and constipation.

It is these advantages that led to the general adoption of the iron peptonates, albuminates, etc., as the remedies to be preferred in the treatment of anæmia. In this report we deal with one of these preparations, that known as pepto-mangan, Gude, in which iron and manganese exist in the form of peptonates. Gude's pepto-mangan has been used for a long time at the Columbus Hospital as a matter of routine in all anæmic patients during convalescence from prolonged illness or from operations. The satisfactory results which have been obtained with this preparation have been noted, in a general way, by the visiting staff as well as by the house physicians, but until

now we had made no study of the exact results, as attested by the examination of the blood before and after the initiation of the treatment.

In order to determine more accurately what could be expected of pepto-mangan in secondary anæmias as they occur in a general hospital, we studied a number of cases in the medical, surgical and gynecological wards. Of these a majority were in the services of Drs. Ramon Guiteras and Egbert H. Grandin, visiting surgeon and visiting gynecologist to the hospital, and take this opportunity to acknowledge their courtesy in permitting us to pursue this work.

About forty cases were studied from October 1, 1902, to March 1, 1903, in as thorough manner as possible, with a view of determining the action of the preparation to be tested. Unfortunately, for reasons beyond our control, a great many of these patients left the hospital, believing themselves sufficiently improved, without giving us time to try the remedy for a sufficient period to obtain definite results. We present, however, twelve cases in which the medication was continued for three or more weeks, usually for about a month in each instance. In each of these cases blood-counts were made before beginning the treatment, as well as after it had been discontinued. The cases are given below, simply as they appeared in our notes, and they were not selected particularly on account of the results noted, but merely because they were the cases studied more completely than the rest.

REPORT OF CASES.

Case I. Mrs. R. F., Italian, 42 years of age, was admitted to the hospital on December 4th. Diagnosis, ovarian cyst. Symptoms of secondary anæmia. She was operated upon December 5th and the uterus was removed through the abdominal incision, as it was found to be the seat of a fibroid tumor which had degenerated into sarcoma. She was discharged cured on January 10, 1903. During her convalescence she took one tablespoonful of pepto-mangan (Gude) three times daily. The examination of the blood showed the following findings:

December 4, hemoglobin 50 per cent., reds 3,350,000, whites 15,000. December 18, after hysterectomy, hemoglobin 39 per cent., reds 2,300,000, whites 16,000. January 10, hemoglobin 70 per cent., reds 4,250,000, whites 7,800.

The patient left the hospital in an excellent condition, showing no signs of anæmia or debility.

Case II. A. P., Italian, 25 years old, admitted November 17th, with stricture of the urethra and signs of marked anæmia. November 24th, perineal section and internal urethrotomy for structure. There was considerable hemorrhage during and for a few days after the operation.

Examination of blood: December 12, eighteen days after oferation, hemoglobin 68 per cent., reds 3,700,000, whites 10,429. January 4th, 1903, twenty-eight days after beginning the use of pepto-mangan, hemoglobin 95 per cent., reds 4,800,000, whites 8,400.

Pepto-mangan was given in doses of one tablespoonful three times daily from December 13th to January 10th. The patient was discharged cured on January 10th, in good general condition.

Case III. M. S., Italian, 25 years old, admitted October 14th. The diagnosis was perinephritic abscess and tuberculous knee-joint, and the patient showed pallor of the skin and mucous membranes. He was operated upon by lumbar incision for perinephritic abscess on October 24th, and his knee-joint was excised December 18th.

Examination of blood: December 13, 1902, three weeks after first operation, hemoglobin

70 per cent., reds 3,104,000, whites 5,888. December 20, 1902, two days after excision of joint, hemoglobin 70 per cent., reds 2,750,000, whites 24,000. January 10th, when discharged, hemoglobin 85 per cent., reds 4,640,000, whites 5,150.

This patient was given pepto-mangan for three weeks from December 21st to January 10th. He was discharged improved in general health. The anæmia was very marked on December 20th after the second operation, and the increase in the blood cells and hemoglobin was very satisfactory for a case of this severity after three weeks' treatment.

Case IV. Ida M., 5 years old, Italian parents, born in the United States, was admitted November 30, 1902, suffering from typhoid fever. December 12th, after the convalescence had set in, the child was extremely anæmic-looking, with pale skin and pale, bluish-red mucous membranes. Pepto-mangan was ordered, a teaspoonful three times daily, on December 12th. Eight days later the first blood examination was made, two weeks later, the second. The findings of the pathologist were as follows:

December 20th, hemoglobin 75 per cent., reds 4,720,000, whites 30,000. January 8th, hemoglobin 85 per cent., reds 4,960,000, whites 9,200. The patient was discharged cured on January 8th.

Case V. Cesare C., aged 25 years, single. Had been operated upon one year ago in South America for vesical calculus and urethral stricture. Was admitted December 3, 1902, complaining of inability to urinate and continuous dribbling of urine through a suprapubic fistula. December 13th, perineal section without a guide and internal urethrotomy were performed. The patient was weak and anæmic after the operation, so pepto-mangan, a tablespoonful three times daily, was prescribed on February 5th, 1903. He made a good recovery from the perineal operation, but the suprapubic fistula persisted. After twenty-two days' treatment with pepto-mangan he was discharged improved.

Examination of blood: February 6, 1903, hemoglobin 80 per cent., reds 3,878,000, whites 4,250. February 28, 1903, hemoglobin 85 per cent., reds 4,516,000, whites 4,600.

Case VI. M. C., aged 44 years, widower, had had urethritis four times. On admission he gave a history of having suffered from frequent and painful micturition for fifteen months. An examination showed a chronic urethral discharge, a urethral stricture, 12 F. at about 6½ inches from the meatus, and a tumor in the right umbilical region simulating a very large kidney. The prostate was much enlarged and very tender. The urine was of a specific gravity of 1,020, acid in reaction, contained no sugar and no albumin, but numerous pus cells. In addition to treatment by irrigations and by dilatation of his stricture, he received pepto-mangan, a tablespoonful three times daily, from February 4th to February 28th, to combat a marked anæmia.

Examination of the blood: February 5th, hemoglobin 45 per cent., reds 2,149,000, whites 9,760. February 28th, hemoglobin 55 per cent., reds 2,460,000, whites 6,890.

The patient improved as regards his urinary symptoms, but his anæmia did not show much amelioration after twenty-three days of iron therapy. At the time of writing he was to be prepared for a second operation, an exploratory nephrotomy for his renal tumor.

Case VII. A. B., Italian, aged 58 years, married, was admitted to the hospital on November 24, 1902, complaining of symptoms of enlarged prostate which had been giving trouble for six months. He had lost considerable flesh and strength and looked very anæmic. He was operated upon December 27th. His convalescence progressed satisfactorily as regards his urinary symptoms, but the anæmia persisted, and on January 14th he was put on

a tablespoonful of pepto-mangan three times daily. After twenty-five days of this treatment he was discharged somewhat improved as regards the anæmia. The report of the two blood examinations before and after the use of pepto-mangan was as follows:

January 15, 1903, hemoglobin 55 per cent., reds 2,940,000, whites 8,300. February 9, 1903, hemoglobin 65 per cent., reds 3,110,000, whites 8,100.

Case VIII. A. D., 8 years old, schoolgirl, on admission to the hospital, September 22, 1902, complained chiefly of abdominal pain, general weakness, and enlargement of the abdomen. On September 24th the abdomen was opened, and the peritoneal cavity found to contain a large number of tuberculous foci on the peritoneum and a considerable amount of serous fluid. The diagnosis of tuberculosis peritonitis was made.

On January 27, 1903, the abdomen was again found full of fluid, and was opened for the second time. On January 28th the patient was given pepto-mangan, two teaspoonfuls three times daily, for twenty-nine days, at the end of which time she was discharged. The anæmia had not improved. The reports of the blood examinations were as follows:

January 29, 1903, hemoglobin 75 per cent., reds 3,920,000, whites 10,000. February 27, 1903, hemoglobin 75 per cent., reds 3,890,000, whites 7,200.

Case IX. G. P., Italian, 28 years old, was admitted to the hospital on January 13, 1903. For the last four months he had noticed a swelling of the left testicle. He had his scrotum tapped ten days before admission, and about five ounces of a clear fluid had been withdrawn. An examination showed a pyriform swelling about eight times larger than the normal testicle, with an apex above the external ring. Its upper part was hard, without fluctuation, dull on percussion, no impulse on coughing and non-translucent. Its lower part fluctuated and was translucent. On January 19, 1903, the testicle was removed, the diagnosis of sarcoma of the testis being afterwards confirmed by microscopical examination. On February 1st the patient was given pepto-mangan in doses of a tablespoonful three times daily, and this medication was continued until February 28th, when he was discharged with a well healed wound and improvement of anæmia. The reports of the blood examinations were as follows:

February 5, 1903, hemoglobin 65 per cent., reds 2,362,000, whites 5,900. February 28, 1903, hemoglobin 70 per cent., reds 3,800,000, whites 7,000.

Case X. L. M., born in the U. S., aged 25 years, was admitted to the hospital January 3, 1903. She had been married four years, and had had one child and one miscarriage. No venereal history. One month before admission she was exposed to cold during menstruation, and the flow ceased. One week before admission she began to flow steadily and still continued to do so, at her entrance to the hospital. She has had severe pelvic pains for three weeks. The uterus was found retroflexed, and a large doughy mass was found on the left side posteriorly. On January 9, 1903, she was operated upon by posterior vaginal section. A suppurating hematocle originating from a ruptured extrauterine pregnancy was found in the left broad ligament. She was given pepto-mangan in doses of a tablespoonful, three times daily, from January 10, 1903, to February 9, 1903. The patient was discharged cured on February 9th. The reports of the blood examinations were as follows:

January 24th, hemoglobin 65 per cent., reds 3,150,000, whites 9,200. February 9th hemoglobin 75 per cent., reds 4,318,000, whites 6,100.

Case XI. Mrs. L. G., Italian, 23 years of age, married six years, III para, last child

three years ago. Admitted January 15, 1903, on the recommendation of her family physician, who had made the diagnosis of ovarian cyst. On admission a careful examination was made and she was found to be pregnant in the eighth month. The woman was delivered in the hospital on February 12, 1903, the labor being normal, but accompanied with considerable hemorrhage, leaving the patient markedly anæmic, as she had been previously suffering from anæmia during her pregnancy. Pepto-mangan was given her in doses of a tablespoonful three times daily from January 25th to February 28th, when she was discharged cured. The reports of the blood examinations were as follows:

January 29th, hemoglobin 55 per cent., reds 3,126,000, whites 8,450. February 28th, hemoglobin 75 per cent., reds 4,390,000, whites 6,000.

Case XII. G. G., Italian, 44 years, single, was admitted to the hospital on November 26, 1902. He is accustomed to smoke a pipe. For the past fourteen months he has had a sore on his lower lip, which gradually grew larger. At times it gave rise to a great deal of pain. On examination, a small growth was found in the median line of the lower lip, hard in consistence, ulcerating, and with slight infiltration of the surrounding tissues. The sublingual and cervical glands were not enlarged. The growth was removed by a V-shaped incision on December 10, 1902. A moderate degree of anæmia remained after the operation, and on February 6, 1903, the patient was given pepto-mangan, in doses of a tablespoonful three times daily. This medication was continued until March 5, 1903, when the patient was discharged cured. The microscopical examination of the growth showed it to be an epithelioma. The reports of the blood examinations were as follows:

February 6, 1903, hemoglobin 70 per cent., reds 3,219,000, whites 8,318. March 5, 1903, hemoglobin 85 per cent., reds 4,890,000, whites 7,000.

SYNOPSIS OF THE CASES.

No.	Name	Age	Sex	Diagnosis	First blood counts			Last blood counts			Result as regards Anæmia
					Hem.	Whites	Reds	Hem.	Whites	Reds	
I	R. F.	42	F.	Fibroid of uterus degener. into Sarcoma (Oper.)	50%	15,000	2,580,000	70%	7,800	4,250,000	Markedly Improved
II	A. P.	25	M.	Stricture of the urethra (Oper.)	68%	10,429	3,700,000	95%	8,400	4,800,000	Cured
III	M. S.	25	M.	Perinephritic abscess (Oper.) Tuberculosis knee (Oper.)	70%	5,888	3,104,000	85%	5,150	4,640,000	Improved
IV	I. M.	5	F.	Typhoid fever	75%	30,000	4,720,000	85%	9,200	4,980,000	Markedly Improved
V	C. C.	25	M.	Suprapubic operation for vesical calculus Urethral stricture (Oper.)	80%	4,250	3,878,000	85%	4,800	4,516,000	Improved
VI	M. C.	44	M.	Renal tumor Urethral stricture	45%	9,700	2,149,000	55%	6,880	2,400,000	Slightly Improved
VII	A. B	58	M.	Hypertrophied prostate (Oper.)	55%	8,300	2,940,000	65%	8,100	3,110,000	Improved
VIII	A. D.	8	F.	Tuberculous peritonitis (Oper.)	75%	10,000	3,920,000	65%	7,200	3,880,000	Not Improved
IX	G. P.	28	M.	Sarcoma of testis (Oper.)	65%	5,800	2,382,000	70%	7,000	3,800,000	Improved
X	L. M.	25	F.	Suppurating Hematocele (Oper.)	65%	9,200	3,150,000	75%	6,100	4,318,000	Improved
XI	L. G.	23	F.	Pregnancy and labor	55%	8,450	3,126,000	75%	6,000	4,390,000	Improved
XII	G. G.	44	M.	Epithelioma of the hip (Oper.)	70%	8,318	3,219,000	85%	7,000	4,890,000	Improved

On reviewing the results obtained, we find that, considering the diversity of cases studied under the influence of pepto-mangan, the ratio of increase in the hemoglobin and red cells was very uniform. In one case only (VIII) of the twelve studied in detail, there was no improvement noted in the anæmia, and there was a hopeless case of tuberculous peritonitis, in which, however, the patient was discharged

improved as regards her abdominal symptoms after operation. In another case (VI) the improvement was but slight, but this was a patient with renal tumor, and marked cachexia. These two cases were as severe tests as an iron preparation could be subjected to, and perhaps the paucity of the results is not to be wondered at in these instances.

In the remaining ten cases reported here, as the table shows, the results were very satisfactory for the short duration of the treatment. There is no question that a few weeks longer would have brought most of the "improved" cases up to the point where we could say that the anæmia was "cured." But unfortunately our patients belonged to a class in which every day spent in a hospital counts in privations for others who depended upon them, and we have been often obliged, upon the insistent demands of the patients and their friends, to discharge the convalescents at the earliest possible date.

In addition to the forty-odd cases which we studied this winter, pepto-mangan has been used in the hospital for over two years in anæmic convalescents, with uniformly satisfactory results. In none of the cases under our observation did any untoward symptoms accompany or follow the use of this preparation. In no case did constipation, nausea, headache, or digestive difficulties follow its administration.

The results recorded here correspond with those obtained with the use of pepto-mangan by Loomis,[5] Van Schaick,[6] and von Ramdohr,[7] of New York; Peterson, Perekhan, Doehring,[8] of Chicago; Wolffe,[9] of Philadelphia; Summa [10] and Bauduy,[11] of St. Louis; Von Ruck,[12] of Asheville, N. C.; McGuire,[13] of Richmond, Va.; Frieser [14] and Pohl,[15] of Vienna, and Fasano,[16] of Naples.

On the whole, therefore, we have found pepto-mangan a very satisfactory and efficient hematinic in secondary anæmias.

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NEWS, NOTES AND ANNOUNCEMENTS.

FRUIT.—All kinds of fruit possess remedial properties of the highest value. Nature gives us such a wide range to choose from that it is a comparatively easy matter to eat fruit every day throughout the year. A diet that always includes fruit will be found a constant protection against many ills that otherwise would be sure to make their unwelcome appearance. Indeed, the stomach will call for fruit when it rejects all else. This alone shows the high importance of eating fruit every day.—*Pacific Health Jour.*

THE VERMONT STATE MEDICAL SOCIETY.—The 90th Annual Meeting of the Vermont State Medical Society will be held at Bellows Falls, Oct. 15th and 16th, under the Presidency of Dr. E. M. Pond, of Rutland. An unusually strong program is being arranged by the efficient Secretary, Dr. G. H. Gorham. The papers will be of live, scientific interest, and the annual banquet, with Dr. C. W. Peck of Brandon, as anniversary chairman, cannot fail to prove enjoyable.

The business of the Society will not encroach on the scientific work of the meeting for it will all be conducted by the House of Delegates. This cannot fail to gratify a large number of the members who go to the State Society meetings for personal benefit and interest in the scientific program.

Pay your dues to your local County Society, is the order of the new regime.

INEBRIETY, THE 20TH CENTURY PROBLEM.—Whenever the world pauses long enough to think of the growing menace from inebriety, it stands appalled. Our homes, our dear ones, our honored institutions, our business enterprises, yea, everything the future holds for mankind is threatened by the insidious march of drug and liquor habits. The dangers are so real, that sooner or later, whether we will or not, every thinking person must take cognizance of them and throw his or her influence, if they are not already victims, toward the stemming of the tide. Every method, every institution, every factor that offers the slightest hope in solving the problem, must be fostered and encouraged.

Meantime, while the world is slowly waking up, there is an institution in New York City, with numerous branches in other cities, that is doing a splendid work in reclaiming human wrecks from lives of debauchery and worse than uselessness. We refer to the Oppenheimer Institute, an institution that has grown from the experience and lifework of a New York physician, Dr. Isaac Oppenheimer. In a short time the reputation of the Institute has spread throughout the length and breadth of our land and even beyond the seas, for *it accomplishes definite results.* So tangible has been the success of the Oppenheimer Institute that a large number of prominent men and women have become interested in its future, and offered material assistance in broadening its field of work and influence. Thus it has grown to national importance, and conducted as it is on broad, scientific principles, with every regard for ethics and humanitarianism, it cannot fail to be a power for good.

Any of our readers who are interested on behalf of patients or friends, should write for literature to the Institute, 170 Broadway, N. Y. City.

Doctor, I am now 74, and if I should live 74 years more I should continue to prescribe the Alkaloids for I am confident that I have struck a good thing. Have used the Alkaloids five years and the more I use them the more I am convinced tha tthe Alkaloids are the thing. I have no worrying about the result.

S. H. DULEY.

Morris, Minn.

The Vermont Medical Monthly.

A JOURNAL OF REVIEW, REFORM AND PROGRESS IN THE MEDICAL SCIENCES.

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Burlington, Vt., September 25, 1903.

EDITORIAL.

THE ABUSE OF GLASSES.

It would seem to the most casual observer that a large majority of the human race are afflicted with defective eyesight, for the person who does not wear glasses is getting to be a *rara avis*. There can be no question that many factors existing to-day, that our forefathers were not called upon to meet, are responsible for a large increase in refractive errors. Certain it is also that the tendency of modern times towards concentration of population in cities is responsible for the marked increase of nearsightedness. But with the natural increase of failing eyesight, there has sprung up a sort of fad for the wearing of glasses. Unscrupulous opticians have aided and abetted the foolishness of those who have thought that glasses added to their personal appearance or gave them a highly cultured or studious air, and the result is that an incalculable amount of harm is being done. It is sad that human vanity can be so blind, and regardless of common sense,but every oculist is aware of countless cases where eye strain, actual ocular disease and a host of other ills have been entirely due to the2 persistent wearing of eyeglasses that were not needed. Like every other organ, the eye needs frcquent rest and hygienic care. Its muscles arc quite as liable to fatigue as those of any other part of the body, but lenses cannot supply rest, when fatigue is due to over use or abuse. Common sense alone teachcs this, but since common scnse is always crowded into the background when peoplc want to do anything contrary to sound judgment, the promiscuous wearing of glasses will probably continue.

Those of us who recognize the dangers, however, and feel that the "windows of the soul" should be protected from the incompetent and unscrupulous optician, whose sole aim is to sell his wares, believe that steps should be taken to minimize the danger by appropriate legislation. Any man who assumes to correct errors of refraction, entailing as it does the highest amount of skill and judgment, should be obliged to pass a competent examination before the State Board of Health as to his fitness. Only good will result from such a measure for it will to a large extent protect the foolish from themselves, a consummation devoutly to be wished for.

COMMERCIALISM THAT UPLIFTS.

In the past a great deal of criticism has been directed against the Abbott Alkaloidal Company, pioneers in alkaloidal medication, for their so-called commercialism. We do not doubt for a minute that a good many medical men have refrained from using their excellent products, for the very reason that they feared the criticism of supporting or patronizing a medico-commercial enterprise. We must confess to feelings of disgust for such ideas, for they are incompatible with the liberality and broadmindedness that ought to characterize medical men. If Dr. Abbott and Dr. Waugh choose to sell good products to the

medical profession and prove their worth and advantage in every legitimate way, that is their business, just as it is every other physician's to convert his knowledge and experience into coin of the realm. As medical men we like to appear above the spirit of commercialism. But we only deceive ourselves. The world knows that we are not practicing medicine and working twenty hours out of the twenty-four for the sake of our health or the glory of humanity alone. We are after the almighty dollar just as much as the plumber or undertaker, and the sooner we let the world know it, the more respect we will command. A proper value placed on our services by ourselves will mean that the people will also value them, for the world is pretty prone to take a man at his own valuation.

But to return to the Abbott Alkaloidal Co. We respect and admire their commercial methods for they are honest, and are doing a splendid work in uplifting modern therapeusis. If they posed as philanthropists alone, we should be suspicious, but they do not. They have something to sell and justify the use and sale of that something by showing the advantages to be obtained. Hundreds and thousands of physicians know that they tell the truth, and this is justification enough for their methods. Their products cannot be excelled and stand for purity, simplicity and progress. Commercialism it may be, pure and simple, but it is commercialism that uplifts, that carries us a little nearer accuracy and truth, and we say success to it.

MEDICAL ABSTRACTS.

Is Arsenic a Physiological Element?—The presence of arsenic in the human system, as has recently been discovered by M. A. Gautier, of Paris, and afterward confirmed by M. Bertrand, and the fact that it has been found in all animals from the higher vertebrate down to the sponges, leads these distinguished scientists to the conclusion that it is a primordial element of the living cell absolutely necessary to the proper working of the organism. In a recent scientific cruise made on board the Prince of Monaco's yacht, Monsieur Bertrand found by infallible tests of great delicacy the presence of arsenic in animals inhabiting the bottom of the sea, where there could have been no possibility of their having obtained it as a part of their development. Monsieur Bertrand has just brought to the attention of the Academy of Paris the presence of arsenic in hens' eggs. Although every part of the egg contains an appreciable quantity, the largest proportion is found in the yolk; of the 200th part of a millegram found on an average in an egg, from one-half to two-thirds is in the yolk, the white containing a much less amount in proportion. The fact of the universal presence of arsenic in animal life, even though exceeding minute, is of great importance, not only in therapeutics in preserving the harmony of the organic elements of the system, but in forensic medicine, as it may be cumulative, and permits the argument of isolated traces of it in human viscera may have a perfectly normal origin and does not necessarily admit of a criminal intent.—*Med. Times.*

Prophylaxis in Threatened Appendicitis.—Diet is of great importance. At first it should consist of nothing more than strained soups, consomme or bouillon. If milk is given, it should be first peptonized. Later, food that digests readily in the stomach may be given. All articles of diet that tend to increase fermentation should be avoided.

Pain should be relieved by the application of ice poultices or the hot water bag, as may prove to be the most agreeable to the patient. In no event should opium or its derivatives be employed until other means have failed to afford relief. The bowels should be kept free

from gas by the use of enemata, or, if need be, laxatives, such as castor oil, magnesia or cascara may be used. An occasional laxative dose of calomel will do no harm.—*American Practitioner and News.*

Treatment of Tetanus.—Dr. Douglas Symmers, of Philadelphia, contributes an excellent paper on the treatment of tetanus by means of subcutaneous injections of carbolic acid, and gives a review of seventy-five cases from the literature on the subject. The following are his conclusions: Each individual case imposes, of course, its own limitations and restrictions, but in the light of our present knowledge the following suggestions are worthy of emphasis: (1) All suspicious wounds, and all wounds in which the tetanus bacillus is known to exist, should be excised or the extremity amputated; if this be impracticable, the wound should be cleansed of all foreign substances and saturated with oxygen by means of hydrogen dioxide or the injection of pure oxygen gas, following which it should be flushed with boric-acid or saline solution, which in turn should be followed by potassium permanganate or a 5 per cent solution of iodine trichloride; no matter what local treatment is adopted, if the wound affect an extremity, care should be exercised in applying permanent carbolic dressings or any other form of carbolic acid lest gangrene develop; in establishing drainage, moist iodoform gauze should be used whenever expedient; impermeable dressings, dusting powders, and caustics should never be employed and such wounds should never be incised. (2) Subcutaneous injections of antitetanic serum should be given in every case in which the development of tetanus is more than a remote pssibility. (4) In addition to the general management of a case of tetanus, the patient should receive subcutaneous injections of carbolic acid along the tracks of the great nerve trunks, the injections being commenced so soon as the diagnosis is made; the body should be further fortified by the administration of the acid by the mouth, or rectum, or both, and finally the drug in every case should be pushed to its utmost physiologic limit. (5) Antitetanic serum should be combined with carbolic acid, and if possible, it should be given according to the method of Jacob: 5 Cc. or 10 Cc. of cerebrospinal fluid is withdrawn by means of a hollow needle cautiously inserted into the subarachnoid space between the second and third lumbar vertebras, following which 5 Cc. of antitetanic serum is allowed to flow slowly in under very gentle pressure; the foot of the bed is then elevated and allowed to remain so for at least half an hour; if this cannot be done, the serum should be administered subcutaneously—frequently and in full doses—choosing, by preference, the track of the great nerve trunks, or inserting the needle near or even into the sheath of one or both of the sciatic nerves, in which event the patient should be kept under chloroform for a reasonable time in order that pressure against or stretching of the nerve sheath may not increase the number of convulsions or the degree of pain; the intracerebral and subdural paths, opening upon dangerous ground and necessitating the performance of a major operation, are available only in certain cases and under certain circumstances, and the ultimate object is attained with no more certainty than is assured by the subarachnoid method. The intravenous injection is the least rational of all because the antitoxin, going directly into the right heart, becomes aerated as it passes through the lesser circulation, and is thus deprived of at least some of its potency, an objection which Laplace tentatively directs against the subcutaneous employment of the serum, and which would apply with even greater force to the intravenous method. Lastly, absolute quiet should be maintained,

and the use of carbolic acid, antitetanic serum, and the nervous sedatives be continued for several days after the complete subsidence of spasm.—*Amer. Medicine.*

STRAY THOUGHTS.

RESOLVE.

To keep my health.
To do my work.
To live.
To see to it I grow and gain and give.
Never to look behind me for an hour.
To wait in weakness and to walk in power,
But always fronting forward to the light,
Always and always facing toward the right.
Robbed, starved, defeated, fallen, wide astray—
On, with what strength I have,
Back to the way.

—*Charlotte Perkins Stetson.*

IF I WERE YOU.

If I were you, I'd see my path of duty,
So straight and plain, without a curve or bend,
And walk upon it, without swerve or falter,
From life's beginning straightway to its end.
I'd be so strong, so faithful, and so true,
I would, if I were you.

—*Anna Olcott Commelin.*

TWO CAREERS.

I.

So much one thought about the life beyond,
He did not drain the waters of his pond;

And when death laid his children 'neath the sod
He called it "the mysterious will of God."

He would not strive for worldly gain, not he—
His health, he said, was stored in God's To Be.

He kept his mortal body poorly dressed,
And talked about the garments of the blesed;

And when to his last sleep he laid him down,
His only mourner begged her widow's gown.

II.

One was not sure there was a life to come,
So made a heaven of his earthly home.

He strove for wealth, and with an open hand
He comforted the needy in his land.

He wore new garments often, and the old
Helped many a brother to keep out the cold.

He said his life was such a little span,
Man ought to make the most of it for man;

And when he died, the fortune that he left
Gave succor to the needy and bereft.

—*Ella Wheeler Wilcox.*

BOOK REVIEWS.

SAUNDERS' MEDICAL HAND ATLASES.

Atlas of the External Diseases of the Eye.—By Prof. Dr. O. Haab, of Zurich. Second Edition, Thoroughly Revised. Edited, with additions, by G. E. DeSchweinitz, A. M., M. D., Professor of Ophthalmology in the University of Pennsylvania. With 98 colored lithographic illustrations on 48 plates, and 232 pages of text. Philadelphia, New York, London: W. B. Saunders & Company, 1903. Price, $3.00 net.

This Atlas on External Diseases of the Eye forms an excellent companion-book to Professor Haab's "Atlas of Opthalmoscopy and Opthalmoscopic Diagnosis," and is just what might be expected from an author of such broad clinical experience and trained observation. Starting with examination of the eye the student is easily and gradually led from one examination to another, thus becoming familiar with the best methods of investigating the eye for the detection of disease. In the chapters on diseases of the eye which follow, the most important diseases are clearly described and the best therapeutic measures recorded. The text has been amply illustrated by a series of beautiful chromo-lithographic plates, to each one of which a clinical history is appended. This second edition has been thoroughly revised and brought down to date, and a number of new chromo-lithographic plates added. As in the first edition valuable editorial comments are introduced, and reference made to many of the modern therapeutic agents.

Modern Surgery.—General and Operative. By John Chalmers DaCosta, M. D., Professor of the Principles of Surgery and of Clin-

ical Surgery in the Jefferson Medical College, Philadelphia. Handsome octavo volume of 1099 pages, with over 700 illustrations, some in colors. Philadelphia, New York, London: W. B. Saunders & Company, 1903. Cloth, $5.00 net; Sheep or Half Morocco, $6.00 net.

This work presents in a concise form the fundamental principles and the accepted methods of modern surgery. Obsolete and unessential methods have been excluded in favor of the living and the essential. The author's extensive experience as a teacher is evident throughout the entire work, the statements being clear and to the point.

The progress of surgery in every department is one of the most notable phenomena of the present day. So many improvements, discoveries, and observations have been made since the appearance of the last edition of this work that the author found it necessary to rewrite it entirely. In this fourth edition the book shows evidences of a thorough and careful revision, and there has been added much new matter. There have also been added over two hundred excellent and practical illustrations, greatly increasing the value of the work. Because of the great amount of new matter it has been deemed advisable in this present edition to adopt a larger type page. This is a great improvement, rendering, as it does, the work less cumbersome. This book will be found to express the latest advances in the art and science of surgery. We certainly recommend it.

A Text-Book of Operative Surgery.—Covering the Surgical Anatomy and Operative Technic Involved in the Operations of General Surgery. Written for Students and Practitioners. By Warren Stone Bickham, Phar. M., M. D., Assistant Instructor in Operative Surg., College of Phys. and Surgeons, N. Y.; Late Visiting Surgeon to Charity Hospital, New Orleans, etc. Handsome octavo of 984 pages, with 559 illustrations, entirely original. Philadelphia, New York, London: W. B. Saunders & Company, 1903. Cloth, $6.00 net; Sheep or Half Morocco, $7.00 net.

This work completely covers the surgical anatomy and operative technic involved in the operations of general surgery. It is constructed on thoroughly new lines, the discussion of the subject being remarkably systematized and arranged in a manner entirely original. A feature of the work to which we would call especial attention, and for which alone it is well worth the price, is the wealth of magnificent illustrations. There are 559 of them, all entirely original. They depicit the progressive steps in the various operations detailed with unusual clearness, and at the same time represent the highest artistic excellence. The text is fully abreast of the latest advances in suggery, all the recent improvements along the line of technic being adequately discussed. Another feature distinguishing it from other works on operative surgery, is the treatment of the anatomic side of the subject in connection with the operative technic. The illustration will be found of particular assistance in this connection, the muscles, bones, etc., being clearly indicated, together with the lines of incision. It is a magnificent work, and we have yet to see its equal.

A Diagnostic Chart of Tumors and Pseudo-Tumors.—Battle & Co. have just issued a complete and unique chart on the above subject, compiled by Dr. Edward C. Hill from standard works on surgery and pathology. The subject matter is divided into solid neoplasma (sub-divided into benign and malignant growths), and true and false cysts. The general characteristics of each division are given, and their twenty-four classes, embracing over 100 varieties, are compared critically in columns under the following headings: Tissue, Topography, Number, Size, Conform-

ation, Color, Consistence, Mobility, Sensibility, Surrounding Tissues, Occurrence, History of Growth, and Miscellaneous Points. Features of special differential value are emphasized by the use of italics. This chart shows almost at a glance for ready comparison all that could be learned in a diagnostic way from the perusal of hundreds of pages of ordinary text. It stands indeed to such books as an atlas does to a gazetteer. This very convenient and valuable compendium is at the command gratis of any and every practitioner of medicine, who will take the trouble of writing a postal card to Battle & Co., 2001 Locust St., St. Louis.

NEWER REMEDIES.

Fellow's Compound Syrup of Hypophosphites.—Contains Hypophosphites of Iron, Quinine, Strychnine, Lime, Manganese, Potash.

Each fluid drachm contains the equivalent of 1-4th grain of pure Strychnine.

Doses—Adults—Tonic—One teaspoonful at each meal, in a wineglassful of water (cold).

Stimulant and Tonic—Two teaspoonfuls at meal times, in two wineglassfuls of water (cold).

As a Restorative.—For anæmic persons, or those suffering from muscular or nervous debility (Neurasthenia)—One teaspoonful in water at each meal.

For Children—The doses should be regulated according to age, viz: from 9 to 12, one-half; from 5 to 9, one-third; from 1 to 5, one-quarter teaspoonful.

To secure the best results always dilute the syrup with a wineglassful of cold water to each teaspoonful of the syrup.

Medical letters may be addressed to Mr. Fellows, 26 Christopher St., New York, U. S. A., or 94 Paul St., London, E. C., England.

The Rational Treatment of Prolapsus Uteri.—This condition so generally prevalent in women and only afforded temporary relief by the use of pessary, can be more rationally and satisfactorily treated by relieving the burden thrown upon the round ligament which supports the uterus by depleting this engorged and congested member of its abnormal blood supply, we suggest the following procedure:

First, the uterus and entire uterine canal should be thoroughly cleaned by flushing with hot water.

Second, the use of an astringent antiseptic should next be employed which will contract the uterine capillaries and blood vessels.

Third, the ligaments and surrounding tissues must be toned up to enable them to more rapidly regain their normal tonecity. As a remedy particularly adaptable in the above condition, Dr. M. A. Wheeler, Attending Physician of the Rensselaer County Hospital, Troy, N. Y., highly recommends Micajah's Medicated Uterine Wafers, and says that after many years of practice he places his sole reliance upon them. These wafers combine the aseptic and astringent action so imperatively required and also tone up the relaxed condition of the uterus and its adnexa. Leucorrhea so often prevalent in these cases will rapidly disappear under this treatment.

The Advantages of Combining Remedies.—John Moir, L. R. C. P. & L. R. C. S. Ed., in *"The Therapist,"* London, says: "Latterly I have been using heroin very extensively in tablet form in combination with antikamnia, and found the combination to act charmingly, both for relieving pain and in procuring comfortable, restful sleep, so very desirable and necessary after sleepless periods, caused by a protracted, irritable cough. The soothing rest in these cases was also characterized by a light but well-marked fall in temperature; but

the greatest benefit of all in this treatment is that, although the distressing frequency of the respiration was reduced, it was stronger and heavier and less spasmodic, with a beneficial effect upon the heart at the same time. The tablets I use contain antikamnia 5 grs., heroin hydrochlor. 1-12 gr., and were given every two, three or four hours, in cases of cough, bronchitis and respiratory affections generally, according to severity of the symptoms, but usually one tablet every three hours. I found that the respiration was rendered easy, the expectoration was loosened without difficulty, and sleep was more readily obtained than with morphine, and unlike morphine there were no after-effects. I have personally taken Antikamnia and Heroin Tablets three times a day for an irritating cough, with occasional inclination to breathlessness; so that I have every reason to be thoroughly satisfied with them as sedatives and calmatives."

Rigid Os.—A rigid condition of the cervix uteri is one of the frequent causes of tardy labor, and therefore greatly enhances the dangers of parturition. In most instances this condition is due to a spasmodic contraction of the uterine muscles which is particularly liable to occur in women of nervous disposition. In these cases Hayden's Virburnum Compound is a well tried and invaluable remedy. Its anodyne and antispasmodic effects are strikingly exhibited, the rigid tissues becoming relaxed, labor progressing satisfactorily, and the general restlessness of the patient being allayed. A dose of one dessertspoonful, followed if necessary by a teaspoonful every half hour, usually does away with the necessity of dilatation, if there is no mechanical obstacle, such as cicatricial tissues or the presence of a tumor.

Sanmetto in Genito-Urinary Irritations and Atonic Sexual Conditions.—I have used Sanmetto very extensively in my practice for years, and am daily more and more convinced of its intrinsic merit in all genito-urinary irritations and atonic sexual conditions. It is my sheet anchor in urethritis, cystitis and chronic prostatis. I shall continue its use in cases where it is indicated, and also enlarge upon the field of its exhibition as circumstances may suggest. Sanmetto is all right.

Flavius J. Knight, M. D.
Charlotte, Mich.

Give the Best that is in You.—The best lesson in culture is to learn to give the best that is in us under all circumstances. He who is master of himself will be able to command his powers at all times. No matter how distracting his surroundings,how unfortunate the conditions under which he works, he will be able to focus his powers completely and to marshal them with certainty. If things go hard with the self-mastered man, he will be able to trample upon difficulties, and to use his stumbling-blocks as stepping-stones.

If a great misfortune overtakes him, he will simply use it as a starting-point for a new departure, a turning-point for more determined endeavor. He may even be weighed down with sorrow or suffering under discouragement, but he always starts anew with redoubled determination to do the things he has set his heart upon.

The power of self-subjection of a determined soul is always incredible. Imprison him, and he writes a "Pilgrim's Progress;" deprive him of his eyesight, and he creates a "Paradise Lost."—*Success.*

Curing a Boil.—A writer in the *Peoria Medical Journal* describes a method of treating a boil by the use of cocain first, then carbolic acid. He injects cocain into the boil with a fine needle, follows it by several drops of pure carbolic acid injected through a larger needle. As pure carbolic acid is not absorbed, no toxic effects are produced by its use. The method is practically painless.

COMMON SENSE TONIC MEDICATION, WITH ILLUSTRATIVE CASES.

By A. W. Duvall, M. D., Philadelphia, Pa.

Every physician of experience has many times felt the need of a satisfactory method of treatment for the exceedingly common class of cases attended with impoverishment of blood, exhaustion of nervous force and the constitutional condition designated malnutrition. Any or all of these conditions may exist independently, may co-exist, or may be part of organic diseases of the respiratory, nervous or digestive systems. It can be safely stated that the ordinarily employed tonics and reconstructives, iron, arsenic, strychnine, cod liver oil, etc., fail in the majority of cases to effect the desired results. It is soon apparent that these remedies are not absorbed, or if they do enter the system, fail to bring about the desired changes in the blood, the nervous system and general nutrition. Reasoning *a priori* it seems that the most rational and scientific method of treating these cases is by fostering the patient's nutritive functions; and this can only be accomplished by directing treatment first to restoring the enfeebled digestive organs, so that food, the natural reconstructive and tissue builder, will be digested and assimilated. This may be said to be the first and most striking indication for treatment, inasmuch as there are always present the symptoms of atonic dyspepsia with loss of appetite, and an absolute inability on the part of the patient to take sufficient nourishment to replace the increased waste of tissue brought about by the disease processes. Most so-called tonic-nutrients and reconstructives have little or no influence upon these most important functions. Iron is administered in anæmia because that element is known to be deficient in the blood; the fact that the deficiency of iron and impoverishment of the blood is but a part of a clinical condition, of which general tissue impoverishment—malnutrition—is the essential and underlying feature, seems to be disregarded. Cod liver oil, according to both scientific investigations and practical experience, is of utility only as a food fat; aside from this its therapeutic, i. e. remedial value, is practically nil. Strychnine is a stimulant to the nervous system, and, according to Professor Hobart A. Hare and numerous other authorities, is positively contraindicated in most conditions which are regarded as requiring tonic medication. What is most needed is an "all-around" tonic, which attacks the pathologic conditions upon the rational scientific basis of restoring tone to the general system—blood, nerves, organs, nutrition, by an imitation of nature's methods of restoring waste of tissue and impoverishment of nervous force, i. e. by coaxing the abrogated digestive and assimilative functions—and thereby the general nutrition—to resume normal physiologic activity. This is all the more imperative when one considers that the various pathologic conditions associated with organic diseases and impoverishment of blood and vitality, have the one essential feature in common, i. e. malnutrition. The correctness of this reasoning is amply proven by an extensive experience in treating a large number of cases of exactly the kind which every physician regards as requiring tonic treatment. The following cases are selected at random from a large number of similar ones, and are cited merely to illustrate the foregoing remarks upon what constitutes both rational and scientific tonic medication. The remedy selected was a mixture of gentian, taraxacum, dilute phosphoric acid, glycerine, with a small amount of sherry wine and carminatives (furnished under the name of Gray's Glycerine Tonic Comp.) all of which ingredients, have a well known and universally acknowledged tonic influence upon the digestive and assimilative functions. Particular attention is directed to the diverse character of the cases, the diagnosis in each of which was perfectly clear.

Case I.—Female, seventeen years of age; mill operator; had gradually lost flesh and strength for a period extending over about seven months. At the time of beginning treatment she presented the picture of typical chlorosis. Her skin was a waxy green, her conjunctivæ of sky-blue color, and she was emaciated to a marked degree. Menses had not been present for four months. The hæmoglobinometer on three separate examinations during a period of ten days showed remarkable corpuscular impoverishment—an average of 42 per cent. The subjective symptoms of muscular weakness, with mental lethargy, were most pronounced. She had been unable to take food, except of fluid character, and in very small quantities, for several weeks. Appetite was totally absent, and milk and broths, even in moderate amounts, occasioned gastric distress and were frequently vomited. She had at times paroxysms of pain resembling gastralgia. Constipation was a marked feature. Physical examination of the thorax revealed loud, systolic, blowing murmurs—hæmic—over the entire precordia, most pronounced at the base of the heart and in the carotids. There was prescribed in addition to rest, frequent bathing, peptonized milk and Blaud's mass in ascending doses. Two weeks' treatment by these measures failed either to increase the proportion of hæmoglobin or relieve the general weakness and marked disturbances of the gastric functions. She was then placed on Gray's Glycerine Tonic Compound, two drachms four times daily, and the iron was discontinued. At the expiration of seven days she had desire for food, which was apparently digested and assimilated. She was given fluid extract of cascara sagrada in fifteen-drop doses at bedtime, in order to overcome constipation. Her appetite gradually returned; she was able after two weeks to take lighter articles of diet—eggs, toast, scraped raw meat—and she had consequently gained strength. Treatment by rest, bathing and the administration of Gray's Glycerine Tonic Comp. was continued for eight weeks, at which time she had gained fourteen pounds in weight, was entirely free from gastralgia and the symptoms of atonic dyspepsia, and her hæmoglobin had increased to 82 per cent. She has had slight menstrual show, and she is now so *far* convalesced that she is able to indulge in a fair amount of mental and physical exertion without experiencing undue fatigue.

Cases II., III. were patients of the clinical character usually designated general debility in which, in addition to disorders of metabolism—manifested by loss of energy and body weight—there were particular enfeeblement of the digestive functions amounting to well-marked cases of atonic dyspepsia. Two of these cases had been under various tonic treatments for periods varying from two to four months. In accordance with Allbutt's dictum, concerning cases of neurasthenia and pseudo-neurasthenia, that the "stomach is the link in the vicious circle which has to be forged anew" ("System of Medicine," Vol. II.), these patients were placed on Gray's Glycerine Tonic Comp., the announced ingredients of which are well-known stomachics and restoratives of gastric functions. The details in brief are as follows:

Case II.—Male, twenty-nine years of age; bookkeeper; of spare build; had been closely confined to business. He had gradually lost flesh and strength for several months past, was particularly conscious of almost complete failure of appetite and suffered considerably from a frontal headache, which was subject to exacerbations of a neuralgic character. Eye strain was detected and corrected by a skilled oculist, but the headache persisted. Repeated physical examinations failed to reveal any organic disease except marked functional digestive disorders. Anorexia, distress after eating, indisposition to mental and physical ex-

ertion, epigastric tenderness and constipation were all present. The patient was first ordered comparative rest, a graduated diet and was placed on two-drachm doses, t. i. d., of elixir of iron, quinine and strychnine. He failed, however, to improve under this treatment and was placed on Gray's Glycerine Tonic Compound, tablespoonful in water, one hour before each meal time. He was ordered in addition an aperient draught at night. Within ten days his improvement was apparent to all his associates. With a marked increase in appetite there was a corresponding ability to digest food and the patient experienced a feeling of general improvement. At the end of one month's treatment he was discharged practically free from all subjective symptoms.

Case III.—Female; twenty-four years of age; housewife, with exacting duties; had gradually lost flesh, strength and ability to take and digest food. She was nervous to a marked degree, had characteristic symptoms of atonic dyspepsia, was unable to sleep and presented a typical picture of nervous exhaustion. Oxaluria was present. She was ordered rest, freedom from household duties, light diet and Gray's Glycerine Comp., half-ounce three times daily before meals.

The first change noted was an improvement in appetite and the ability to sleep. A modified "rest cure," with Gray's Glycerine Tonic Compound, was continued seven weeks, at the end of which time all the symptoms of atonicity of the digestive functions had disappeared, her appetite was better than it had ever been, she was able to assimilate food, rested well at night, and was able to resume the care of her house.

Case IV.—J. S. F., Male, aged 36. Family history: Mother and one brother died of pulmonary tuberculosis. Personal history good. Had not been sick in sixteen years; then had an attack of malaria. Present illness November 27, 1900. Severe chill, pulse 106; temperature, 102; respiration, 36. Great prostration and dry cough. For four days temperature 102 to 104, then gradually declined until on tenth day it was 100. Pulse ranged from 106-120, and then fell to 96. Other symptoms, as cough, expectoration, etc., characteristic of croupous pneumonia. But one point of importance is that there remained, after five weeks, a dullness in the apex of left lung, which would not clear up. Examination of sputum showed the pneumococcus in decreasing numbers after two weeks, and in the fifth week were found tubercle bacilli. Patient had taken cod liver oil in conjunction with the usual remedies in the treatment of pneumonia; but he did not gain strength. Gray's Glycerine Tonic was then administered. There was an immediate improvement in appetite, the patient began to eat and digest food in adequate quantities, coughed less, increased in flesh, strength and general nutrition. Dullness in left apex is practically gone, and sputum examinations show freedom from tubercle bacilli.

This case is doubly interesting. It illustrates not only the efficacy of the treatment practiced, but shows most forcibly that proper treatment in the early stages of pulmonary tuberculosis will frequently eradicate the disease; this latter fact is emphasized by all medical authorities.

Case V.—Baby, seven months; bottle-fed. Diagnosis: Bronchitis and malnutrition. Treatment: One-half teaspoonful Gray's Glycerine Tonic Compound, clear, every hour. Saw two weeks later. Results: Bronchitis cured. Gain in weight 4½ pounds. General condition improved. Treatment continued for four weeks resulted in overcoming existing malnutrition.

Case VI.—Man, twenty-eight; mechanic. Diagnosis: Pulmonary tuberculosis, with poor appetite. General condition very bad. Treatment: One teaspoonful Gray's Glycerine Tonic Compound every two hours. Ten days later:

Cough diminished; appetite improved; eats with relish. Fever much less. Treatment continued for six weeks, with the result that the night sweats were abolished and patient's nutrition is very much improved. Treatment continued.

Case VII.—Man, forty-one; works on street railroad. Complains of loss of appetite, bad cough, sweats at night badly. General condition fairly good. Diagnosis: Phthisis as result of la grippe last winter. Treatment: A teaspoonful of Gray's Glycerine Compound. Results, two weeks later: Cough not so frequent or severe; expectorates easier; appetite increased. Treatment continued with progressive improvement.

Case VIII.—Housewife; twenty-eight. Her condition, as expressed by herself was: "Cannot eat," and "have no milk for baby." General condition poor; extremely nervous. Diagnosis: Anæmia and malnutrition following childbirth three months ago. Treatment: Gray's Glycerine Tonic Compound; dessertspoonful in water before meals. A week later: Nervousness less. Appetite improved. Looked better. Treatment continued. Improvement quickly noticeable and commented on by all her friends. Second week: Bowels seemed to be regulated by the general improvement. No heartburn; has not vomited but once in two weeks. Color much better; skin clear. Her milk secretion was materially increased, and the nourishing character of her milk was manifested by a rapid improvement in the nutrition of the baby.

Case IX.—Aged 35, wife of a physician. Anæmia, general debility and malnutrition of long duration. In spite of the varied and judicious employment of iron in various organic and inorganic combinations as well as arsenic, strychnine and cod liver oil, the symptoms continued. The various proprietary forms of organic iron were tried without material benefit. The intense degree of the anæmia will be better appreciated by a report of the examination of the blood, which revealed: red blood corpuscles, 2,900,500; hemaglobin, 45 per cent. Treatment by iron (all forms), arsenic and strychnine was continued for *six months,* with only an increase of 3 per cent in the hæmoglobin. Gray's Tonic was then administered. In four days the hæmoglobin increased 4 per cent, there was for the first time a desire on the part of the patient for food, and within two weeks the patient was not only taking nourishment in sufficient quantities, but digestion was apparently normal, sleep was natural and undisturbed and there was a progressive increase in flesh and strength. After two months' treatment, which consisted of Gray's Tonic alone, the red blood corpuscles were increased to 4,400,000 and the hæmoglobin to 62 per cent. It will be noted that the blood counts at the beginning of treatment showed 2,900,-500 red blood corpuscles, and only 45 per cent hæmoglobin. With this blood enrichment, there was such general improvement that the patient may be said to have practically recovered. This case, which was seen in consultation by one of our best known consultants, illustrates most forcibly the inadequacy of iron in certain severe forms of anæmia.

For purposes of brevity further detailed cases—which are many and varied—are not herewith reported. The above mentioned cases suffice to illustrate the statement made that if the treatment of the various forms of anæmia, nervous exhaustion and malnutrition —existing either independently or as a part of constitutional or organic diseases—are to be satisfactorily treated and prompt results expected, the old time so-called tonics, of which iron, arsenic, strychnine, cod liver oil, etc., are representatives, must be supplemented by measures which are not only rational and scientific, but which have the approval of extensive and critical clinical experience. Gray's Tonic is an example of this principle; it is a reliable

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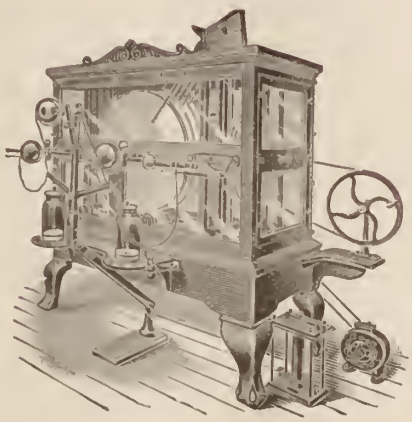

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tonic, reconstructive and nutrient in the truest and fullest sense of these terms. The remedy in question was obtained from the Purdue Frederick Co., 15 Murray St., New York.

LIFE NOURISHES LIFE—BOVININE.—The origin, evolution and interdependence of the different species of animals are themes ever full of interest.

Waiving all discussion of the origin and evolution of the species, as well as other questions of biology and mythology, it is conceded that man was created "a little lower than the angels," but a great deal higher than the highest of the brute family.

Practically, as declared in Holy Writ, man was given dominion over the beast of the field and the fowls of the air. He can not cope with the elephant or lion in strength, but he can devise traps and pitfalls in which to capture them. He can not run with the deer nor fly with the eagle, but he can invent explosives swift enough and rifles accurate enough to overtake either of them.

Brain triumphs over brawn; mind conquers muscle. The ponderous elephant obeys the pusilanimous prod of his pigmy keeper, because the prod is wielded by a superior intelligence. Timid philosophers and pessimists indict this fact of supremacy and dominion as a mere opportunity for cruelty. It is nothing of the kind. It is predestination—a part of the original plan.

Throughout the entire length of the chain, the lower orders contribute to the higher. But for this law of interdependence and necessity the progress of the race would have halted ages ago, and in its noblest representatives of to-day would rank no higher than the recently discovered "little bushmen" who skulk in the jungles of unexplored Africa.

Life sustains life—it is the law, order and sequence of Nature. Our present knowledge does not enable us to define the mysterious life, but we know how it is nourished. The animal transmutes plant, pulp and seed into assimilable nutrient, dissolves it in a saline fluid (serum) and sends it coursing through the distributing channels of the body. It is free from waste, distilled, refined, perfected by unerring vital chemistry—it is ready for instant use.

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We can not reiterate it in too strong language that the blood is the sole sustainer of life. It carries, contains and contributes every atom, element and molecule of matter that goes to build, sustain and restore the human body—muscle, nerve or brain, flesh or framework. None of the artificially prepared foods, whatever their names or claims, are thus vivified, vitalized, ready for instant assimilation and transmutation into vital force—into vigorous life.

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THE

Vermont Medical Monthly

Official Organ Vermont State Medical Society.

Vol. ix. No. 10. Whole No. 106. | Burlington, Vt., Oct. 25, 1903. | $1 per year. Single copies, 15 cts.

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Entered as second class matter at Burlington, Vt., Post Office.

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The Vermont Medical Monthly

Vol. IX. October 25, 1903. No. 10.

ORIGINAL ARTICLES.

THE BACTERIOLOGY AND PATHOLOGY OF DIPHTHERIA.*

By B. H. Stone, A. B., M. D.

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Diphtheria is one of the best understood of any of the infectious diseases and is of unique interest from the fact that through its study the subject of bacteriology and pathology of all the communicable diseases has received an immense impetus and a principle of treatment has been evolved which bids fair to be of inestimable value in the management of all bacterial diseases. In no other pathological condition has the discovery of the cause led to such brilliant successes in treatment. The development of our present knowledge of its etiology, pathology and treatment form one of the most interesting and stimulating stories of all medical history. Intimately associated with this advance we find the names of many of the brightest medical scientists of their times; Virchow, Wagner, Weigert, Klebs, Loeffler, Roux, Yersin, Welch, Flexner, Wright, Erlich, Ernst and McCollom.

Before beginning a discussion of the pathology and bacteriology of this disease it is essential to define clearly what we mean by the term diphtheria and I shall use the definition proposed at a recent meeting of the American Public Health Association: Diphtheria is that disease characterized by the production of a false membrane caused by or associated with the Klebs-Loeffler bacillus and accompanied by constitutional symptoms more or less severe.

*Read before Rutland ConutyMedical Society.

This immediately excludes on the one hand all those conditions in which there is a false membrane caused by some other organism—the old time diphtheretic and diphtheroid sore throats —and on the other hand the cases in which the diphtheria bacillus is present but the constitutional symptoms absent. This latter class of cases should, however, from the sanitarian's point of view, receive much the same consideration.

The Klebs-Loeffler bacillus was first observed by Klebs in 1883, in diphtheretic false membrane, and was isolated and studied by Loeffler in the following year. It is a rod, straight or slightly curved, with rounded ends, two or three microns in length; one-fourth to one-half as long as the diameter of a red cell. It is stained by Loeffler's and Gram's methods, and its appearance when treated with the former stain is very characteristic, showing a very distinct beading with intervals taking the stain much less intensely. It is the only organism occurring in the throat which possesses this peculiarity of staining, so that its identification by staining methods alone is usually possible. This staining reaction is shown better with bacteria which have been grown on blood serum cultures than when taken directly from the throat. There are, however, great differences in the appearances of the bacteria, due to slight changes in their environment. It has, in other words, the character of pleomorphism to an unusual degree. The organism is aerobic and facultative anaerobic, non-motile and does not liquify gelatine. Development occurs in culture media at temperatures ranging from twenty to forty degrees centigrade. The most favorable temperature is about thirty-five degrees C. It grows in gelatine, agar, and bou-

illon of faintly alkaline reaction, and in its growth in bouillon produces first an acid and then an alkaline reaction. The most favorable medium for its growth is Loeffler's blood serum mixture composed of three parts blood serum and one part bouillon mixed and coagulated by heat. On this material its growth is characteristic and rapid, surpassing that of most other organisms found in the throat. When grown for twenty-four hours on blood serum, it appears in the form of minute watery slightly raised colonies. This is the medium commonly used for its development in the laboratory.

On account of the ease of its cultivation, the diphtheria bacillus was early studied and in no other disease has the etiological relation between infecting agent and infection been more thoroughly proven. Koch's postulates that to prove a disease produced by a bacterium you must find the organism always associated with the lesion, be able to isolate it, reintroduce it into an animal with reproduction of the lesion and again recover the organism, have time and again been satisfied.

The germ is usually transmitted directly from person to person, although occasionally such infection has come through the ingestion of food. It is probable that the disease may sometimes be spread by domestic animals. Some of these are susceptible to the disease itself, and others, while immune themselves, may carry infectious material in their fur.

It has long been thought that contagion often comes from filth and through sink drains. This has never been demonstrated and can hardly be true, though undoubtedly filth furnishes a good culture ground for the germ if once inoculated. Furthermore, it has been shown that the poisonous effects of sewer gas render the individual more susceptible to infection. This is probably the only influence of these unsanitary conditions, though many cases have occurred which are extremely hard to explain in any other way, and the sink drain theory still has many strong adherents.

The diphtheria bacillus produces its pathologic results by means of a toxin elaborated outside its own body. It is a good example of that great class of diseases known as toxaemias. The organism is almost always localized in the throat in connection with the false membrane. They are, however, occasionally found in other parts of the body, indicating that a general septicaemia may and sometimes does occur at some stage of the disease. In the report of a series of 161 autopsies performed upon diphtheritic cases at the Boston City Hospital, the bacillus was found distributed as follows:

Heart's blood 7 times, 3 times alone, and 4 times mixed with other pathogenics.

Liver 30 times, 16 times alone, and 14 times with other pathogenics.

Spleen 19 times, 16 times alone, and 3 times with other pathogenics.

Kidneys 27 times, 17 times alone, and 10 times with other pathogenics.

Bacterial examinations were made of all these organs in every case. In a large proportion of these cases, as shown above, the internal organs showed a mixed infection, the strepto- and staphylococcus and diplococcus lanceolatus occurring in connection with the Klebs-Loeffler bacillus. The clinical significance of these cases of general infection with the diphtheria bacillus, is not plain. It occurs usually in the gravest cases and whether or not the bacillus continues to produce its toxin when within the blood and internal organs, it would be impossible to say, but in all probability it does so.

The occurrence of diphtheria bacilli in the throats of cases not affected with the true disease, is of great importance as a probable means of spreading infection. The organism has been found in a number of lesions other than those of true diphtheria. Some of these

are pericarditis, endocarditis, pneumonia, abscess of the lungs, acute middle ear disease, membranous and atrophic rhinitis and acute abscess of the lymph nodes. These cases, however, nearly all of them, follow attacks of true diphtheria and are best explained as sequelae. Not so the occasional occurrence of diphtheria in healthy throats. This is a subject upon which much has been written and many doubtful conclusions drawn. Kober, in a review of all the reports which he found, published in '89 the surprising statement that diphtheria bacilli were found in seven per cent of all the healthy throats, while among those exposed the throats of eighteen per cent contained the germ. This high percentage is probably explained by the fact that the investigations were made largely among dwellers in crowded city tenements and from individuals living in institutions. Many of the researches were made in investigating some epidemic actually existing. Cultures from 285 healthy individuals were examined at the Brooklyn Hospital, with only seven positive results. Of these seven, four were among adults from whom the cultures were made in connection with an outbreak of diphtheria believed to be due to infected milk; two were found in a school-room in which there had been a small outbreak. Only one of these cases had apparently never been exposed. Another series of 190 cases is published by Dr. F. P. Denny. In this series cultures from 16 healthy throats showed the bacilli. These cases came from a large school in which there were ten cases of mild diphtheria.

In order to get some definite idea of the prevalence of this organism in the throats of individuals not subjected to these unfavorable conditions, Dr. C. H. Beecher and the writer have undertaken to make routine examinations from the throats of persons in every walk of life without regard to previous throat disease. So far we have made 200 examinations and have found the bacillus only in a single case.

TABLE SHOWING THE LOCATION OF THE MEMBRANE IN 144 CASES OF THROAT INFECTION.

	NUMBER.	LOCATION OF MEMBRANE.	POSITIVE CASES.	CLINICAL DIAGNOSIS	NEGATIVE CASES.
Positive cases.	562	Pharynx.	18	Disagrees with Bact.	224
		Larynx.	13	Agrees with Bact.	275
		Tonsils.	252	None.	353
		Uvula.	4	Trachea, bronchii.	2
		Nasal.	5	Hard palate.	3
		Ton. soft, Palate, Uvula.	37	Vagina and Vulva	1
		Ton. Phar.	38	Not stated.	159
		Ton.	6	None.	125
		Larynx.	5	Phar. Ton. Uv. Tongue.	2
		Ton. Phar. Uvula.	15	Phar. Ton. Nose.	3
		Ton. Phar. Uvula. Lar.	6	Nasal. Tonsils.	1
		Nasal. Tonsils.	17	Ton. Phar. Larynx.	6
		Phar. Ton. Uv. Tongue.	2	Uvula.	5
		Phar. Ton. Nose.	3	Ton. Phar. Larynx.	5
		None.	2	Ton. Phar. Uvula.	6
		Not stated.	125	Nasal.	29
		Vagina and Vulva	159	Ton. soft, Palate, Uvula.	38
		Hard palate.	1	Ton. Phar.	38
		Trachea. bronchii.	3	Ton.	6
		None.	2	Larynx.	5
		Disagrees with Bact.	353	Ton. Phar. Uvula.	6
		Agrees with Bact.	224	Ton. Phar. Uvula. Lar.	5
			275	Nasal. Tonsils.	17
				Phar. Ton. Uv. Tongue.	2
				Phar. Ton. Nose.	3
				None.	2
				Not stated.	125
				Vagina and Vulva	159
				Hard palate.	1
				Trachea. bronchii.	3
				None.	2
				Disagrees with Bact.	353
				Agrees with Bact.	224
Negative Cases	852		35		275

In this case it persisted for several weeks. We think we are justified in concluding that diphtheria bacilli are seldom found except after great exposure in the throats of healthy persons living in hygienic surroundings. A large number of healthy persons may be infected by a mild, unnoticed case. That the conditions which favor the growth of virulent bacilli in healthy throats are the living together of a large number of persons with a limited air space.

The bacillus does, however, often persist after an attack of the disease for a long time after the patient has recovered from all clinical symptoms and in an apparently healthy throat. This annoying condition of affairs cannot be predicted and it is impossible to explain why it occurs in some cases and not in others. It can only be detected by bacteriological means, and for this reason quarantine

should never be broken until such examinations have been made. These cases can undoubtedly transmit the disease.

Diptheria infections are rarely pure. The conditions produced by the organism favor infection by other pathogenics and we find the Klebs-Loeffler bacillus combined with the staphylococcus, streptococcus, diplococcus lanceolatus, pneumococcus, one or all four. What part these organisms play in the clinical picture is difficult to say, but as these cases of mixed infection are often the most severe it is probable that the toxins of the other pathogenics are superimposed upon those of the diphtheria bacillus. It is a fact of some significance that in the 161 autopsy cases referred to above in which the Klebs-Loeffler was found in 83 separate vital organs, the other pathogenics occurred 173 times. Certain it is that the presence of the other infectious bacteria complicates the matter of antitoxin treatment.

A class of bacteria which might have given rise to much confusion, are the so-called pseudo-diphtheria bacilli which are occasionally met with in cases of mild sore throat or even with no associated clinical manifestations. These organisms have been observed and studied and reported by various workers under the name of Xerosis bacillus, Hoffman's bacillus, etc. They lack certain peculiarities of morphology and staining reactions and virulence supposed to identify the true diphtheria organism. Opinion in the last few years has been turning to the point of considering these organisms, merely attenuated varieties of the true diphtheria bacillus, or possibly that both the pseudo and the true forms may have come from a common origin. For this opinion there are strong grounds. It has been shown that they are identical in morphology in very young cultures. The test of toxicity was for a long time considered final in the differentiation between the Klebs-Loeffler bacillus and the pseudo-organisms. But toxicity is at best a variable factor and strains of typical diphtheria bacilli vary greatly in this respect. It requires much larger doses of some strains than of others to kill the guinea pig—the animal which has been taken as the standard for diphtheria experimental work. Moreover, this decrease in virulence can be brought about by artificial means by growing for many generations as a saphrophyte on culture media. This process usually causes the germ to lose also its characteristic morphological and staining points and assume a form very closely related to that of the pseudo variety.

But even more conclusive results have been arrived at by working the other way. It has been found that the least virulent of the pseudo varieties, Hoffman's bacillus, is virulent for certain small birds and that cultures recovered from these birds are so increased in virulence that they will cause the death of a guinea pig with symptoms and lesions characteristic of diphtheria infection. Moreover, with this increased virulence the organism reassumes many of its lost characteristics of morphology and staining.

We may conclude, then, that there are to be met with diphtheria organisms of every degree of virulence and that this virulence may be increased or decreased, as the case may be, accordingly as it is thrown into environment suitable for the one change or the other.

The poison produced by the diphtheria organism in its growth is related to the enzymes. It is elaborated by the bacteria outside the body and may be secured free from the organisms by filtering an old bouillon culture through unglazed porcelain. From such a filtrate the poison has been precipitated and secured in the form of a dry white powder of such a strength that .2 milligrams will kill a guinea pig. Its introduction is followed by fibrinous swelling, hemorrhage into the muscles, oedema and necrosis.

The toxin as formed by the diphtheria bacilli consists of several complex organic compounds with the same centecimal composition, some of which are toxic and others not, but all of which unite chemically with antitoxin. This presence of a variable amount of toxones, as Erlich calls the non-toxic element, is a great source of confusion in standardizing antitoxin. These toxones have, according to Erlich, the power of developing the slow diphtheria paralyses, while the toxin produces the acute symptoms.

The most conspicuous gross pathologic lesion of diphtheria is of course the membrane. This, when characteristic, is white or greyish white, fibrinous in character and is the product of an exudative inflammation caused by the toxin of the bacteria.

Two varieties may be distinguished. One, dense, fibrinous, elastic, capable of being stripped off in large flakes, microscopically seems to be composed of a reticular structure with considerable uniformity in the size of the beams forming the reticulum. This tissue is much more dense and refractory than ordinary fibrin and is hyalin rather than fibrinous in character and is probably due to a rapid hyalin degeneration of the fibrin originally exuded.

The other variety, macroscopically more friable, is composed of fibrin. The fibrin forms a reticulum varying greatly in the size of its fibers and its spaces. These spaces in general are larger, making the reticulum more open. The spaces in either membrane are filled with leucocytes, mostly of the polymorpholeuclar variety. The bacteria are found in the loose layers of these membranes. The epithelium beneath the membrane degenerates and becomes necrotic. The tissues beneath the epithelium are variously altered, the most profound change consisting of necrosis with an extensive exudation of fibrin into the tissues. This change may be so profound that it is only by the presence of the blood vessels that the one can be differentiated from the other. The blood vessels in the region are intensely congested and may even be filled with thrombi. The bacteria are only found in this exudate, and in general it may be said that bacteria are never found in living tissues. Even when found in the internal organs they are always in areas of local necrosis.

Membrane formation may be summarized, then, as follows:—active proliferation of nuclei,—degeneration of epithelium,—necrosis, —exudation of inflammatory products rich in fibrin, which may or may not undergo hyaline degeneration,—changes in the tissue beneath which represent a combination of degeneration and exudation. The membrane is never formed primarily on an intact epithelial surface.

This membrane is ordinarily confined to the epithelium of the throat but may occur upon any epithelial surface and sometimes upon abraded surfaces not epithelial. In the throat it may be limited to any of the structures or may be spread diffusely over several. In one hundred and twenty-seven fatal cases examined at the Boston City Hospital, the membrane was distributed as follows: tonsils 65 cases, larynx 75, trachea 66, pharynx 51, nares 43, bronchii 42, soft palate, including uvula, 13, aesophogus 12, tongue 9. On tonsils alone 7 cases, trachea 2, larynx 3, pharynx 1, soft palate 1, aesophogus 1, epiglottis 2, nares 1. The number of structures involved in a large proportion of these cases is unusual and is explained by the fact that these were all fatal. In a series of 562 cases of diphtheria cultures, which were examined at our laboratory, the membrane was confined to the tonsils in 252 instances. In the other cases it was spread over various other parts of the throat, the uvula, soft palate and pharynx being most often involved. In only five cases was the membrane reported to be nasal in location.

An inspection of the statistics of 852 cases which were examined for the presence of diphtheria bacilli with negative results, shows a remarkable similarity in the distribution of the false membrane. This similarity is so marked that one is driven to conclude that the location of the membrane is of almost no value in the differential diagnosis.

The general pathological lesions of diphtheria are all due to the poisoning caused by the absorption of toxin. Of these lesions the degeneration of the myocardium is one of the most common. The simplest form is a fatty degeneration which may occur diffusely throughout the entire organ or in well localized foci. There may be interstitial changes secondary to this muscle degeneration analogous to the changes in interstitial nephritis. Thrombosis is not uncommon and is due to the previous necrosis. No bacteria are found in connection with these lesions.

A broncho-pneumonia often results with a serous, purulent, fibrinous or hemorrhagic exudation and necrosis.

Cloudy swelling and degeneration may occur in spleen, kidney, and adrenals, and in connection with these lesions there are often small foci of necrosis known as focal or insular necrosis.

In chronic cases a degeneration of the peripheral nerves often occurs, and in both acute and chronic cases changes may occur in the ganglion cells.

The faucial glands are usually little disturbed; not so, however, the cervical glands and the spleen. These are usually distinctly swollen.

In conclusion, perhaps I can do no better than to emphasize the difficulty of making an early diagnosis from the clinical symptoms or the gross pathological symptoms between tonsilitis and diphtheria, a difficulty which I am sure is appreciated by all who have been brought much in contact with these two conditions. The membranes are almost identical in appearance and location and the staphylococcus infection may produce initial symptoms fully as severe as those of the graver disease.

An analysis of the statistics before mentioned shows that the physicians of this State have met with this difficulty. Of 562 cases which proved to be diphtheria upon a bacteriological examination, only 286 bore a clinical diagnosis of diphtheria, 74 were diagnosed tonsilitis, and in 202 of the cases no diagnosis was ventured.

A glance at the negative cases shows that of 852 of these, 224 were diagnosed diphtheria, 353 were not diagnosed at all, and in only 275, or about one-fourth of the cases, was a correct clinical diagnosis made. This indicates the need of resorting to a bacteriological examination. Such an examination prevented 224 of the above mentioned cases from being subjected to the inconveniences of quarantine, and what is of more importance, it prevented 74 cases of true diphtheria from going at large and subjecting others to infection. Further than this, the early diagnosis in a number of these cases probably prevented the waste of hundreds of dollars worth of antitoxin.

HERNIA OF THE APPENDIX.

By E. E. Ellis, M. D.

On October 30th, 1900, J. L. M., a farmer, aged 51 years, married, previous health good, although having a mitral murmur, which had never given him trouble; father and mother both died of disease of heart at past seventy; three sisters died during early womanhood; two of tuberculosis and one of heart disease; two brothers living who enjoy good health, called at my office to have a finger dressed which had been bitten by a hog a short time before. I cauterized the wound as thoroughly as possible and dressed it antiseptically; but

* Read before the Orange County Medical Society, October 9th, 1903.

I failed to reach all the infection and it continued to give trouble by discharging and so forth. Still all symptoms were local. December the 10th I was called to attend him at his house. I found that for fourteen years he had had two oblique inguinal hernias, and always wore a double elastic truss, and while the ruptures often came down, he had always been able to replace them by assuming a recumbent posture; but on that day he had been unable to, so I was called. I found on examination that a loop of intestine had descended into the right scrotum and it was with difficulty that I succeeded in reducing all but a small triangular lump, which remained just outside of the external abdominal ring. This I was unable to reduce and although there were no symptoms of strangulation, I felt uneasy and counsel was called on the 12th. After a careful and thorough examination, both consultants pronounced the lump, that I had been trying to put into the abdominal cavity, a swelling on the cord and consequently irreducible and advised hot fomentations to allay the inflammatory condition, which advice was followed with a result that the patient was up and about his usual duties on December 23d, and wearing his truss with no unusual discomfort and so continued until March 22d, 1901; at which time his finger was practically well, when he was taken with all the symptoms of Lagrippe,—chills, fever, muscular pains, soreness and so forth. On March 26th all symptoms had subsided and he was about the house apparently well, with the exception of the weakness which always follows such an attack. At the beginning of this illness he complained that for a few days, his truss had hurt that swelling a little, but complained of nothing else. On examination I found a little change in its shape, while the size remained about the same with very little sensitiveness. March 29th I was again called to attend him, he having been taken with a pain in right shoulder, chilly sensations, and disgust for food. I found temperature 99, pulse 88, tongue heavily coated, bowels constipated, with area of hepatic dulness higher than normal. Treatment for congestion of the liver was instituted but the symptoms showed no improvement, in fact, became aggravated, the area of hepatic dulness increased, temperature fluctuated from 98 to 102, pulse from 88 to 120, respirations increased in frequency, pain in right shoulder kept up, cough appeared, bronzed hue was marked, fluid in right pleural cavity was developed, irregular chills and cold sweats followed, together with occasional vomiting. All symptoms gradually increased despite treatment, until the morning of April 20th, when he passed away. The family, as well as myself, were anxious for an autopsy, so April 21st one was performed by Drs. Bailey and Allen of Randolph, and myself. The right pleural cavity was found filled with a serous fluid, the diaphragmatic portion of the pleura congested, with the lung apparently normal. In the posterio-superior portion of the liver was found a large abscess, filled with a large quantity of about as filthy smelling pus as it has ever been my lot to meet. After satisfying ourselves of the cause of death, Dr. Bailey suggested, out of curiosity, to look at the appendix. After opening the abdominal cavity lower down, I easily found its proximal end; but the distal end seemed to be somewhere attached, so to trace it I kept cutting until I followed it through the internal ring, inguinal canal, external ring, just external to which I found its end bound down by adhesions almost gangrenous, and from which a few drops of pus were expressed. This explained the swelling of the cord which I had endeavored to return to the abdominal cavity. We failed to measure the appendix but should judge it to be from six to seven inches in length, which of course in a measure explains why it gave so little discomfort.

I report this case not because of the abscess, although to me that is very interesting, being the only case of its kind that I have been called upon to treat during a practice of over eight years, and I believe its picture is indelibly stamped upon my memory, that is, the expression of the countenance, color of the skin and so forth; but more on account of the appendix, which was surely outside the abdominal cavity four months, and during a month of that time there is no doubt but what it was the seat of an active inflammation, and yet during that period not a symptom, which called the attention of either patient or physician to its condition. The only pain complained of by patient being in right shoulder, which I attributed then, as I do now, to the pathological condition of the liver. In looking over the literature on this subject during the past week, I find several authors speak of the appendix coming down, one stating that its being brought down with a loop of caecum, being not as rare as is supposed; and one case is reported where it descended into the scrotum, but I have been unable to find a case where it remained outside the abdominal cavity, any length of time, or where it became inflamed while there. Although I have not had the time for investigation that I expected to have, when I promised to report this, and not nearly as much as I would liked to have put into it, I hope that those who are to discuss it may be able to throw more light upon this subject.

Sanmetto in Prostatic Hypertrophy with Vesical Complications.—I have waited to express my opinion until I had a case in which I might apply the critical or crucial test to Sanmetto. Finally one of prostatic hypertrophy with serious vesical complications was presented, in which, having employed Sanmetto, both my patient and myself are much more than pleased with results. Henceforward Sanmetto goes into my armamentarium for all such and similar cases.

J. Newton Smith, M. D..

SOME INTERESTING CASES REPORTED AT THE CLINICAL SOCIETY OF THE NEW YORK POLYCLINIC MEDICAL SCHOOL AND HOSPITAL.

MEETING HELD OCTOBER 5, 1903.

The Pres., Dr. James Hawley Burtenshaw, in the Chair.

AMPUTATION OF BREAST DEMONSTRATING TRIANGULAR DRESSING OF ARM.

Dr. J. A. Bodine presented three cases of amputation of the breast for carcinoma, in which the arm had been dressed during the healing period on a triangle holding the upper arm at right angles to the body. He called attention to the consequent freedom with which the patients could use their arms. He had been using this dressing in all such cases for the past three years. An isosceles triangle, made of light splint-wood held in position by rubber adhesive strips, is so placed against the side of the chest that the upper arm is at right angles to the body, while the forearm in supination rests along one side of the triangle with the hand resting upon the hip. The triangle presses along the body between the line of incision for removal of the breast and the posterior puncture made for the drainage-tube. The arm being in this position the patient is perfectly comfortable while in bed and also while walking about. Adherence of the skin flap and scar to the under surface of the arm after enucleation of the axillary contents is an inch and a half to two inches nearer the shoulder end of the arm when dressed in this position than it is when bound against the chest. It is this difference in position of attachment of the scar and skin flap to the arm that gives such freedom from cicatricial contraction following amputation of the breast.

Dr. R. H. M. Dawbarn said that he had employed the method demonstrated by Dr. Bodine several times. It is more comfortable

because the abduction of the arm slides the scar so that it does not adhere to the region of the vein nor the main lymphatics. Patients at times have been made very miserable after amputation of the breast by swelling of the arm, due to adhesion of the scar, the forearm and arm becoming large and edematous and annoying the patient for a long time. He avoids it, partly by carrying the incision up the middle or even posterior part of the axilla, although the main dissection is sharply forward in the anterior portion of the axilla where the main vessels lie.

There is only one muscle which can take the place of the pectoralis major and minor, both of which must be entirely removed in the modern operation, and that is the deltoid. It is wonderful how this muscle hypertrophied, and being inserted into the outer third of the collar-bone, with a very poor leverage, accomplishes its mission. In the case of women who have very weak deltoids (the reverse of those shown by Dr. Bodine), it has been part of his regular operation of late years to dissect free from the clavicle one inch of the anterior edge of the deltoid, and to carry it inward as far as it will easily go, and then to sew it to the stump of the pectoralis major. That muscle, in course of time, becomes hypertrophied, and it helps a great deal; but in cases in which this operation is performed, it obviously would not do to use the isosceles triangle, with its necessary abduction of the arm. In the technique just described, as to the deltoid, the cephalic vein is liable to cause trouble, and he generally ties it off, but this may not be necessary if great care is taken. It is only when the axillary vein is involved in the cancerous growth that saving the little cephalic vein becomes a matter of importance.

EXTIRPATION OF THE JAW.

Dr. Bodine also presented two cases of fact surgery to illustrate two practical points which he considers important in the treatment of these cases. Control of hemorrhage in all surgery above the level of the cricoid cartilage is accomplished by rapidly making an incision down to the carotid artery supplying the area to be invaded, passing an ordinary rubber band that has been boiled, around the vessel, and having it pulled taut by an assistant, thus as effectually controlling the blood-current as in the case of an Esmarch bandage around the limb. The rubber is withdrawn after the operation is completed without having done any damage to the walls of the blood-vessel. He had followed this plan many years in excisions of the tongue or jaw, and in other bloody work about the head or face. The second point that the doctor wished to emphasize was that wounds of the face made by the surgeon should never be dressed with gauze. If no dressing whatever is applied and the wound is exposed to the atmosphere, it heals per primam. Dressings applied to the wound usually become saturated, either with tear or with saliva, thus certainly infecting the line of incision.

One patient presented to the Society had carcinoma of the superior maxilla. A wide removal was practised, the hemorrhage being controlled as stated above. He did not lose more than a teaspoonful of blood during the operation, suffered no shock whatever, and on the third day after operation was permitted to walk about the ward.

The second case was one of removal of the left half of the upper lip, the gap being filled in by a plastic maneuvre. The wound had healed per priman, no dressing having been applied.

FRACTURE OF THE PATELLA.

Dr. Bodine showed a case of fracture of the patella in which primary suture of the capsule had been practised. He said that in fracture of this bone the open operation of suture of the capsule is always to be preferred to treat-

ment by splints. It is impossible to obtain bony union with perfect joint function in any other way than by open incision. The fringe of the fibroperiosteal capsule invariably drops between the broken margins of the patella, effectually preventing bony union. In addition, a bloodclot forms, which becomes organized and fixed. The only objection one can bring against the open operation is the possibility of sepsis. This can be avoided with almost absolute certainty, as illustrated by the patient shown, who was operated on without the fingers of the operator going near the wound, only four instruments being used. The entire operation can be performed in fifteen minutes without any pain whatever, and with the use of one-fourth of a grain of cocaine. After incising the skin the blood-clot is washed away by a stream of warm salt solution, the ruptured capsule is picked up and sutured with kangaroo tendon, and the skin incision closed by a subcuticular suture. A posterior splint is then applied and the patient returned to bed. It is not always necessary to enter the general articular cavity of the joint. The posterior reflection of the general synovial membrane is sometimes so high up on the posterior surface of the patella that the line of fracture is below it and the general articular cavity escapes. The patient had been operated on four weeks previous to the meeting, and was able to flex his knee-joint nearly to its full limit. In two weeks more it was to be expected that the motion of the joint would be perfect.

Dr. Dawbarn opened the discussion of Dr. Bodine's cases by saying, in regard to extirpation of the jaw, that he differed from Dr. Bodine as to the wisdom of never dressing a face wound, as he thought that an occasional stitch abscess, due to exposure to dust, might be prevented by the use, for instance, of sterile gold-beater's skin courtplaster, one of the best of dressings. Lately he had modified the Ferguson incision in these cases, carrying it distinctly below the orbital plate, as, if carried into or closely below the lid, a certain degree of actropian will result. The lower the scar, the safer the operation in this respect. He believed in a preliminary operation for control of the external carotid in every severe operation about the face, such as excision of the jaw, and was convinced that many deaths from shock would not occur if this procedure were carried out.

Regarding the fracture of the patella, he said that if it were his own patella, he would not submit to primary suture, but would have it treated by splints. He thought a close fibrous union as satisfactory for practical purposes as bony union, and the element of risk much less, for some slight risk exists, even at the hands of the most rigid asceptician. He differed with Dr. Bodine in regard to the falling downward of the capsule between the bones being the chief cause of non-union. He thought the main obstacle was a bulging forward of the loose synovial membrane between the too fragments. The bones could not unite, of course, through this membrane.

The chairman, Dr. Burtenshaw, said that he well remembered the first case of fractured patella that came under his care. He brought the two pieces of bone together by means of adhesive plaster applied to the anterior aspect of the leg and thigh, bound the limb to a splint, and kept the patient in bed for the better part of three months. The result was perfectly satisfactory. He thought the danger of infection of the knee-joint by the open method very pronounced, but no greater, in the hands of a competent surgeon, than in many other wounds.

Dr. W. H. Luckett said that he did not think it best to omit the application of dressings to face wounds. He is in the habit of applying a wet dressing to all primary wounds of this character, not so much for its antiseptic effect as for its mechanical action in prevent-

ing too early sealing of the edges, with consequent accumulation of serum and blood in small pockets, which are favorable points for the growth of bacteria.

With regard to quadriceps muscle, he thought it helped to keep pieces of fractured patella apart, as well as certain tissues both in front of and behind the bone. He had never seen a synovial membrane come between the fragments from behind; in fact, the normal position of the membrane would prohibit this action. An absolutely bloodless field is necessary for a successful outcome of the operation, as one reason for adoption of the open method is to remove the fluid and blood from the sac and from between the two pieces of bone.

Dr. Alexander Lyle said that he had operated by this method in three cases, and with excellent results in two. In the third, ankylosis of the joint complicated recovery, but this was corrected under general anesthesia.

Dr. Victor Pedersen said that it is a well established fact that there is no synovial membrane behind the patella in the human being. It stops at the margin of the patella, and behind it extends only as a modified membrane. Probably the structure which would interfere most frequently with union of the fragments would be the capsule.

Dr. Bodine closed the discussion by saying that the suggestion of interference with union by the general synovial membrane was entirely new to him, and from his knowledge of the anatomy involved, he did not see how it was possible. He did not think it wise to irrigate the general articular cavity of the joint at time of operation. The irrigation fluid would produce more damage than a moderate amount of blood effusion. It is only necessary to wash out the blood-clot from between the two broken pieces and to suture the capsule. Operations should not be undertaken before third day following accident, during which time all oozing of blood from the broken surfaces has stopped, and the application of the tourniquet is unnecessary; in fact it is in the way.

ENCEPHLOCELE.

Dr. Lyle presented a child, born April 14, 1903, of healthy parents, which at birth had a tumor measuring one inch in diameter by one-half inch in depth above the nose and between the eyes. Through the courtesy of Dr. Whit he was asked to see the child, and he advised immediate operation. On April 17th, three days after birth, the baby was placed under chloroform narcosis and a longitudinal incision was made over the tumor and the frontal bone. The flaps were retracted, the sac dissected free and the contents easily withdrawn. Two small hornes of the sac extended down into the nares. After the dissection was completed, it was found that the absence of bone corresponded in size and shape to that of a silver quarter of a dollar. To cover this opening and to prevent a recurrence of the protrusion a corresponding amount of periosteum was raised from the frontal bone, turned on its pedicle and united with catgut to the margin of the ring. The skin was likewise sutured, a firm compress of gauze applied, and the head bandaged. The result was only fairly gratifying, and after a month a truss with double water-pads shaped like the finger tips was made and worn constantly. The present condition of the child is satisfactory. The periosteal flap is becoming more rigid and the bone is filling in, while the child's general and mental condition is excellent.

APPENDICITIS WITH COMPLICATIONS.

Dr. L. J. Ladinski showed a girl, 18 years old, on whom he had operated for appendicitis. He said that when he first saw the patient, it was impossible to make a diagnosis. A second examination a few days later revealed the presence of a large fluctuating tumor in the

pelvis posterior and adherent to the uterus, but nothing abnormal was found in the ilias fossa. An incision was made in the median line. The tumor was found to consist of a mass of hypertrophied omentum to which a coil of intestine and the inflamed appendix were intimately adherent. In the centre of the mass was a large collection of pus. The tip of the appendix and the coil of the intestine were adherent to the walls of the posterior cul-de-sac, and because of the gangrenous condition of this portion of the gut, about six inches of it were incised and a Murphy button inserted. The appendix was removed and the adherent omentum excised, and the pelvis and abdominal cavity drained from above. The patient made a good recovery after a protracted convalescence. Four weeks after the operation she developed a mastoiditis on the right side and the bone was incised and scraped.

He also presented a patient with a large anterior labial hernia. He said that there are two varieties of labial hernia, the anterior, which is similar to the scrotal hernia in the male, and the posterior, in which the hernia descends either in front of or behind the uterus into the vagina and labia. Labial hernia must be differentiated from fibromata, sarcomata, or cysts of the labia.

IMMUNITY.

The paper of the evening was read by Dr. F. M. Jeffries. It was a fifteen minute *resume* of the investigations culminating in our present ideas of immunity. The paper opened with definitions of immunity and infection and then described and classified the varieties of immunity.

After classifying the means by which immunity may be acquired, the speaker proceeded to a discussion of the production of toxins and antitoxins, and the statement was made that when the problem of the production of antitoxin is solved the problem of immunity will also have been solved. The subjects of hemolysis and bacteriolysis were briefly gone over, and then the two chief theories of immunity were explained, viz., Metschnikoff's theory of phagocytosis and Ehrlich's side-chain theory. It was stated that neither of these theories explains all the phenomena of the subject, although they have each added materially to our proper understanding of the same. Other conditions than those explained in these two theories must be taken into consideration.

The paper closed as follows: "To sum up, the processes of immunity are exceedingly complex, and there is no theory yet advanced which satisfactorily meets the requirements of a thorough explanation. The end is only attained by the activities of all parts of the body, the cells as well as the fluids. Nor must we lose sight of the fact that the bacteria themselves are subject to variation, as an example of which may be cited the colon bacillus, the normal habitat of which is the intestinal tract and which probably has to do with the processes of digestion, yet let tthe proper conditions be supplied and it gives forth its poison, that is to say, becomes pathogenic; and finally, we know that many of, perhaps all, bacteria produce in their growth enzymes which are bacteriolytic in themselves." A number of articles in English dealing with the subject were cited.

Dr. Albert Kohn opened the discussion of Dr. Jeffries' paper. He said that Metschnikoff studied the white cells. The origin of his work shows how laborious it must have been, and it is wonderful how his theory of phagocytosis was gained on a theoretical basis, working on the lower organisms. He studied the exoderm, the endoderm and the mesoderm; the workings of this layer were to a certain extent of the same nature as those of the endoderm, that is, of a digestive type. He then began to prove his conclusions on marine an-

imals, inserting foreign bodies in order to see what the action would be. He found that irritation was caused by what seemed to be attempts at digestion. Later, he modified his primary conclusions that the phagocytes were the only bodies concerned in the digestion of the bacteria and their toxins. His theory was accepted until Bouchard brought forward the theory that it is not the pagocytes that digest the live bacteria; that after their destruction they carried away their dead bodies.

As to the question of susceptibility, according to Ehrlich, all consideration of such outside factors as hygiene, traumatism, etc., must be omitted. If we have receptors which in the one set of cells will unite with certain parts of the toxins, the haptophorus atoms, these receptors already exist, and they cannot be influenced by traumatism, hygiene, etc., unless the receptors are changed, decreased or increased by those outside factors. The fact that the alexin bodies can be destroyed by heat, a fresh supply of sear added, and the properties of the alexin bodies return proves that the heat destroys the alexin.

Dr. James J. Walsh said that the subject of immunity was usually considered very complex. In reality, however, it is not more involved or inexplicable than is the simple matter of solutions. We pour sugar into water until it will not receive any more, but the same water will then take up a large amount of salt, and after it has become saturated with salt it will take up various other substances. A child suffers from scarlet fever and will not take the disease any more, but will if exposed, take mumps or measles. It is as if the cells became saturated with the toxins of one disease after another. The first step in immunity, as regards our modern knowledge of the subject, was taken by Pasteur when he demonstrated that chickens at the normal temperature would not contract anthrax, though if their temperatures were reduced to that of the animal in man, they were liable to anthrax. The six or eight degrees of higher temperature produced a natural immunity to the disease. In the light of Ehrlich's theory of immunity depending on the number of side chains or cells, one is tempted to wonder whether more side chains exist at the higher than at the lower temperature and whether a chicken's immunity could be destroyed by a series of changes of temperature. As a matter of fact, Ehrlich's and Metschnikoff's theories are not so far apart as has often been thought. The protective substances in the blood and cells, according to Ehrlich's theory, may well be supplied by the activity of the phagocytes.

The first immunizing process ever invented was Jenner's vaccination. During the past week Dr. Walsh said that he had been with Dr. Calkins of Columbia University who had been working on the protozoon supposed to cause smallpox. This protozoon occurs also in vaccinia. In the case of vaccination, however, the parasites invade only the cell bodies, while in smallpox they invade the nuclei of the cells, grow much more luxuriantly, and after a time invade the whole body, thus producing a generalized septic condition. In recent years we have come to realize as the result of studies in immunity that babies who are fed on mother's milk are better protected against contagious diseases than are those artificially fed. The principle reason for this is that most mothers have had the ordinary diseases of childhood and enjoy immunity from them. Immunizing substances occur in their milk and are transferred to the child during the nursing. This constitutes another reason why mothers should be encouraged to nurse their offspring and not allowed to neglect this sacred duty unless there is some absolutely necessary reason.

THE VERMONT STATE MEDICAL SOCIETY.

The Ninetieth Annual Meeting of the Vermont State Medical Society was held at Bellows Falls, Oct. 15 and 16, 1903. The various sessions were held in Hibernian Hall, and were well attended. The meeting was unusually interesting, the papers were thoroughly enjoyed, and everything went off smoothly and nicely.

The following was the program:

PROGRAM.

FIRST DAY—THURSDAY MORNING.

9.30 o'clock.

1. Called to order by the President, E. M. Pond, Rutland.
2. Prayer by Rev. C. W. Jackson, Bellows Falls.
3. Report of the Committee on Arrangements.
4. Reading of the Record of the last annual meeting by the Secretary.
5. Reports of Officers and Delegates:
   Secretary ..... Geo. H. Gorham
   Treasurer ..... B. H. Stone
   Board of License Censors, Chairman, Henry Janes
   Necrology, Chairman ..... M. H. Eddy
   Legislation, Chairman..... W. N. Platt
   Delegates to the Medical Department of the University of Vermont, Dartmouth Medical College and to the different Societies.
6. Obituary of James Conland, M. D., C. S. Pratt, Brattleboro
7. Obituary of J. C. Rutherford, M. D., C. L. Erwin, Newport Center
8. Obituary of W. H. Vincent, M. D., C. W. Howard, Shoreham
9. History of Bennington County Medical Society, L. B. Newton, North Bennington
10. Reduction of Dislocations of the shoulder joint, Henry Janes, Waterbury

Discussion opened by H. C. Jackson, Norwich.

THURSDAY AFTERNOON.

2 o'clock.

1. Introduction of Delegates from other Societies.
2. Vice-President's Annual Address. Nephritis, Deane Richmond, Windsor

Discussion opened by J. S. Horner, Pawlet.

3. Prolapse of the Uterus, S. G. Start, Cambridge

Discussion opened by C. H. Bonney, Ludlow.

4. Ileo-Colitis in Infants in the light of recent Investigation, Thos. Morgan Rotch, Boston

Discussion opened by L. C. Holcombe, Milton.

5. Diagnosis of Abdominal Tumors, H. L. Crowell, Kansas City

Discussion opened by Donly C. Hawley, Burlington.

Meeting of the House of Delegates, 5 P. M.

EVENING SESSION.

8 o'clock.

President's Annual Address. Early operation in Abdominal Troubles, E. M. Pond, Rutland

Discussion opened by L. M. Greene, Bethel.

BANQUET.

The Annual Banquet was held at the Hotel Windham at the close of the evening session.

C. M. PECK, Anniversary Chairman.

SECOND DAY, FRIDAY—MORNING SESSION.

9 o'clock.

1. Report of the Clerk of the House of Delegates.
2. Report of the Tuberculosis Commission, Don D. Grout, Waterbury
3. Treatment of effusions of the chest and their consequences, William Watkins Seymour, Troy, N. Y.

Discussion opened by S. E. Maynard, Burlington.

4. Symposium on Pneumonia.
   a Etiology and pathology, F. C. Phelps, Vergennes
   b Clinical History and Diagnosis, O. C. Baker, Brandon
   d Complications and Sequelae, C. W. Locke, Springfield
   c Treatment, A. C. Bailey, Randolph

Discussion opened by C. S. Scofield, Richford.

AFTERNOON SESSION.

1.30 o'clock.

1. Intracranial Fibro-Sarcoma, or Psammoma, W. D. Berry, Waterbury

Discussion opened by W. N. Thompson, Brattleboro

2. Essay, J. E. Hartshorne, St. Johnsbury

Discussion opened by H. A. Francisco, Rutland.

3. The Temperature as a guide to the existence of suppuration, Lyman Allen, Burlington

Discussion opened by E. S. Allbee, Bellows Falls.

4. Voluntary papers and reports of cases.
5. Unfinished business.
6. Adjournment.

Read by invitation before the Celtic Medical Society of New York, Academy of Medicine, New York, April 23, 1903.

The following officers were elected:

President—Dr. W. N. Bryant, Ludlow.

Vice-President—Dr. P. E. McSweeney, Burlington.

Secretary—Dr. G. H. Gorham, Bellows Falls.

Treasurer—Dr. B. H. Stone, Burlington.

Auditor—Dr. J. H. Blodgett, Saxtons River.

NEWS, NOTES AND ANNOUNCEMENTS

Rutland County Medical and Surgical Society.—A quarterly meeting of the Rutland County Medical and Surgical Society was held at the Berwick House, Rutland, Vt., October 20th, 1903, at 11 A. M. The program was a symposium on pneumonia.

a. Etiology and Pathology,
G. H. Fox, Rutland, Vt.
Discussion, J. L. Welsh, Proctor, Vt.

b. Clinical History and Diagnosis,
O. C. Baker, Brandon, Vt.
Discussion, C. B. Ross, W. Rutland, Vt.

c. Treatment,
John J. Lyston, Rutland, Vt.
Discussion,
Harwood Vernon, Rutland, Vt.

The American Public Health Association.—At the recent annual meeting of the American Public Health Association held in Washington, the following officers were elected: President, Dr. Charles J. Finley, Havana, Cuba; vice-presidents, Drs. J. R. Monjaras, Mexico, and W. W. Woodward, Washington, D. C.; secretary, Dr. Charles O. Probst, Columbus, Ohio; treasurer, Dr. Frank W. Wright, New Haven, Conn. The next annual meeting will be held at Havana, Cuba.

The Chittenden County and Burlington Clinical Society.—A regular monthly meeting of the Society was held at their rooms, 162 College street, October 30th, 1903, at 8.30 P. M. Dr. C. H. Beecher read a very interesting paper on Primary Pernicious Anemia.

At the recent meeting of the American Public Health Association held at Washington, the committee on vital statistics reported that effective co-operation had been instituted between that Association, the Conference of State Boards of Health, the American Medical Association, the United States Census Bureau and the United States Public Health and Marine-Hospital Service for the improvement of the vital statistics of this country. Among the objects sought are the extension of adequate methods of registration, the use of uniform and comparable tables and rates in bulletins and reports, and the improvement of the international classification of causes of death. A pamphlet on "Statistical Treatment of Causes of Death" has been issued by the United States Census Bureau, requests for which should be addressed to Mr. W. A. King, Chief Statistician for Vital Statistics, Census Bureau.

It has special reference to the difficulties encountered in compiling deaths returned from several causes, and asks for the co-operation of the profession in framing a thoroughly satisfactory method of procedure in such cases.

An International Congress on Tuberculosis.—The Administrative Board of the St. Louis Exposition have appointed a Committee to organize a World's Congress on Tuberculosis, to be held October 3, 4 and5, 1904.

The following gentlemen compose the National Committee of Organization:

Clark Bell, LL. D., Chairman, 39 Broadway, New York. President Medico-Legal Society of New York.

A.N.Bell, M.D., Editor Sanitarian, Honorary President of the Congress, Brooklyn.

E. J. Barrick, M. D., President of the American Congress on Tuberculosis, Toronto, Ont.

Hon. Moritz Ellinger, Corresponding Secretary of the Medico-Legal Society and Chairman of the Governing Council, New York.

Ex-Judge Hon. Abram H. Dailey, Honorary President of the Congress, Brooklyn, N. Y.

J. Mount Eleyer, M. D., New York City, Vice-President of the Congress.

Samuel Bell Thomas, Esq., Secretary of the Congress, 116 Nassau Street, New York.

A. P. Grinnell, M. D., Burlington, Vt., First Vice-President Medico-Legal Society.

H. Edwin Lewis, M. D., Burlington, Vt., Editor Vermont Medical Monthly, Member of Council.

Richard J. Nunn, M. D., Savannah, Ga., Member of Council.

W. F. Drewry, M. D., Vice-President of the Congress, Member of the Council, Petersburgh, Va.

M. K. Kassabian, M. D., Member of Council, Philadelphia, Pa.

M. Markiewicz, M. D., New York City, Member of Council.

Dr. F. E. Daniel, First Vice-President of the Congress, Editor Texas Medical Journal, Austin, Texas.

Prof. Dr. C. H. Hughes, Honorary President of the Congress, St. Louis.

Dr. W. F. Morrow, Secretary of State Board of Health of the State of Missouri, Kansas City.

Dr. John H. Simon, Health Commissioner, St. Louis, Vice-President of the Congress.

Dr. W. B. Dutton, Chief Surgeon, M. P. System, St. Louis, Mo.

G. R. Tabor, State Health Officer, Austin, Texas.

The Vermont Medical Monthly.

A JOURNAL OF REVIEW, REFORM AND PROGRESS IN THE MEDICAL SCIENCES.

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J. M. French, M. D. *Milford, Mass.*
F. S. Hutchinson, M. D. *Enosburg Falls, Vt.*

BURLINGTON, VT., October 25, 1903.

EDITORIAL.

JUSTICE ABORTED.

The result of the Cosgriff-McSweeney malpractice suit is announced as we go to press. That any body of men of even mediocre intelligence could disagree, and fail to render a verdict for the defendant, Dr. P. E. McSweeney, is almost unbelievable to those who know anything at all about the case. It is understood that the final ballot of the jury stood eight for the defendant and four for the plaintiff, but the real difficulty and cause of a miscarriage of justice was one man who had sold large quantities of beef to the plaintiff Cosgriff. If this is so, and there seems no reason to doubt it, an investigation should be made and some restitution made the defendant. A particularly farcical phase of the affair was the return of the jury for instruction. All through the trial the plaintiff denied any disease of the appendix which was removed, and yet in the face of this the jury sought advice as to their duties "should they find the appendix in question only partially diseased!" Ye gods, "partially diseased!" It would be interesting in this connection to learn the jury's ideas of pathology, and the relation of "partial disease" to symptomatology. Their exhibition of asininity is only another instance of the utter inability of the average jury to wrestle with scientific problems.

Another disagreeable, detestable feature of the trial, was the attitude of at least one of the plaintiff's lawyers. His plea in which he attacked Dr. McSweeney and almost every witness for the defense, was a dirty, scurrilous effort, unworthy of any self-respecting man. It was an attack, and not an argument, and noticeable principally for its abuse and bad grammar. The law is lowered and not elevated by men whose personality can let them stoop to such tirades. A pleasing contrast was the plea of Mr. Ballard for the defense. His attitude was that of a gentleman, argumentative and sincere, but devoid of abuse or villification. His diction was perfect and he showed a grasp of the medical side of the question that is seldom found in a lawyer or layman.

It is to be regretted that the case did not end as every one expected it would, in complete vindication of Dr. McSweeney, but the public at last understand the matter and "see through the hole in the wall." Dr. McSweeney has lost none of his old friends and has made many new ones. He will go on doing his duty and making as great a success of his work in the future as he has in the past. The medical profession respect him and stand by him and this ought to be enough vindication for any man.

EDITORIAL NOTES and CLIPPINGS.

SUCCESS THOUGHTS FOR THE DOCTOR.

Mistakes are but mile posts along the highway to success. He who never makes a mistake never makes anything.

The doctor who tells the truth the oftenest is believed the oftenest.

To prevent misunderstanding with your patient say just what you mean, use few words and be positive.

Dignity is all right, but it don't practise medicine when it chills your patrons. Keep close. Friendship counts.

Confidence and enthusiasm are as necessary to the successful doctor as to any other business man.

Professional wisdom depends on knowing how to do the right thing at the right time and how to do it well.

Don't tug and strain at theories—be plain, sensible, every-day doctors.

Don't be afraid or ashamed to use every legitimate means to promote your business. Don't be a clam and don't be a quack.

Generalities are as much out of place in modern medical diagnosis as shotgun prescriptions are in the practice of to-day.

The successful doctor in all his doings appeals to the understanding and intelligence of his patrons.

Formality is cold, friendliness is warm, and the sunny side always attracts.

Let the thought of every day suggest success to yourself and your every act will suggest confidence and success to your patrons.

The better you treat your patrons and the more successful you are, the more they will advertise you.

Pleased patrons are your best promoters.

The chief end of business is to succeed and success means not only quality, but quantity of result. Don't be afraid to push.—*Alkaloidal Clinic.*

No Place for Doctors.—A well-known and popular physician, whose belief in the future accords with that of the late Col. Ingersoll, had occasion recently to perform a surgical operation upon a man not select in his language. After etherizing his patient, the operation was successfully performed.

When the effect of the ether has passed off, the subject, looking wildly around the room, exclaimed: "Where am I?"

The doctor replied: "Oh! you are all right."

"But," said the man, "I may be all right, but where am I?"

The doctor answered, jocularly, "In heaven."

The patient responded: "If that's so, I'd like to know what in ——— you are doing here!"—*Philadelphia Ledger.*

MEDICAL ABSTRACTS.

REMARKS UPON CESARIAN SECTION FOR PLACENTA PREVIA,*

With Special Reference to the Life of the Child.

Francis D. Donoghue, M. D., Instructor in Clinical Surgery, Tufts Medical School, Boston.

Abstract from Annals of Gyn. and Ped., Boston, August, 1903.

Is Cesarian Section for certain varieties of placenta previa justifiable? If you believe that the mother and child have the same right to life, you must answer affirmatively. If, on the other hand, you believe in the teaching that the infant may be deliberately sacrificed to improve the mother's chance of living, then you probably do not believe in this treatment.

After quoting results of Shauta, Ehrenfest, Fry, Straussman and Higgins, Dr. Donoghue says:—

It is evident, therefore, that the results of the modern *conservative treatment for placenta previa* compare favorably, so far as the child is concerned, with the *conservative* operation so common twenty years ago in cases of *contracted pelvis,* namely CRANIOTOMY. The

*Read by Invitation before the Celtic Medical Society of New York Academy of Medicine, April 23, 1903.

mortality to the mother, in both instances is about the same.

Craniotomy, with a *low maternal mortality*, has given place to Cesarian Section, with a *slightly higher* maternal mortality, because the right of the child to life can not be denied. Is it unfair to draw a parallel between the operation which *deliberately sacrifices* a hundred percent of the children in the interest of the mother, and one which only sacrifices eighty or ninety percent?

Finally, I believe that (a) the operation should be performed through the left rectus muscle. (b) Incision of the uterus is not usually followed by hemorrhage, even when the broad ligaments are not constricted. (c) Time should be allowed for contraction and retraction of the uterine fibres before attempting to remove the placenta. (d) If sufficient time be given for this to occur, no blood will be lost from beginning to end of operation, and if severe hemorrhage has preceded operation the abdomen can be filled with saline solution before it is closed. (e) The shock of such an operation is certainly not greater than that of version or forceps in a woman already exhausted, and (f) within a few minutes of starting, the indications of treatment,—(empty uterus, and control hemorrhage),—will have been fulfilled.

Ergot in Alcoholism and Morphinism. —At the recent annual meeting of the New York State Medical Association, Dr. Alfred T. Livingston, of Jamestown, N. Y., protested against the general practice of using narcotic stimulants in the general class of drug habit cases, believing that sleeplessness, pain, and restlessness can be more surely relieved by ergot. The nervous disturbance of these patients depending upon the disturbance of the vascular system, the indication is to bring about promptly an equilibrium of the circulation, and for doing this the hypodermic injection of ergot is the most certain method. Ergot contracts the muscular coat of the blood-vessels, but its most pronounced action is upon areas of such tissue as is weak and relaxed, and hence its action on dilated blood-vessels is peculiarly satisfactory.

The first step in the treatment of these drug habits is to discontinue the use of the narcotic, or of any substitute therefor. Dr. L. begins with the ergot at once, giving a purgative at the same time, and keeps the bowels open. In general, two or three doses of ergot of half a dram each of his solution (consisting of 1 dram of the extract dissolved in an ounce of water) are given daily, but in extreme cases it may be necessary to employ the drug at intervals of two hours.

The ergot method acts admirably in the morphine habit, the most difficult of all to cure. In no case, after the first forty-eight hours, had he seen any evidence of a desire for morphine. A modified plan in severe forms of morphine or opium habit is to give hypodermically one or two doses of ergot daily, combined with a fractional part of the former daily dose of the drug to which the patient was addicted. The next day the narcotic used is reduced one-half, and so on until the eighth day, when it is discontinued.

In the discussion which took place after the reading of the paper, Dr. Alexander Lambert spoke highly of the ergot treatment in cases of confirmed alcoholism. For years each six weeks' service of his in Bellevue Hospital had yielded 25 or 30 deaths from alcoholism, but this had been reduced to 6 or 7 deaths since the ergot treatment had been inaugurated. He ordinarily administered 30 minims of a 12½ per cent solution of extract of ergot, repeating it in an hour, and afterward at intervals of two hours. In "wet brain" cases, in former years, the best he could do was to save 3 out

of 100, but by the ergot treatment he had been enabled to save all but 2 in about 30 cases.

Dr. F. H. Wiggin also said that he found the hypodermic use of ergot useful both in delirium tremens and in insomnia, but not with less than 50 or 60 minims of the ergot solution at a dose (equaling about 6 to 8 grains of the extract of ergot.)—*Merck's Archives.*

Pruritus and Fissures of the Anus.—Dr. W. C. Black (*Merck's Archives*) states that the following treatment is successful in severe cases of pruritus ani, especially those complicated with fissures. The sphincter ani is stretched until there is complete relaxation and the mucous membrane within the sphincter is painted with the following:

R Ichthyol,
Glycerine, aa dr. j.
M. Sig. Apply locally.

This treatment has proven in his hands more successful than any other remedy that has ever been recommended. Recently he has had good success with ichthyol injected in full strength, just within the sphincter two or three times a day.—*The Hot Springs Med. Jour.*

Fissure of the Anus.—This is one of the most aggravating and persistent of rectal troubles. It may usually be cured by dilating the sphincter as fully as possible under cocaine anesthesia and burning with pure carbolic, followed by firm packing for two days. If this does not relieve, Czerny's operation may be performed: Excision in profound anesthesia, uniting afterward the tip of the wound in the mucosa with the opposite point of the wound in the skin, drawing it out for the purpose by a suture was passed through the mucosa at the tip of the incision. The rest of the wound is united with two to four stitches. The fissure is thus radically extirpated and the defect left is lined with sound mucosa.—*Am. Jour. of Surgery and Gynecology.*

STRAY THOUGHTS.

Ingratitude.—The basest of all human shortcomings is ingratitude. A man may owe his happiness, his fortune, yea even life itself to his friend, and yet forsake that friend in his hour of need. No words can express the infamy of the ungrateful, and if there is any one fault that deserves stronger condemnation than ingratitude it has yet to be recognized. Ingersoll used to say that ingratitude was a crime. It is, and the ungrateful are criminals but little removed from those who wear the brand of Cain; in other words, there are some things almost as bad as murder, and ingratitude stands at the top. Surely the fires of hell must glow when an ingrate dies.

CROSSING THE BAR.

Sunset and evening star,
And one clear call for me!
And may there be no moaning of the bar,
When I put out to sea.

But such a tide as moving seems asleep,
Too full for sound and foam,
When that which drew from out the boundless deep
Turns again home.

Twilight and evening bell,
And after that the dark!
And may there be no sadness of farewell,
When I embark:
For tho' from out our bourn of Time and Place
The flood may bear me far,
I hope to see my Pilot face to face,
When I have crossed the bar.

UPWARD.

There is a trend in every life
Toward higher motives, nobler deeds,
In spite of all the bitter strife,
Twixt human hearts and human greeds.

—L.

DON'T WORRY.

'Tis only the foolish who worry,
For worry is bound to kill,
And the man who worries,
Is the man who hurries,
To the village over the hill.

—L.

BOOK REVIEWS.

INTERNATIONAL CLINICS.—A Quarterly of Illustrated Clinical Lectures and especially prepared Articles on Medicine, Neurology, Surgery, Therapeutics, Obstetrics, Pediatrics, Pathology, Dermatology, Diseases of the Eye, Ear, Nose and Throat, and other Topics of Interest to Students and Practitioners by leading Members of the Medical Profession throughout the world. Edited by A. O. J. Kelly, A. M., M. D., Philadelphia, U. S. A., with the collaboration of John B. Murphy, M. D., Chicago: Alexander D. Blackader, M. D., Montreal; H. C. Wood, M. D., Philadelphia; T. M. Rotch, M. D., Boston; E. Landolt, M. D., Paris; Thomas G. Morton, M. D., Philadelphia; James J. Walsh, M. D., New York; J. W. Ballantyne, M. D., Edinburgh, and John Harold, M. D., London, with Regular Correspondents in Montreal, London, Paris, Leipsic and Vienna. J. B. Lippincott Co., Philadelphia and London. Cloth, $2.00. Vol. II, 13th series.

While there have been many publications attempting to cover the ground occupied by the Clinics, it is a notable fact that none have lived as long, and that it stands alone, unique in its field.

This long life, made possible by the hearty support of the profession, is no doubt due to the very practical nature of the work and its eminent editorial corps.

The particularly excellent feature of this number is the symposium on the causation and treatment of the summer diarrheas of children, opened by Conn, of Middeleton—a very interesting discussion of the bacteria in milk and their relations to one another. He calls attention to the interesting fact, which has already attracted attention from the clinical point of view, although much misunderstood by the laity, that the lactic acid forming group are actually beneficial to the consumer, in that their activity prevents the growth, and even destroys the lives of the more dangerous pathogenic and toxin forming types. In other words, milk that gets thoroughly sour, while offensive, is found far less injurious to health than is milk with the slightly bitter or sweetish taste, but which does not coagulate. From which comes another practical point, namely, that the mere determination of the gross number of bacteria in milk is of comparatively little value, unless it includes the proportions between the lactic acid forming bacteria and the putrefactive groups, although this distinction is difficult to draw in the present state of our knowledge.

The Bacillus Shigae is, of course, given full credit for causation.

The lecture upon the treatment of cholera infantum by Marfan of Paris, is exceedingly interesting, in the treatment of which is urged abstinence from food, with large amounts of water, as much as a quart in the twenty-four hours, followed in cases of severe toxic poisoning by subcutaneous injections of artificial serum and hot baths.

MEDICAL JURISPRUDENCE, INSANITY, AND TOXICOLOGY.—By Henry C. Chapman, M. D., Professor of Institutes of Medicine and Medical Jurisprudence in the Jefferson Medical College, Philadelphia. Third Edition, Thoroughly Revised, Greatly Enlarged, and Entirely Reset. Handsome 12mo. volume of 329 pages, fully illustrated, including four colored plates. Philadelphia, New York, London: W. B. Saunders & Co., 1903. Cloth, $1.75 net.

This work is based on the author's practical experience as Coroner's Physician of the City of Philadelphia for a period of six years. Dr. Chapman's book, therefore, is of unusual value to the medical and legal professions, presenting, as it does, the information gained from active participation in medicolegal cases. This third edition, enlarged by the addition of new matter to the extent of seventy-five pages, has been entirely reset, and it is evident that in its preparation every page has undergone a careful scrutiny, so as to include the very latest advances in this important branch of medical

science. Much of the matter has been rearranged, the text has been more fully illuminated by additional references to cases, and a number of new figures and tables have been added.

In reviewing this excellent work we have found that it covers the field completely and thoroughly, nothing of practical importance to the physician or lawyer having been omitted. In our opinion, there is no doubt that the work will meet with as great favor as the previous edition—a popularity which it certainly deserves.

NEWER REMEDIES.

The Treatment of Symptoms.—In a highly interesting article on this subject, Walter M. Fleming, A. M., M. D., of New York City, uses the following language:

"Long experience in the treatment of diseases in their incipiency, evidences beyond all debate, that almost invariably, the attack in a large proportion of cases is inaugurated by febrile symptoms of greater or lesser severity. Also, it may be noticed that constipation or torpid inactivity of the bowels prevails. Therefore, the first indication in the incubation or incipiency of the attack, of almost any form or nature, is primarily to allay the fever, pain-nervousness and solicitude of the patient, and secondarily to empty the alimentary canal. These two ends being accomplished, a long advance towards a possible abortive issue of the attack has been made, or in any event, the first indication and requirements are fulfilled, in proper progress toward a cure.

Thus in the primary treatment of the numerous ills, which are characterized by the above quoted symptoms, the physician will find Laxative Antikamnia and Quinine Tablets at once handy, convenient and reliable, safe and sure, and to which the turbulent symptoms of fever, constipation, pain-sleeplessness, nausea and generally wretched depression yield so promptly and gracefully, that it is certainly refreshing to the physician himself, to note the change in his patient, from suffering and solicitude to comfort and quiet. I certainly know of no other remedy which will so readily and decisively allay and control the symptoms above enumerated."

Sanmetto in Enlarged Prostate Complicated with Cystitis.—Dr. J. M. Minick of Wichita, Kan., President of the Kansas State Board of Health, reporting his experience with Sanmetto, says: "I do not explain the action of Sanmetto from any ulterior motive or for publication any further than I candidly believe it is a God-send to men who are afflicted with enlarged prostate gland complicated with chronic cystitis, with a constant desire to micturate, especially at night."

Glyco-Heroin (Smith) compared with Codeine and Morphine.—Aside from the after-effects of morphine, such as nausea, general lassitude, vomiting and vertigo, it has the disadvantage that the patient becomes readily addicted to it and chronic morphinomania occurs, especially in neurotic persons.

Codeine in its physiologic action resembles narcotine, though the narcotic stage is not so much pronounced. When administered in small doses intestinal peristalsis is promoted, while in large doses it produces diarrhœa in consequence of complete relaxation of the intestinal muscles, owing to paralysis of the nerve centers governing the intestines.

The sedative action of Codeine is unreliable.

Expectoration is not promoted by morphine or codeine, while Glyco-Heroin (Smith) acts as a stimulant to the respiratory center and stagnation of the secretions is excluded.

Comparative doses of Glyco-Heroin (Smith) and codeine show the latter to produce nausea, vomiting and vertigo, while these symptoms

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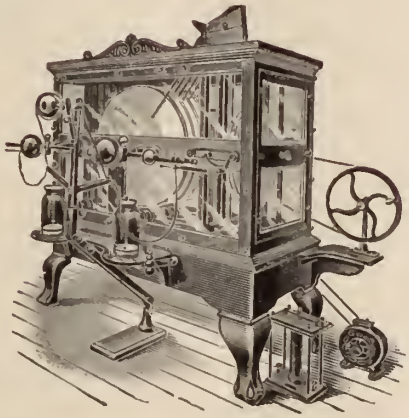

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are absent during the administration of Glyco-Heroin (Smith).

Unlike morphine preparations, Glyco-Heroin (Smith) does not constipate.

Glyco-Heroin (Smith), as a respiratory sedative is decidedly superior to the preparations of opium, morphine, codeine and other narcotics, as it is devoid of the toxic or depressing effects, which characterize the latter, when given in doses sufficient to reduce the reflex irritability of the bronchial, tracheal and laryngeal mucous membranes.

Puerperal Sepsis.—J. Clifton Edgar, M. D., recently read a paper of especial value before the New York Academy of Medicine, which illustrates the need of prophylactic measures in these cases. He said that endometritis was the most common lesion in cases of puerperal sepsis and named two principal varieties, septic and putrid. He showed that frequently the process started from a vaginitis. With regard to prophylaxis, the speaker urged the necessity of great personal cleanliness on the part of both physician and nurse, with special precaution on the limitation of internal examination. With proper asepsis before, during and after parturition the danger of endometritis is unminimized. In this connection we would mention the value of Glyco-Thymoline for irrigation purposes in these cases. This preparation, while strongly antiseptic, is non-toxic, and non-irritating and its action is to deplete inflammatory engorgements by rapid exosmosis, drawing outwardly through the capillaries the products of inflammation. This action checks re-absorption of ptomaines and produces a degree of asepsis that is unsuitable for the further propagation of pathogenic bacteria. Bearing on this subject, T. R. Maxfield, of Brooklyn, N. Y., states:

"Have been using Glyco-Thermoline for years. For the past two years my favorite use for it has been in obstetrical work. I never go to a case without a two-ounce bottle of it in my grip, although I usually order it in advance for general washing. I have formed the practice of giving an intra-uterine douche of Glyco-Thymoline in each case. This thoroughly cleanses the organ of membrane, fragments of placenta, etc., and reduces all danger of infection to a minimum. Hemorrhage (secondary) or fever are almost out of the question."

Germ Destroying and Nerve Soothing.—The following excerpt from an article in the "*Virginia Medical Monthly,*" by Stephen J. Clark, M. D., No. 66 W. 10th Street, of this city, plainly outlines the useful combination of two leading remedies in materia medica:—

"Binz claims specific antiseptic powers for quinine; other writers are in accord with him on this point, and report good results from large doses in septicaemia, pyaemia, puerperal fever and erysipelas. It is a germ destroyer of the bacilli of influenza (la grippe). Antikamnia and quinine tablets will promptly relieve in this disease. Quinine is a poison to the minute organism, sarcina; and antikamnia exerts a soothing, quieting effect on the nerve filaments. A full dose (two five-grain tablets) of this remedy will often arrest a commencing pneumonia or pleuritis. These tablets are also useful in the typho-malarial fever of the South—particularly for the hyperpyrexia—both quinine and antikamnia, as previously said, being decided fever reducers. They are likewise most valuable in cases of periodical attacks of headache of nondefined origin; of the so-called 'bilious attacks;' of dengue; in neuraalgia of the trigemini; in that of 'ovarian catarrh;' and, in short, they are effective in every case where quinine would ordinarily be prescribed and without the 'ringing' which generally accompanies the administration of quinine alone."—*New York Medical Journal.*

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Vermont Medical Monthly

Official Organ Vermont State Medical Society.

Vol. ix. No. 11. Whole No. 107. | Burlington, Vt., Nov. 25, 1903. | $1 per year. Single copies, 15 cts.

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The Vermont Medical Monthly

Vol. IX. November 25, 1903. No. 11.

ORIGINAL ARTICLES.

PROLAPSE OF THE UTERUS.*

By S. G. Start, M. D., Cambridge, Vt.

Prolapse of the uterus is a downward displacement of that organ, accompanied by more or less retro-displacement.

The anatomy of the pelvic organs is sufficiently familiar so that a review of it at this time is not necessary. Suffice it to say, that the supports of the uterus are:—the pelvic floor and its eight ligaments, two broad, two sacro-uterine, two round and two vesico-uterine ligaments.

There are several degrees of prolapse described differently by different writers. The division given by Prof. Skeene about strikes a happy medium. There is, of course, no line of demarcation between the three degrees which he describes. According to this arrangement, when the uterus sinks so that the cervix rests entirely on the pelvic floor it is called prolapse of the first degree. When the uterine axis becomes vertical, or coincides with the axis of the vagina, the cervix appearing at the outlet, it is called prolapse of the second degree. When the uterus is partly or wholly without the vulva it is called prolapse of the third degree or procidentia.

Prolapse may be either acute or chronic, although acute prolapse is comparatively rare.

There are two general causes of prolapse, namely, violence and weakness. Acute prolapse is generally caused by violence, such as the sudden causation of hernia, a fall upon the back, a severe coughing spell, lifting or carrying heavy burdens, and striking heavily upon the feet, as was the cause in one of my own cases. Chronic prolapse is more often caused by subinvolution after confinement, rupture of the pelvic floor, tumors of the uterus or its appendages. Congenital weakness or arrest of development of the supports may be a cause, seen in virgins. Some writers claim that the low attachments of the vesico-uterine ligaments allow a retro-displacement and favor prolapse.

In a large majority of the cases the displacement progresses gradually. The changes which take place in the uterine ligaments generally being caused by subinvolution, or with the growth of tumors, the increased weight gradually weakens the supports and the uterus begins to descend because it is too heavy for its immediate supports. Or the supports may have undergone some pathological change.

Rupture of the pelvic floor allows the vagina, bladder and part of the rectum to descend, and the uterus follows as a natural consequence. A wide shallow pelvis which is more than sufficient for the accommodation of its contents predisposes to displacement. Standing or walking to a degree of fatigue brings undue strain on the pelvic organs. Stooping forward while in a sitting position, as running a sewing machine, or the school girl at her desk, obstructs the return circulation of the pelvis and impairs the nutrition of the organ and brings increased downward pressure to bear upon them. The abuse of corsets does a deal of harm.

Symptomology.—The clinical history of prolapse of the uterus differs greatly in different patients, although the pathological condition may appear to be the same. The suffer-

* Read at the 90th Annual Meeting of the Vermont State Medical Society.

ing caused varies with the general health and nervous temperament. A patient with complete prolapse may complain of less inconvenience and suffering than with a prolapse of the first degree. The symptoms most common in this condition are headache, backache, tenesmus, constipation and all kinds and conditions of nervous symptoms. Headache is a very prominent symptom of prolapse. One patient will complain of pain in the frontal region, another with pain in the occipital region, but most often the pain is in the top of the head and back of the neck, and is described as a pulling down or a dragging sensation. Backache is always present and is aggravated by walking and standing, usually described as bearing down. There is apt to be derangement of digestion and constipation. There may be frequent desire to evacuate the bowel but "something seems to press against the rectum" and the effort is of no avail. There may also be vesical tenesmus. In prolapse of the second or third degree locomotion may be impaired or made uncomfortable.

Diagnosis.—Prolapse of the uterus is not apt to be taken for any other condition, although polypus or an inverted uterus may be mistaken. Prolapse differs from supervaginal hypertrophy by the low position of the body, and the normal or only slight increase in the depth of cavity. The lesser degrees of prolapse become more apparent in the erect posture.

Treatment.—There are four important objects to be attained in the treatment of prolapse; to restore the displaced organ, to keep it in place, to restore the supports and remove complications.

There are several methods of replacing the uterus with instruments to be used both intra- and extra-uterine. But I have had the best success and think it far safer to use the fingers. Sometimes the uterus may be replaced with the patient in the dorsal position, but it is far easier if the knee-chest position is assumed. In this position the viscera fall out of the way and the patient can exert less muscular effort in opposition to the operator.

When the prolapse is of the first or second degree the finger may be introduced into the vagina posteriorily and by pressing down and backward on the perineum to admit a little air, the uterus usually falls back into place. If it does not, by pressing upward and forward on the body of the uterus until the cervix is well within the vagina then with two fingers in the vagina by pressing backward and upward upon the cervix it is easily replaced if there are no adhesions.

Pessaries to retain the uterus in position work fairly well in some cases, but as they exert only a mechanical influence they have no curative effect except as the rest to the uterine ligaments allows them to partially regain their loss in strength. The operations that have been used to retain the uterus in its position when other methods of treatment have failed I will not attempt to describe but will refer you to the many works on gynecology. If the pelvic floor is damaged this must be repaired.

After the uterus has been replaced it has been my practice to tampon the vagina with some astringent and stimulant. I have had the best success with the cotton tampon. With the Simms speculum and the patient still in the knee-chest position I introduce a tampon as far posteriorly as possible, then another anterior to this. If necessary I put a third tampon against these two. The tampons remain in position twenty-four to thirty-six hours when they are removed and a douche given with the patient on the back. I use about a gallon of warm water with an ounce of powdered borax. If the tampon is removed at night and the uterus will retain its position with the patient in the recumbent posture, I sometimes do not replace it until the following morning. The tampons are saturated with glycerine,

ichthyol, or ichtholdine, or some combination of the three.

As a matter of illustration I will give the histories of some cases that I have treated in this way.

Case I. Mrs. M., age twenty-six. Previous history negative. Five years ago gave birth to a child during the sixth month of pregnancy, followed by puerperal fever. Her second and last labor was normal and at time. May 3d, 1903, the patient jumped from a carriage and struck heavily upon her feet. She felt "something drop," as she expressed it, causing excruciating pain in the pelvis and back. She rode home about three miles and I saw her very soon. She complained of bearing down pains, inability to walk or stand erect, severe headache which she described as pulling down from the top of her head and back of her neck. Upon examination with the patient in the dorsal position, I found the cervix just within the vulva. I tried to replace it with the patient still in this position, but failed to do so. I asked her to take the knee-chest position, when I introduced one finger into the vagina back of the cervix and pressed upward and forward on the body of the uterus until the cervix was well within the vagina. Then with one finger of the left hand used as a Simms speculum (I had no speculum with me), and with the index finger of the right hand on the anterior aspect of the cervix pressing backward and upward, the uterus dropped into position. As I had nothing with me to hold it in place, I asked her to come to my office, only a short distance, and when she got off the bed, she said, "Why doctor, my headache is all gone." I held the uterus in place with a tampon saturated with glycerine and ichtholdine equal parts. I replaced the tampons two or three times, and as the patient is obliged to take in washings for a living, she has neglected further treatment. I examined her about a month ago, and although the uterus was somewhat prolapsed and she has some backache, she is working every day.

Case II. Miss F. S., age twenty-three, school teacher. Came to see me Feb. 12th, 1903. Said she had "hysteric fits" and wanted them cured. On looking for the cause of her fits I elicted the following history. One and one-half years previous she was thrown from a bicycle striking on her back and was unable to ride for some time owing to pain in her back, frontal headache and vertigo. She felt as though something was out of place and called a physician who examined her and said she had "falling of the womb." The uterus was replaced and she wore a pessary for about a year with very little relief. Her backache and headache continued with the addition of dysmenorrhea. As she refused an examination, I instructed her to take the knee-chest position for five or ten minutes twice daily and use a douche once a day, one gallon of water and an ounce of borax. I also gave her some nerve tonic.

After about six weeks, as she was no better, she allowed an examination. I found the uteras prolapsed with the cervix about an inch from the vulva and some vaginitis. After replacing the uterus I tamponed with ichtholdine full strength. This was continued for about three weeks when I changed to glycerine and ichtholdine equal parts. Her bowels were a little sluggish, so I gave her effervescent sodium phosphate in the morning, and before meals I gave her a tonic containing one-half ounce tincture of nux vomica and four ounces compound tincture of gentian, teaspoonful before meals. She improved quite rapidly under this treatment, her hysteric fits coming less frequently, the headache and backache being relieved.

Case III. Mrs. M. J., age twenty-four, had three children. First child born in April, 1899. The following July the patient was

out walking and suddenly "something dropped," as she said. Had to sit down for a time and had difficulty in getting home. Had a lady friend examine her and found "something sticking out." The next day she told the doctor's wife how she was and the doctor gave her some vaginal suppositories, used one dozen suppossitories which did no good. Two weeks after this she became pregnant. During all this time she had backache, bearing down pains, headache, constipation and disturbance of digestion. These symptoms continued during the second pregnancy. The child was born May 6th, 1900, followed by puerperal fever. Never was so strong after the second labor as before. The third child was born Jan. 15th, 1903. Had normal labor, sick about eight hours. After this her symptoms were worse than ever and I saw her first on June 18th, 1903. I found a slight laceration of the perineum but not sufficient to cause so much distress. The uterus was low down in the pelvis, large, boggy and tender. With some difficulty, owing to the size, I replaced the uterus and kept the vagina tamponed with ichthyol and glycerine for about two weeks, followed by ichtholdine full strength for two weeks and then glycerine and ichtholdine. Since July 1st she has had no return of her symptoms and is doing her own housework and caring for her two children.

ACUTE (DIFFUSE) NEPHRITIS.*

By Deane Richmond, M. D., Windsor, Vt.

This affection of the kidneys has been known as acute Bright's disease, acute desquamative nephritis, acute tubular nephritis, croupous nephritis, catarrhal nephritis, acute albumenuria, the first stage of chronic Brights disease, acute parenchymatous nephritis, glomerular nephritis, haemorrhagic nephritis, epithelial nephritis, acute interstitial nephritis, and acute diffuse nephritis.

Etiology.—Probably a majority of cases of acute nephritis occur as a complication or sequel to scarlatina, although other acute infectious diseases as diphtheria, measles, small pox, chicken pox and mumps more rarely cause it.

Other diseases are sometimes followed by it, as typhoid, typhus and relapsing fever, cerebro-spinal meningitis, pneumonia, erysipelas and malaria.

Certain inflammatory and septic processes are also occasionally the cause, as surgical fever, carbuncle, puerperal fever, and septic endocarditis.

Various poisons, among them a number of remedial drugs, are potent causes of acute inflammation in the kidney. Chief among these is cantharides, but arsenic, turpentine, capaiba, cubebs, squills, chlorate of potash, petroleum, pyrogallic acid, chrysarobin, and carbolic acid may also cause acute nephritis.

Chronic alcoholism and extensive burns may also cause it, and cold, in the form of sudden changes of temperature, or wetting and chilling of the heated body, is, next to scarlatina, the most important and frequent cause.

It is to this last class of cases that I call your attention. The onset of the disease is sudden, and in severe cases is usually marked by a chill, followed by decided fever which may be of short duration. In milder cases, no chill is apparent, and the temperature throughout is but slightly elevated. Fever, therefore, is not a constant, or prominent symptom, and belongs to the conditions underlying the nephritis rather than to the disease itself.

Pain in the back is an early but infrequent symptom; it is not often severe and usually disappears. Vomiting may usher in the disease.

The early appearance of puffiness of the eyelids and face, and pallor of the skin, is char-

* Read at the 90th Annual Meeting of the Vermont State Medical Society.

acteristic. This may be followed or accompanied by swelling of the ankles and legs, and sometimes the dropsy involves the whole body.

The scrotum, penis or labia in such cases becomes greatly distended, the skin presenting an almost translucent appearance.

Ascites, hydrothorax or hydropericardium may be present in severe cases; and more dangerous than the above, oedema of the glottis, brain or lungs.

In severe cases, especially in children, cerebral symptoms may be present, headache, drowsiness, stupor, delirium, muscular twitchings, convulsions and coma. The pulse is usually hard and tense, and though slow at first, it may become rapid as the disease progresses.

The urine in acute nephritis furnishes distinctive characteristics. The quantity is diminished, even to total suppression. The specific gravity is increased at first, usually ranging from 1025 to 1030, while the urea is diminished. Later it may fall to 1015 or 1010. The color is darker than normal and is apt to be either smoky-red, or reddish-brown, from the presence of blood, and a more or less abundant flocculent sediment appears on standing.

Red blood corpuscles and renal epithelium are found on microscopical examination, together with the characteristic hyaline, blood, and epithelial tube-casts. The urine is acid, and on boiling throws down a thick curdy precipitate of albumen, which varies in weight from one-fourth to one per cent.

The prognosis in acute nephritis is doubtful when convulsions or coma develop, or when some of the severe complications mentioned are present.

The object in treatment is to relieve the congestion and inflammation, since the renal function is diminished by these conditions. Diaphoretics and cathartics are employed for this purpose, to make the skin and bowels perform the work normally done by the kidneys. Absolute rest in a warm bed and in a warm room is essential. The diet should consist of bland liquid foods, and the patient should drink freely of water, lemonade, skimmed-milk, or butter-milk, all of which are of especial value when taken hot. Severe pain in the loins may be relieved by local bloodletting, leaches or cupping. The hot wet pack is an effective diaphoretic, but pilocarpine should be used in severe cases of uraemia, bearing in mind that it is a dangerous drug and that the heart and pulse should be carefully watched. The sweating should be kept up, or repeated, as the patient's strength will permit, until the dropsy and uraemic symptoms disappear.

Hydragogue cathartics, as elaterium, saline cathartics in hot concentrated solution, or anasarcin may be useful. If the uraemic convulsions do not yield to diaphoressis and catharsis, venesection may sometimes save life.

Nausea and vomiting may be relieved by the usual remedies, by minute doses of cocaine, cracked ice, dilute hydrocyanic or hydrocloric acid, bismuth, oxylate of cerium, and drop doses of wine of ipecac or Fowler's solution, or champagne.

In a case reported herewith, none of the above were effective, but the obstinate vomiting stopped at once on the administration of tinct. ferri chlo. in three drop doses.

Contraction of the arteries, with increased tension, and beginning muscular twitchings, require the use of nitroglycerin, and possibly morphine.

Mild diuretics may be used to advantage after the first few days.

Before closing this paper, I wish to call your attention to a case that I saw several times in consultation with Dr. J. D. Brewster, and by his permission, and some data which he furnished me, I am able to report.

Albert W., age thirteen. Wednesday, June 29th, worked on a hay-mow until very much

heated and then drove the horse-rake without wearing his coat; complained of feeling sick that night, but did not call a physician. Thursday morning, July 30th, had a chill and Dr. Brewster was sent for. Found patient with temperature 104 5-10, pulse 85, face much bloated, eyes closed and lips swollen, livid and rolled outwards; urine scanty, high colored and albuminous. Gave aconite, infusion digitalis and acetate of potash. Friday, July 31st, temperature normal, pulse 80, bloated about the same, urine scanty, specific gravity 1030; treatment the same with saline cathartics and anasarcin. Saturday, August 1st, temperature normal, pulse 80, bloat slightly less, urine dark but increased quantity. From this on the patient appeared to improve slowly with gradual increase in the quantity of urine, until Monday, August 10th, when several attacks of nose bleed occurred after a severe headache. Tuesday P. M., Aug. 11th, two convulsions lasting over an hour. Used hot wet pack; headache continued, vomiting began, urine bloody, temperature normal, pulse 90. Wednesday, Aug. 12th, comfortable in the morning, headache in the afternoon, with convulsions at three o'clock. Dr. Munger called. Used hot pack, pilocarpine 1/8 gr. hypodermically, stopped digitalis and gave asparagin. At 11 P. M. had convulsion and I was called in. Patient unconscious, temperature 101, pulse 160, respiration 10. We gave calomel followed by Rochelle salts and unloaded the colon with high enema. Gave pilocarpine and hyoscine-hydrobromate hypodermically. Patient remained in about the same condition until 4 A. M. Thursday, when he slept one hour and woke up clear and bright; temperature normal, pulse 70, respiration 16.

Kept up the pilocarpine and hyoscine every two hours with small doses of morphine. Thursday P. M., another convulsion, less severe; used high enema and the result was large movement. Friday, Aug. 14th, temperature normal, pulse 78, vomiting stopped by the use of three drop doses of tinc. ferri. chlo. in water every two hours. Photophobia, and pain in eyes, especially the left. Saturday, Aug. 15th, patient about the same but less pain in eyes. Voided about one pint urine which was very dark. Sunday, same. Twelve ounces bloody urine. Monday, 17th Aug., one and one-half pints urine, no blood. Aug. 18th, Patient passed two pints clear urine, and from then on made a slow but uninterrupted recovery.

I speak of this case as it particularly well illustrates how necessary it is to use every precaution long after the patient appears to be well. This boy was kept strictly in bed, with the best of nursing, and with careful attention by his physician, and yet convulsions occurred twelve days from the onset of the disease.

AN EASY WAY TO REDUCE DISLOCATIONS OF THE SHOULDER JOINT WITHOUT ANESTHESIA.*

By Henry Janes, M. D., Waterbury, Vt.

For some twenty years or more, I have been in the habit of reducing dislocations of the shoulder joint in a very simple and generally painless manner, and as none of the physicians to whom I have demonstrated the method had any previous knowledge of it, and as it has never been mentioned in any publication, to my knowledge, it seems worth while to describe it more publicly than has been done heretofore, especially as it is not likely that I shall have many more opportunities for presenting the subject to the notice of this Society.

The method is applicable to all forms of shoulder dislocation which have come under my care since devising it.

* Read at the 90th Annual Meeting of the Vermont State Medical Society.

Of course the principle on which the operation is based is old, and it is only to the simple way of applying the principle, without apparatus, to which I wish to call your attention.

The manner of reduction is as follows: The patient lies flat on his back, if there is a bed or table convenient, if not, he may sit on a low stool or the floor, his arms being extended at right angles to his body, two men, one on each side, seated comfortably so that they can retain their positions for some time without fatigue, grasp his extended arms, one hand at the wrist and one at the elbow, so as to retain a firm hold, and pull against each other, not very forcibly at first, but so as to gradually tire out the patient's muscles, he being instructed to give up as much as possible any effort at resistance. In the course of a minute or two the head of the humerus is brought out opposite to the glenoid cavity into which it can easily be slipped by the surgeon standing at the patient's head, with one hand on the point of the shoulder and the other under the head of the dislocated bone.

As the line of traction tends to draw the head of the humerus away from the nerves and vessels of the arm pit, the manipulation rarely causes any pain worth mentioning, in a recent dislocation, unless the patient struggles and resists the extention. Care should be taken to begin the traction very gently, with no great force or sudden jerks, as they are liable to stimulate opposition on the part of the patient.

If the dislocation is an old one and the reduction requires the breaking up of adhesions, of course it should be done under anesthetics.

"The abstraction of blood from the deep blood-vessels into the superficial capillaries through physiologic and innervation is physiological phlebotomy—Bleed, but save the blood—is the mechanics of antiphlogistine."

SOME INTERESTING CASES.

Clinical Society of the New York Polyclinic Medical School and Hospital. Stated meeting held November 2, 1903. The President, Dr. J. H. Burtenshaw, in the Chair.

RUPTURE OF THE URETHRA.

This patient was presented by Dr. C. H. Chetwood. The boy, nine years old, fell astride the edge of a barrel. The accident was immediately followed by swelling and ecchymosis of the perineum and scrotum, which extended down the inner sides of the thighs. On examination the bladder could be felt slightly distended toward the brim of the pelvis. Gentle effort to introduce a soft rubber catheter was unsuccessful. The diagnosis was complete or incomplete rupture of the urethra. The patient was anesthetized, but it was impossible to obtain entrance to the bladder through the urethra. Perineal section was then performed. The distal end of the tube was found without difficulty, but not until the perineal opening was distended with boric acid solution was it possible to distinguish and grasp the proximal end. The ends were sutured together and a small catheter introduced through the perineal wound. Three days later the catheter was removed, and the patient urinated without trouble. Twenty-four hours later, under anesthesia, a catheter was passed through the meatus into the bladder and tied there for three days. At the end of two weeks cure was complete.

PROSTATIC HYPERTROPHY AFTER GALVANO-PROSTATOTOMY (CHETWOOD).

This patient was also shown by Dr. Chetwood. The man was 63 years of age, a peddler by occupation. His principal complaint had been that he was compelled to urinate at least every half hour day and night, which

was accompanied and followed by considerable pain. The speaker said that urinary symptoms of this character occurring in a man of that age would naturally suggest prostatic hypertrophy, causing vesical insufficiency and cystitis. The examination of this patient bore out this hypothesis. While the prostate proved to be only moderately enlarged, the bladder contained 7 ounces of residual urine, and the Thompson searcher, introduced into the bladder, recognized an obstruction at the urethral orifice in the nature of a bar. Operation was performed on February 27, 1903. Perineal section, followed by digital examination of the bladder showed a tight vesical orifice, an elevated and hypertrophied median fold and a deep *bas fond*. This bar was incised with the galvano-cautery instrument in two places, each being ¾ cm. in length, 45 seconds being allowed for each cut. A perineal tube was then introduced and left in place for five days, at which time it was removed, and in a few days the patitnt began to urinate through the natural channel. He was pronounced cured in three weeks. Summing up this method of operating, the speaker said that it is essentially one of drainage, the aim being to effect, as nearly as possible, the reestablishment of the normal condition of bladder drainage, with a minimum amount of risk, the greatest dispatch, and without removing more of the prostate gland than is necessary in order to accomplish this purpose.

TWO CASES OF SKIN DISEASE.

Dr. Victor C. Pedersen presented two interesting cases of skin disease, one of scaling papulo-squamous syphilide, some of the lesions of which resembled psoriasis; and the other of generalized nummular psoriasis,strongly suggesting syphilis at first sight. The histories of the patients were as follows:

Case I. Male, 22 years old. Eight months ago had a chancre, which left behind the typical indurated scar on the prepuce. Nearly three months afterward a rash appeared on the skin and the man consulted a physician, who prescribed antisyphilitic remedies, which were taken in an irregular manner for a short time, resulting in a more or less complete disappearance of the rash. About three weeks prior to his appearance at the New York Hospital, about the middle of October, the outbreak returned with greater virulence and wider dissemination. When first seen at the New York Hospital he presented a generalized papulo-squamous scaling rash all over the body. Some of the lesions, especially near the elbows and shoulders, were so large and the scales so numerous as to strongly suggest psoriasis. Differential diagnosis was made by the presence of typical mucous patches in the mouth and typical lesions of syphilis on the palms of both hands and soles of both feet. Tonics, mercurial inunctions and ascending doses of the iodide of potash in about three weeks caused practically all of the small lesions to disappear and only the large ones remained. The character of these larger lesions was still somewhat suggestive of psoriasis, and the case was presented for its interest and for differentiation by the members of the Society between these two diseases.

Case II. Male, 24 years old. About five weeks before he applied for admission to the New York Hospital Out-Patient Department, a generalized scaling rash appeared all over his body. In this case the lesions were frankly those of psoriasis, but resembled those of syphilis somewhat in being comparatively small and in being scattered everywhere over the body excepting on the soles and palms. The diagnosis was made through the absence of sole and palm lesions and of lesions in the mouth, and likewise by the distinctly psoriatic condition of the backs of the hands. Three weeks of treatment had caused the scaling to practically disappear, and the color of the un-

derlying skin had assumed a much more healthy appearance. The treatment had been simple, consisting in simple diet and regular physical exercise and ascending doses of Fowler's solution of arsenic, with chrysarobin ointment, about 10 per cent, applied to small areas of the body in turn, from night to night, and 10 per cent boric acid ointment, applied to other parts of the skin to keep the scales as soft as possible.

Dr. F. H. Dillingham opened the discussion of Dr. Pedersen's cases. With regard to Case I, he said he thought most of the lesions were syphilitic. On the patient's back were a large number of lesions undoubtedly syphilitic, and those on the front portion of the body resembled these, but in syphilis there is atrophy or loss of tissue. Sometimes the lesion is too small to be recognized with the naked eye, but if there is loss of tissue, it cannot be psoriasis. It leaves the skin perfectly normal, except often pigmentation disappears. The speaker made a diagnosis of syphilis and psoripheral eczema of the scalp.

Dr. E. L. Keyes, Jr., said that the case reminded him of a patient, about 20 years of age, who came to him with psoriasis all over his body. The case was supposed to be psoriasis, as the lesions were characteristic, and although the question of syphilis was brought up, there was no history and no evidence of a primary lesion. More psoriatic lesions appeared, characteristic ones on the palms of the hands and soles of the feet. This seemed to point to syphilis, and the patient was put on mercury and the lesions promptly disappeared.

Dr. Pedersen said that he had brought the patient before the Society for diagnosis because, three weeks before, when he first saw the man, he was put on syphilitic treatment and the improvement was marvelous. The morning of the meeting, however, the speaker and his colleague at the New York Hospital had failed to agree on the diagnosis, the speaker considering it syphilitic and his colleague claiming the patient presented a combined lesion.

SUBPHRENIC ABSCESS.

Dr. J. A. Bodine presented this patient, a man 35 years old, who had come to him with a previous history of pneumonia, six weeks before. The pneumonia had kept him in bed for 13 days, and he had been up and about for 8 days when pain and fever returned. He was referred to the speaker with a diagnosis of encysted empyema. Sweating, emaciation and septic fæces were present, and on the right lower side of the chest there was well-marked bulging. Respiratory signs were absent in this locality. To verify the diagnosis, a hypodermic syringe was inserted in the upper part of the bulging mass, between the seventh and eighth ribs, and pus was withdrawn. A section of one and one-half inches was made in the ninth rib, care being taken not to go through the diaphragm. There was no pus, but the liver and diaphragm could be felt intervening. The needle was inserted again, between the seventh and eighth ribs, and pus was withdrawn. A second incision was made at this point, and when the pleura was reached six or eight ounces of clear serous fluid was found. When the finger was inserted into the second opening a dome-shaped mass was found rising over the liver. The lower border of the lung was defined and a fluctuant subdiaphragmatic abscess diagnosticated. The diaphragm was incised with a knife and eight or ten ounces of pus withdrawn. A drainage tube was carried through the lower wound. The fever has entirely disappeared and the patient is on the road to recovery.

Dr. Morris Manges said that to make a positive diagnosis in these cases is impossible. Absence of pneumococci might have given the clue to the origin of the subphranic abscess. There is no part of the body in which one is more liable to err than in the lower portion of

the pleural cavity in the recognition of fluid. There is nothing which fluid cannot simulate. It was Leyden who pointed this out, in 1887, and gave to it the name pyothorax subphrenicus. Since then a number of cases have been reported as secondary to pneumonia, but in such cases pneumococci are usually found in the pus from the subphrenic abscess. Another condition which makes differential diagnosis difficult is abscess of the liver as differentiating this same condition from secondary effusion into the pleural cavity. In almost every case one finds the localized point of tenderness over the liver and this indicates where the aspirating needle should enter. In abscess of the liver the dulness and flatness is higher in the axillary line than it is anteriorly, and respiratory conditions are present which are absent in empyema.

UNUNITED COMPOUND FRACTURE OF THE TIBIA.

Dr. L. L. Ross presented a patient who, four weeks before, had fallen in the street. Examination revealed a compound fracture of the tibia, with two simple fractures of the fibula. The patient was 67 years old, and had suffered from locomotor ataxia for eighteen years. For twelve years he was treated with silver nitrate. Four weeks after the accident there was no sign of healing in the fractures. The external wounds had become gangrenous. During his hospital experience the speaker had seen three cases of locomotor ataxia with fractures of the leg, and all three patients had been kept in bed for four, five and six months, without any union resulting, and finally amputation had to be resorted to. From lying in bed for four weeks the patient was developing paresis of the bowel, and movements were induced with difficulty. Catheterization was necessary to draw urine at all. There was not even fibrous union in the fractures.

Dr. W. B. Pritchard said that there was no arbitrary rule for union in such cases. Sometimes it is impossible to obtain union, and in other cases the results are unexpectedly good. This kind of fracture is not peculiar to locomotor ataxia, but often occurs in connection with peripheral neurites and with multiple neuritis, and takes on exactly the same characteristics. The bones are friable, partake of the general trophic disturbance, easily fracture, and show resistance to union. These fractures do well, unless complicated. If simple, there is no external disturbance of the circulation.

The paper of the evening was read by Dr. F. H. Dillingham, and was entitled

ALOPECIA AREATA,

and was, in part, as follows:

"Alopecia areata should only be used to designate a disease where the hair falls out in one or more patches which increase in size by spreading at the periphery and leave a bald area without any apparent inflammation of the skin. In a majority of cases the disease is confined to the scalp, and after the hair stops falling out the patch may remain stationary or new hairs, which are usually at first fine lanugo hairs, appear at the margin or in the patch. While the disease is progressing the hair at the margin is loose, with atrophied roots and can be easily pulled out. The skin shows no signs of inflammation, is smooth, shiney and slightly depressed. There has been a great difference of opinion as to the etiology, some claiming it to be a trophoneurosis and others parentic. There is no question but what there are a number of cases of alopecia occurring as the result of shock or injury to a nerve, but they do not have the definite clinical history that we have in alopecia areata and should not be called such, but designated as alopecia neurotria. Simply because an area is devoid of hair it should not be called alopecia areata.

The manner of spreading at the periphery, the inflammatory process in the coricum, the fact that the loss of hair does not follow a nerve distribution and the number of epidemics reported seem to be conclusive evidence that the disease is porasitic and slightly contagious under favorable conditions. Although a number of different organisms have been found, none of these have been proven to be the cause of the disease.

Salourand claims it is the same bacillus found in seborrhoea but it is also present in comedones of acne. He also claims that it only occurs after pubity, which does not explain the many cases in children. Crocker and Hutchinson believe it to be related to ringworm, but there is no proof.

The disease which will give the most trouble in diagnosis is ringworm of the scalp, in which the patch is inflamed, the baldness is not complete, and there are the characteristic, short, broken-off hairs, with short ends. In doubtful cases the microscope will decide.

In Favus, the yellowish crusts, incomplete baldness, inflammatory symptoms and atrophy will enable one to make a diagnosis. The prognosis is almost always good if the disease has not lasted long enough to destroy the hair follicles. If acne had been properly treated for two months and there are no lanugo hairs, the chances are the hair follicles have been destroyed and there will be permanent alopecia. If there is any defective treatment of the general health, it should be corrected, but aside from this, internal treatment is useless. Besides a large number of drugs, Rontgen rays, Finsen light and Radium have been used.

Chrysarobin will give the best results in most of the cases, but it should not be used on the face or over too large a surface at one time. It is best used with vaseline, gr. xv-zip to the ounce, and it is well not to use too strong a preparation first. We aim to produce a mild dermatitis in order to obtain the benefit of the emigration of the white blood corpuscles and destruction of the organisms. The preparation should be thoroughly rubbed in with considerable friction every night for a week and then discontinued to see if the disease is still progressing. After the alopecia has stopped spreading, stimulating applications with massage should be used to bring an increased blood supply to the part and aid in the nutrition of the new hair.

NEWS, NOTES AND ANNOUNCEMENT

Burlington and Chittenden County Clinical Society.—The annual meeting was held at 162 College St., Friday, Nov. 27, 1903, at 8.30 P. M.

PROGRAM.

Election of officers for ensuing year. The following officers were elected:

President—Dr. H. R. Watkins.
Vice-Pres.—Dr. B. H. Stone.
Secretary—Dr. C. H. Beecher.
President's Annual Address.
Acute Pancreatitis, Dr. H. R. Watkins.
General discussion.

Refreshments were served following the meeting and a social hour was enjoyed by those present.

Sunshine and Sleep.—Sleepless people, and there are many in this country, should court the sun. The very worst soporific is laudanum, and the very best is sunshine. It is very plain, therefore, that poor sleepers should pass as many hours as possible in the sunshine, and as few as possible in the shade. Many women are martyrs, and yet they do not know it. They wear veils, carry parasols, and do all they possibly can to keep off the potent influence which is intended to give them strength, beauty, and cheerfulness. Those women who are pale and delicate may be blooming and strong, and the sunlight will be a potent influence in this transformation.—*Health.*

University of Vermont Centennial.—The University of Vermont, which will celebrate next summer the centennial of its first graduating class, was chartered in 1791. In 1804 it graduated its first class of four. Its members increased and in the first ten years 73 students were graduated. Then, during the war of 1812, in the year 1814-15, the college buildings were used as barracks and all college exercises were necessarily suspended.

In 1816 the University began again with a graduating class of two. The members increased with each decade until just before the Civil War. Attendance at the college was affected by the war in two ways. Prospective students changed their plans and did not enter; and students in attendancce left the University to enlist. So, in 1865, there were but six graduates; and in 1866, only three.

Since the Civil War, when the University was obliged almost to begin again—for the third time—the number of students has increased steadily and rapidly, doubling about every ten years.

During the 100 years of its existence the University has granted over 4,000 degrees: nearly half in arts and science; and one-half in medicine. Besides, over 1,000 students have taken a partial course in arts and science. Of the academic students that have come under the influence of the University a large number have occupied prominent positions. There have been a vice-president of the United States, a cabinet minister, 22 senators and congressmen, besides consuls, United States judges, and officers in the army and navy; 4 governors, 60 State senators, and 121 State representatives and assemblymen, besides lawyers and State judges; 14 college presidents, 96 college professors and 75 other college teachers; 99 editors, 287 clergymen, 493 lawyers, and 554 teachers in private and public schools.

To Vermont the University has given 4 governors, 40 State senators, 76 representatives, besides judges, lawyers, State's attorneys, etc.

In the Civ il War the University furnished 166 men, 17 of whom died in the service. In the brief Spanish-American War there were 32 U. V. M. men in the service.

In the medical department there was instruction given as early as 1809. In 1823 four men graduated. The number of graduates reached 16 in 1829, but after that dwindled. From 1836 to 1854 no instruction was given. The department was reorganized in 1854 and has been in continuous operation ever since. From the Medical Department there have been a governor of Vermont, a member of Congress, mayors of cities, officers of the United States army and navy, professors, etc., besides many eminent physicians.

The University has an up-to-date plant, with good dormitories, well-equipped buildings for science and engineering, a library of 66,000 well selected books, a large airy gymnasium, etc. Its collections and apparatus are excellent. It is lacking in funds to run the plant. Only a few of its professorships are endowed, and the interest bearing funds are small. Many improvements have to be postponed or given up altogether for lack of funds.

It is to meet this need that the Alumni and friends of the University have started a movement to raise $1,000,000 for a Centennial Endowment Fund; $100,000 has already been subscribed by two of the Alumni. Many others have expressed their intention of contributing. It is hoped that loyalty to their State institution and pride in its record will prompt the generous Vermonters and ex-Vermonters to help appreciably in this movement. Besides, an appeal will be made to all who are interested in the cause of education to give their assistance. One million dollars is the amount that is needed, and when that is secured the University will be able to accomplish still more in the future than it has done in the past.

The Vermont Medical Monthly.

A JOURNAL OF REVIEW, REFORM AND PROGRESS IN THE MEDICAL SCIENCES.

H. EDWIN LEWIS, M. D., *Editor.* FRANK C. LEWIS, M. D., *Business Manager.*

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Burlington, Vt., November 25, 1903.

EDITORIAL.

The Criminal Aspects of Typhoid Fever Epidemics.

A very serious outbreak of typhoid fever at Butler, Pa., has startled the whole country. Butler, Pa., is a city with about 15,000 to 16,000 population, and up to the present time over 1,200 cases have been reported, and it is said that new ones are being added to this list at the rate of ten or fifteen a day. It would seem that this epidemic will exceed any other that has ever been in this country, before it can possibly be controlled.

In view of the vaunted progress of bacteriology and laboratory methods, this epidemic is one of the most discouraging things that has occurred in the annals of modern preventive medicine. A contaminated public water supply is unquestionably responsible for this terrible calamity, and in view of the ease with which microscopic and chemical examinations can determine a polluted water, it would seem that this epidemic was avoidable and preventable. This is its saddest feature.

The time is certainly coming when the people will not stand for such catastrophes. At the present time they know more about sanitary matters and modes of infection than ever before, and sooner or later they are going to realize that it should be someone's duty in every community to keep track of the public water supply. Failure to have made frequent enough examinations to determine the condition of the public waters will be considered a municipal crime, and when such failure has as terrible results as have occurred at Butler, someone will rightly be held responsible. The significant fact of the question is that typhoid fever epidemics do not show inability or incompetent methods as much as they do gross negligence, and such negligence becomes doubly reprehensible when the results are so far reaching and disastrous.

The people of Vermont ought to feel especially gratified at this time, for we can appreciate more than ever the splendid work of the Vermont State Laboratory of Hygiene. At least four times a year careful scientific examinations of all public waters in the State are made at the Laboratory, and oftener if necessary. It is a significant fact that there have been no typhoid fever epidemics in our State since the Laboratory was established. When we stop to think of the protection afforded by the State Laboratory against a serious epidemic of typhoid fever which would cost thousands of dollars, to say nothing of innumerable lives and suffering, we can appreciate its value to our public health and understand how well it is justifying its existence.

The Use of Passive Motion Following Fractures and Dislocations.

A very important thing in the after treatment of fractures and dislocations is the use of passive motion or exercise. In a great majority of instances as soon as a plaster cast or splint can be removed from a fracture or dislocated joint, the patient is considered well and allowed to go his way. Failure to use

passive motions and exercise by the attending physician is responsible for many of the deformities and bad results resulting from injuries to the bones or joints. The patient is sufficiently instructed to massage the muscles surrounding the injured area, and instinctively he exercises the broken or dislocated limb himself, but no exercise, however wisely or carefully taken, can accomplish as much in restoring the function of a joint or limb as will passive exercises administered by another individual. These exercises restore the tone and strength of a joint and injured tissues much quicker than any other treatment at our command, and the parts are sooner able to perform their function than they possibly can if these exercises of a passive character are neglected. They should be administered over a period of at least three weeks following the removal of all splints or fixation apparatus, and in this way a result can be accomplished that will be far more satisfactory to the patient and much more to the credit of physician than is usually obtained in the average fracture or dislocation.

Congestive Headaches.

In this age of hustle and bustle, of crowding and overwork, of the everlasting effort to get ahead in a social, business or financial way, medical men are often called upon to treat a type of headache that is distinctly congestive. It is no uncommon thing to have business men, society women, or even young students call upon their medical attendant for relief from sudden agonizing pain in the occipital region. They complain of a distressing sensation of cerebral fulness and oftentimes this sense of orbital distension and ocular pressure is the most significant symptom. Insomnia is marked and a train of nervous symptoms adds to the suffering of the patient.

Mental overwork and worry is the cause pure and simple. In other words, the brain tissue has been abused and if relief is not obtained at once, the patient is always in serious danger of collapse. Therefore, in these cases it is our duty to give relief as soon as possible. Complete mental rest must inaugurate all treatment. Then a brisk cathartic, preferably some of the salines, should be administered and the patient put to bed after a hot foot bath. Cold applications to the occiput are often grateful to the patient. The bromides in some good combination like the following can now be given in small repeated doses:

R. Sodium Bromide.
Strontium Bromide aa dr. ii.
Fld. Ext. Ergot, dr. ii.
Tinct. Card. Comp., q s ad oz. iv.

Sig. A teaspoonful in water every two hours.

The pain which is often severe and agonizing can be controlled almost immediately by the use of pheno-bromate, fiive grains to the dose. This preparation is admirable for relieving the discomfort of this condition and can be administered with no fear of depressing the heart. If this treatment is given vigorously, relief is soon obtained and the patient's gratitude is correspondingly great.

Following the acute stage of cerebral congestion, some good tonic like glycerophosphates of lime and soda should be given and mental rest for two to four weeks strictly enjoined. Five grain tablets of pheno-bromate as needed will assist recovery. Such treatment may not only save the patient from serious illness, but also prevent the onset of those serious mental conditions that are becoming altogether too common at the present day, particularly in young females.

MEDICAL ABSTRACTS.

PROSTATIC ABSCESS.—In a case of gonorrhea in the male, a chill occurring without swelling of the external organs strongly suggests the possibility of prostatic abscess. Always examine by the rectum, and if the gland is large and tender, and hard though elastic, little time should be wasted before opening the perineum. The old method of opening through the rectum with a trocar is a bad one, because it is unclean and liable to result in the formation of urethro-rectal fistula, and because the abscess cannot be incised and drained as widely as by the perineal route.—*Int. Jour. of Surgery.*

HISTORY OF TUBERCULOSIS WORK AT SARANAC LAKE.—Dr. Edward L. Trudeau delivered at Philadelphia, Oct. 24, '03, an address under the auspices of the Henry Phipps Institute for the Study, Treatment and Prevention of Tuberculosis, giving an account of the origin, early struggles, and present successful standing of the well-known sanitarium work with which his name is identified. The following excerpts from the published article (*Med. News,* Oct. 24, '03) are of peculiar interest:

"Of the fifteen hundred cases under consideration (consumptive patients at Saranac Lake), which have been discharged from two to seventeen years, 434 could not be traced, leaving 1,066 which have been traced. Of these, 46.7% are still living; of these 31% are known to be well at present, in 6.5% the disease is still arrested, 4% have relapsed, 5.2% are chronic invalids, and 53.3% are dead. As to the influence of the stage of the disease on the permanency of the results obtained, he (Dr. Lawrason Brown, the compiler of the statistics) found 66% of the 258 incipient cases discharged well at present. Of the 563 advanced cases, 28.6% are well, and of the far advanced cases 2.5% only remain cured."

"Over the doors of the wards and hospitals for consumptives, twenty-five years ago, might have been written these words: 'All hope abandon ye that enter here;' while to-day, in the light of the new knowledge, we may justly place at the entrance of the modern sanitarium the more hopeful inscription, 'Cure sometimes, relieve often, comfort always.'"

"* * * the researches of Koch, Behring, Maragliano, and Neufeld, abroad, and of De-Schweinitz, McFadyean, Pearson and Gilliland and myself in this country, have already brought forward evidence that a marked degree of artificial immunity against tuberculosis can be produced in animals, and the success already obtained in this direction seems sufficient to justify the hope that prevention may some day find a most efficient ally in the discovery of some safe method of immunization applicable to man."—*Jour. of the Mass. Ass'n of the Boards of Health.*

CLINICAL GONORRHEA WITHOUT THE GONOCOCCUS.—A. F. Benedict (*Amer. Jour. Med. Science,* July, 1903) reports four cases in which all the clinical symptoms of gonorrhea were typically present, the patients, however, all denying any history of possible recent exposure. None of these cases presented evidence of the presence of the gonococcus, according to the ordinary Gram and decolorization tests. Also, by the simplest staining methods there was nothing to suggest the gonococcus. Various and numerous cocci singly and in chains, and short and long thread-like bacilli were present in all cases but were not identified. All these cases yielded to treatment, consisting of the ordinary syringing, local applications of hydrogen peroxide, and the use of ordinary antiseptics. In this connection is also reported the case of a Pole, who presented a peculiar indurated and, in places,

glossy glans, but no urethritis. Although married, he had not had intercourse for six months, and he denied venereal taint. His condition proved to be a mycosis, the fungus consisting of a mass of mycelia, without spore bearers.—*Pacific Med. Jour.*

The Operative Treatment of Chronic Bright's Disease.—Ramon Guiteras (*N. Y. Med Jour.,* Nov. 7 and 14, 1903) comes to the following conclusions: 1. Chronic nephritis should not be operated upon until medical treatment has proved of no avail. 2. The time for operation is when it is noticed that the process is advancing rapidly and we fear that the heart will soon become overtaxed. 3. The operation for chronic Bright's which has proved least dangerous and which has shown the best result is nephropexy performed on a single movable kidney. 4. The most unfavorable cases for operation are those of diffuse nephritis. 5. Cases of general anasarca with bad heart action should not be operated upon; if the heart action is good an operation performed as a *dernier ressort* may give the patients a few extra months of life provided they survive it. 6. Where there has been a marked destructive process in the kidneys as a result of a nephritis, the operation may relieve them for a number of weeks or months, but they generally fail again and die when the new capsule begins to contract.—*Pacific Med. Jour.*

Adrenalin and its Uses in General Surgery.—Under the above title an article appears in the October issue of the *Indian Medical Gazette,* from the pen of Harry Gidney, F. R. C. S. (Edin.), D. P. H. (Camb.), etc. The author finds that "the clinical usefulness of adrenalin is very great and extensive, and owing to its power of rapidly and effectively producing vaso-motor constriction, it is adapted to the treatment of all inflammatory conditions. The drug is also of extreme value in arresting hemorrhage during all surgical operations. It is indicated whenever and wherever any local hyperaemia exists, more especially in inflammations of mucous surfaces such as those of the eye, throat, larynx, pharynx, urethra, bladder, nose, rectum, vagina, uterus, stomach, etc. It is used not only to stay hemorrhage when it exists, but also as a preventive or controlling remedy, given either internally or externally prior to an operation, so as to lessen the amount of bleeding during the performance of the operation. It is a non-irritant to mucous membrane unless when used too frequently and in excess.

"On reading the literature on the subject," says the writer, "I find that adrenalin is admitted to be the most powerful and rapid cardiac stimulant and tonic we have, being chiefly used in cardiac affections, haematemesis, hemoptysis, hemophilia, hematuria, menorrhagia, post-partum hemorrhage, purpura, scurvy, etc. It is said to be the most rapid restorative in chloroform and other forms of anesthetic syncope, and in such cases it is advisable to administer it intravenously."

The author reports the results of several operations, major and minor, in which adrenalin was employed. The first case was one of fracture of the vertex of the skull. As one of the larger branches of the middle meningeal artery had been torn there was profuse dural hemorrhage and capillary oozing which were controlled by the use of the 1-1000 solution. In the second case, one of hemorrhoids, profuse bleeding was checked by the rectal insertion of a plug of cotton wool soaked with adrenalin chloride solution.

The third case was one of skin grafting in which the author tried pressure to stop the capillary bleeding. As the procedure was somewhat tedious he applied adrenalin

chloride solution with almost immediate cesssaton of all oozing, and what is usually a lengthy and sanguinary operation was converted into a short and comparatively bloodless one.

The fourth case, one of hemorrhage after the extraction of teeth, and the fifth, which appears to embrace the author's experience in a number of cases of epistaxis, afforded additional opportunity to test the hemostatic effect of adrenalin.

In case VI a post-partum hemorrhage was checked by swabbing the uterine cavity with adrenalin solution, while the same happy result was obtained in a case of secondary hemorrhage following an operation for the relief of a mammary abscess.

The author has found that the instillation of a 1-5000 to 1-2000 solution of this drug reduces the inflammation and considerably cuts short the process of conjunctivitis. He usually applies it (diluted) over the inflamed parts by means of a soft camel's-hair brush. He always uses the preparation containing chloretone, which has a decided local anesthetic action relieving much of the photophobia and pain. He is fully convinced of the power of adrenalin to arrest or lessen the bleeding that arises from the cut ends of the iris after iridectomy. He speaks highly of its efficiency in chemosis, cataract operations, evisceration of the eyeball, operations for ectropion, symblepharon and trachomatous pannus.

The author concludes that in all cases of minor surgery in which it is desired to arrest bleeding from any cut or exposed surface, we have in adrenalin a most useful, powerful and rapid drug—one that is non-poisonous, non-irritant and non-accumulative, especially in operations upon the conjunctiva and eyelids.

BOOK REVIEWS.

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A Manual of the Practice of Medicine.—By A. A. Stevens, A. M., M. D., Pro-

fessor of Pathology in the Woman's Medical College of Pennsylvania; Lecturer on Physical Diagnosis in the University of Pennsylvania; Physician to the Episcopal Hospital and to St. Agnes' Hospital; Fellow of the College of Physicians of Philadelphia, etc. Sixth Edition, Thoroughly Revised, Enlarged, and Reset. Handsome Post-octavo of 556 pages, illustrated. Philadelphia, New York, London: W. B. Saunders & Co., 1903. Flexible Leather, $2.25 net.

The popularity of this manual on the Practice of Medicine can be attested for by its numerous editions. The work covers completely the ground gone over by the student, especial stress being laid on diagnosis, differential diagnosis, and treatment. Each disease is treated in a concise, clear, and scientific manner, and the reader can not fail to grasp the author's meaning. This sixth edition has been entirely reset and greatly enlarged, without changing, however, the original style of the work. Many articles, notably those on Diseases of the Digestive System, Diseases of the Myocardium, Malaria, Diseases of the Blood, Gout, Diseases of the Spinal Cord and Larynx, have been entirely rewritten, thus bringing the work absolutely abreast of the times. After a careful examination we can unhesitatingly recommend this book to students.

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It is a Bad Habit to whip up the waning physiologic functions of elderly people with strychnine or alcohol; after a short time the deleterious reaction is more certain than the primary stimulation. These patients need help of a character not furnished by a powerful stimulant—their functions need gentle reinforcement and, experience proves, the best agent for this purpose is Gray's Glycerine Tonic.

The atonic digestive disturbances almost constantly present in old age are promptly overcome by the use of Gray's Tonic. It stimulates the enfeebled digestive glands to secrete abundant supply of gastric juice. This in turn, assists the assimilation of food and improves the general nutrition. Then too, these patients feel better because the remedy acts as a prop to the entire system; they are less languid, are not so easily fatigued upon exertion and are mentally more alert. Many physicians report that the routine employment of Gray's Tonic in those patients in whom are present the signs and symptoms of old age, imparts a degree of comfort and well-being, free from after-effects, not obtainable from any other medication; one physician states "it picks them up and holds them together."

Another strong reason for the use of Gray's Tonic in elderly people is that it wards off the tendency to inflammations of the respiratory organs; this fact has been noted and commented upon for many years past and is doubtless due to the fortifying action of the remedy upon the general constitution and its specific influence upon the respiratory tract.

Experience shows that it is good practice to administer Gray's Tonic to all patients in whom are noticeable the symptoms due to advancing years. The absolute freedom of the

remedy from depressing or other detrimental reaction makes it the safest and most preferable means of combating the exhaustion and enfeeblement of age.

The Decadence of Opium.—We would not banish opium. Far from it. There are times when it becomes our refuge. But we would restrict it to its proper sphere. In the acute stage of most inflammations, and in the closing painful phases of some few chronic disorders, opium in galenic or alkaloidal derivatives, is our grandest remedy—our confidential friend. But here, the application should cease; and it is just here that the synthetic products step in to claim their share in the domain of therapy. Among the latter, perhaps none has met with so grateful a reception as Antikamnia Tablets, and justly so. Given a frontal-temporal-vertical or occipital neuralgia, it will almost invariably arrest the head-pain. In the terrific fronto-parietal neuralgia of glaucoma, or in rheumatic or post-operative iritis, they are of signal service, contributing much to the comfort of the patient. Their range of application is wide. They are of positive value in certain forms of dysmenorrhoea; they have served well in the pleuritic pains of advancing pneumonia and in the arthralgias of acute rheumatism. They have been found to allay the lightning, lancinating pains of locomotor ataxia, but nowhere may they be employed with such confidence as in the neuralgias limited to the area of distribution of the fifth nerve. Here their action is almost specific, surpassing even the effect of aconite over this nerve.—*Nat. Med. Review.*

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Indianapolis, Ind."

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I have the pleasure of telling you of a most remarkable experience had with the bottle of ecthol you kindly forwarded me last month. When I received the sample of ecthol I had been treating a young man about ten days for what I diagnosed as ulcer of the stomach. For a year before coming to me he had occasionally seen dark colored blood in his alvine discharges, and now and then, he had vomited blood of a lighter hue. There was an indurated spot on the body of the stomach about twice the size of a silver dollar which had been giving him trouble for some time. Could trace no history of cancer in his family. After putting him on teaspoonful doses of ecthol four times a day, he came to my office and smilingly told me the hard spot was gone. I examined him and found it to be true. During this last week he had been on ecthol alone. The vomiting had also ceased and he had gained in bodily vigor. Gave him a second vial of same, cautioned him as to eating and exercise, and discharged him in fine spirits. I wonder if this case can be matched?

John F. Neal, M. D.

Lytle, Texas, Oct. 14, 1903.

Sanmetto as a Genito-Urinary Tonic and Remedy.—I have prescribed Sanmetto in a number of cases of incontinence of urine, with gratifying results. I believe it to be a oremedy par excellence in all cases of genito-urinary complaints. I have reason to believe that Sanmetto possesses aphrodisiac properties equaled by few remedies at our command.

G. C. Snyder, M. D.

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"For therapeutic efficiency in rapid resolution of the products of inflammation, Antiphlogistine is unexcelled."

For saline medication nothing approaches in value and efficiency Abbott's Saline Laxative. Physicians who use it once are never caught without it again. Used wisely and in sufficient quantity it is the doctor's most valuable assistant. It never fails to work and that is something that can be said of few assistants.

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JOHN D. NORTH, M. D.
Jackson, Mich.

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By L. H. Warner, A. M., Ph. G., M. D.
20 W. 34th St., New York.

From year to year the predisposing and exciting causes of neurasthenia become more frequent, and this, in my belief, is due to the fact that the use of brain power in the struggle for existence becomes an absolute necessity. Charles L. Dana of New York, in his works on neurasthenia, ably states: The tendency of people to city rather than rural life is perhaps one of the strongest predisposing and existing causes of neurasthenia, proof of which every medical man finds in the abundance of neurasthenics amongst his clients. Luxurious living, sedentary life, unsanitary conditions of great and populous cities, overwork, continued anxiety, mental strain, sexual abuse—are some of the exciting causes of neurasthenia.

The symptoms of neurasthenia are manifold and too well known to require recapitulation, but it is my desire to cite the words of Dana which led me to investigate and study a series of cases of neurasthenia, to study in same the probable functional disturbance of the heart's

activity and vasomotor disturbances. Appertaining to the latter, Dana says: The most frequent condition that I have seen is an acceleration of the pulse beat from very slight cause, due to a weakening of the inhibition of the heart. A pressure over some painful point in the body will sometimes bring up the pulse from 80 or 90 to over 100, and it will remain there for one or two minutes.

A great deal of stress has been laid upon the vasomotor disturbances of neurasthenia, and a large number of neurasthenic symptoms have been ascribed to a weakening of the vasomotor center. As a result, the patient suffers from cold hands and feet, from flushing of the face alternating with pallor, from dermographic skin and from those symptoms which we usually attribute to cerebral congestion, such as a sense of fulness in the head, headache, spots before the eyes, dizziness and noises in the head.

Sphygmograms of the pulse show a lowering of arterial tension, and perhaps still more a great variability in the tension of the arteries. The accompanying chart gives the sphygmographic tracings of six of the cases of neurasthenia to the study of which I have devoted my entire time and attention. In all cases of neurasthenia we undoubtedly find defective metabolism, for the examination of the urine and faeces of all neurasthenic patients will exhibit pathological quantities of either one or more of the following factors: oxalate of lime, phosphates, inbican, uric acid, nucleo-albumen sugar, albumen, etc. An examination of the blood presents us with an anæmia and slight or advanced digestive leukocytosis, and upon count of the leukocytes in the prepared specimen we find most interesting histologically altered cells. Blood examination of all cases examined showed a slight eosinophilia.

C. F. Hodge states that when the nerve cells are fatigued by persistent work or electrical stimulation, the nucleus of the cell decreases in size, has a jagged irregular outline, loses its open and reticulated appearance and takes a darker stain, that the cell protoplasm shrinks slightly in size and stains more feebly. These facts are forcibly demonstrated through the clinical study of the blood of all neurasthenic patients. Whether the agency in neurasthenia be a disturbance of either the vascular or vasomotor centres, such disturbances will disturb their equilibrium. The nerve cells connected therewith become weakened in their nutritive and functional power; the blood, whose function it is to distribute pabulum to all cells and tissues, is not carried normally nor regularly to the nerve centres, as is customary and required, hence the nerve cells become impaired in nutrition and functionating power. Defective metabolism will permit the introduction of toxic materials into the blood circulation, and this may induce symptoms of neurasthenia.

With these facts before me, and the further fact that the better understanding of biology, physiology and hæmatology enables us to absolutely and finally determine as to prognosis in disease, as to the physiological action of whatever medication we might employ to combat disease, I entered upon the work to collect the accompanying data in a series of cases of neurastheniæ. I might mention that strict stress should be laid upon ordering the patient a chiefly nitrogenous diet, and advising if possible hydrotherapy, massage and electricity. Of therapeutic agents we have many at our command—the principally used ones being the bromine and iodine halogen derivatives. As most neurasthenics suffer with more or less digestive disorder, which exhibits itself in the blood in the form of a digestive leukocytosis, and in the urine by an excessive phosphate elimination, I am inclined to disfavor the bromine and iodine derivatives, as they tend to aggravate rather than lessen these disturb-

ances. Alterative, antispasmodic and tonic properties should enter into the selected medicinal combination. In the cases herewith recorded the sphygmographic tracings, urine and blood tests, combined with the physical condition of patients, showed little progress after limited tests regarding the physiological action of Tr. Valerian Ammon, Mist. Ammon, Potass. et Sod. Bromidum, but a like test in like time with Neurilla gave most excellent results, not alone that the pulse became regular, as shown by tracings, but also blood and urine tests showed improvements and patients noted marked relief.

As far as I can learn, Neurilla is an extract of Scutellaria and aromatics. The antispasmodic calmative properties of this drug are well known to all, but what I principally consider is the tonic reconstructive properties of the aromatic combination in Neurilla. Where it has been the custom to follow the regular treatment with a tonic treatment, it appears to me that the use of Neurilla covers all these requisites thoroughly. A glance at the daily sphygmogram tracings taken at eight A. M., one hour after medication, will show that the pulsation became more regular, beginning the seventh day, twenty-four hours after the first dose of Neurilla had been taken. The blood plates of two of the six cases here cited show an aggravated digestive leukocytosis and mild eosinophilla, both of which abated upon examining the blood after two weeks' treatment. All six cases exhibited a mild anæmia, and all gained from 8% to 11% hemoglobin within two weeks. Without lengthening this paper with daily reports as to condition of patients, which might be followed by accompanying charts, I cite the history of the different cases:

Case I. A. H., age 37. Housewife. Has enjoyed perfect health up to four months ago; mother of three children, the youngest of which died four months ago. Shortly after, patient began to lose in flesh and appetite, troubled with headaches, fright and constipation. Has taken various remedies without apparent benefit. Pulse, 115. Temp., 100. (See tracing case I, first day.) Is ordered medication as indicated upon lower end of chart. First improvement is noted on seventh day. Fourteenth day tests are concluded, patient is advised to continue Neurilla in teaspoonful doses at bedtime.

Case II. F. McN., age 43. Bookkeeper. Has enjoyed perfect health up to three weeks ago, when he accidentally misstepped and fell down stairs, without causing local injury. Since then appears very nervous, loss of appetite, etc.; has taken some nerve tonics bought in open market. Pulse, 107. Temp., 99.3. (See tracing case II, first day.) Is ordered medication as indicated upon lower end of chart. First improvement noted on sixth day. After fourteen days discharged. Advised to continue Neurilla in teaspoonful doses at bedtime.

Case III. C. C. C., age 39. Clerk. Has been hard drinker for some years, but discontinued a few months ago; since then has complained of headaches, wakefulness, loss of appetite, indigestion, etc. Has taken several drink cures without results. Pulse, 96. Temp., 100. (See tracing case III, first day.) Blood picture shows a severe digestive leukocytosis and mild eosinophilia. (Treatment as shown in chart.) Rapid improvement after sixth day, as demonstrated by sphygmogram and blood picture. Patient is advised to continue Neurilla treatment.

Cases IV, V and VI. All give history of previous nervous strain, overwork, etc., in ill-ventilated storerooms, and subsequently no rest in crowded unsanitary lodgings. The condition of patient, case V, was most deplorable, he practising masturbation for years past. (See blood picture.) The treatment in all cases is recorded in chart opposite number of case and day of treatment.

Although I noted good results in all these cases on Neurilla medication, I advised all patients to continue with Neurilla for a few weeks. I have previously stated Neurilla possesses, aside from its alterant antispasmodic and calmative properties, tonic properties which add to its value as a therapeutic agent in the treatment of neurasthenia and other nervous and digestive disorders.

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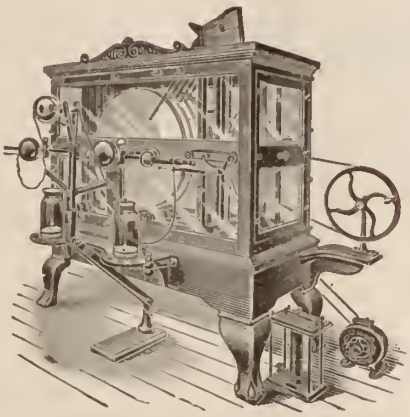

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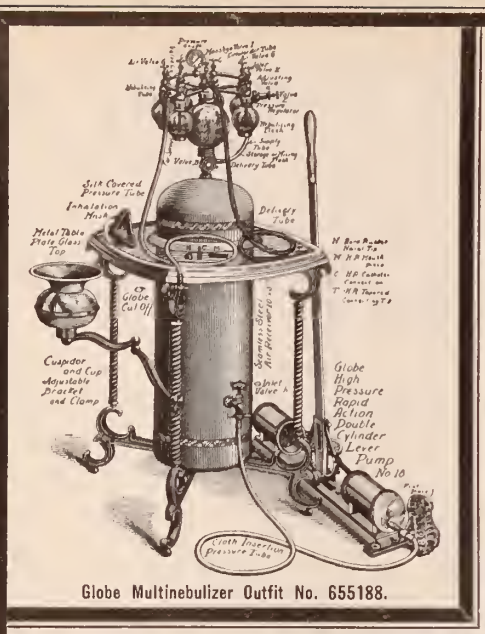

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THE

Vermont Medical Monthly

Official Organ Vermont State Medical Society.

Vol. ix. No. 12. Whole No. 108. | Burlington, Vt., Dec. 25, 1903. | $1 per year. Single copies, 15 cts.

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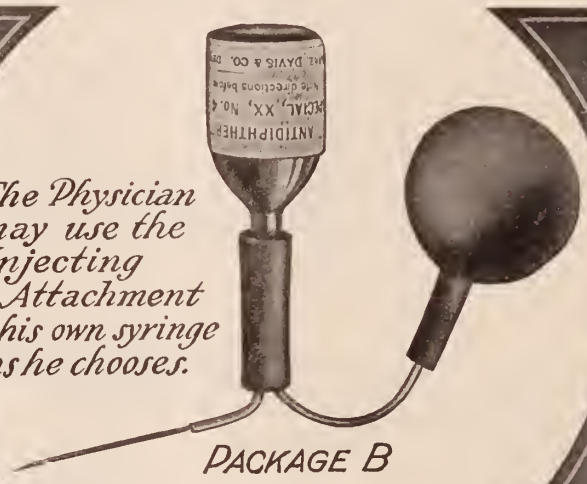

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The Vermont Medical Monthly

Vol. IX. December 25, 1903. No. 12.

ORIGINAL ARTICLES.

COMMITMENT AND TREATMENT OF THE INSANE.*

By Walter D. Berry, M. D., Waterbury, Vt.

Clinical Director and Pathologist Vermont State Hospital for the Insane; Professor of Mental Diseases University of Vermont Medical College.

In lieu of presenting my subject in the usual way, permit me to quote those familiar lines in the query of Macbeth: "Can'st thou minister to a mind diseased?" and answer the question as fairly as did that famous bard when he wrote again, "Nature too unkind, that made no medicine for a troubled mind."

If this be true then, that we cannot treat successfully the disordered mind, it is, however, equally true that we may often do much to benefit the condition of the unfortunate possessor of such a mind.

I would propose, therefore, as the leading "motif" of the management of the insane, the aphorism: *"The way to treat insanity is to let the insanity alone and treat the patient."* In other words, like dropsy, insanity is a symptom; and as the former directs our attention to disorders of the heart, the kidney, the liver, or the blood, so the latter is to us an evidence of dirordered action in nervous tissues—in neurosis,to use a more exact term. For this reason, the very term "mental disease" is a misnomer; one might as well say "urinary disease" for nephritis.

The name, of course, does no harm, if we use it in a conventional sense, remembering that there is no such thing as disease of the mind; and that disordered perception and thought mean brain disease, just as disordered digestion indicates gastric or intestinal disease. As the subject of my paper presupposes the diagnosis to have been made, I will give a short outline of the treatment of mental diseases and I will not, therefore, weary you with a detailed description of the various methods of managing mania, melancholia, paranoia, paresis, etc., but will try to direct your attention to the needs of patients with disordered psychic functions which come under the observation of the general practitioner in the course of his ordinary work and call attention also to certain defects in the proper commitment of the insane, particularly as to what class of cases should not be committed to a hospital for the insane.

The patients that present certain departures from the normal mental state, as they come under the physician's care, may be considered under five heads according to ages or rather "life periods":—

1. Childhood—first to the 12th year.
2. Adolescence—12th to 25th year.
3. Maturity—25th to 45th year.
4. Climacteric—45th to 60th year.
5. Senility—60th to 80th year.

Insanity is rare in childhood, though its existence at birth has been asserted by some authors. The diagnosis, however, must necessarily be in doubt, since it is difficult to see how an organism possessing no mind can have its psychic functions disturbed. *Rush* noted mania at two, *Sinkler* at three. *Sachs* also quotes *Hagen* to the effect that one in 70,684 children annually become insane, and *Spitzka* states that "over 4% of 3,244 adult recorded private cases, may be justly regarded as hav-

*Read at a meeting of the Washington County Medical Society.

ing been insane in childhood," while but twelve patients afflicted with infantile forms of insanity were observed by him in their infancy.

The forms of insanity in childhood belong mainly to the *indefinite psychoses* resulting from defects or delays in development, impaired nutrition, sequelae of infectious disease, neurasthenia, etc., although it is quite possible to have pronounced mania and melancholia at this period. Defects of "inhibition" are in a measure physiologic in early life and it is an easy matter for these in an extreme degree, to constitute the leading features of an insanity. The violent and "incorrigible" are examples of this defect, their cerebral "reflexes" being uncontrollable by the higher mechanisms.

Under *Causal Treatment:* The great principle that stands first in the treatment of most diseases—namely, the removal of the cause—applies with special emphasis to the insanities of childhood. So far as these cases are hereditary we cannot, of course, remove the predisposing causes; but we may do much, however, to render inoperative the exciting causes. What are they?

Malnutrition, associations, late hours, mental over-excitement, social, religious, or educational; emotional literature. The importance of nutrition at this developmental period is obvious, and needs only to be mentioned; the same is true of the evidence of late hours, social dissipations, theatres, etc.

The neurotic child should not be made a man or woman before its time; should not be taken to funerals, theatres, religious revivals and other emotional exhibitions; should not be put in competition with stronger children at school. How often is the opposite course pursued by parents because the child is "bright," which in most cases means "weak," i. e., easily impressed. If association of a child with an hysterical parent is to be condemned, how much more important that it be not brought into intimate associations with insane relatives. It would be an advantage to many of these neurotic "border-line" children if they could be kept from school until such time as nature has developed their neurons more fully, and proper inhibitory connections are made. "But," protests the parent, "my child must have an education—must hold a position in society."

Such parents should be warned that imperfect fruit may be gathered at the expense of loss of the tree. It is our duty to advise parents not to "push" these children at their studies; to take off the pressure and allow the nerve elements to attain the best proportions possible to their nature.

A few years spent in the sunshine of the fields and woods, with careful attention to general hygiene and nutrition, are worth more than all the veneer of civilization to these backward plants.

As regards the treatment of the developed psychoses in children, this may be conducted satisfactorily at home, provided the facilities are adequate, namely, isolation in hygienic quarters, a skilled nurse who must be a stranger to the patient, and careful medical supervision. Lacking these essentials, and especially if the child must be in association with neurotic parents or guardians, institutional treatment becomes imperative.

The medical treatment proper may be arranged under three heads:

1. Eliminative.
2. Dietetic.
3. Symptomatic.

The first includes attention to the excretions generally—the skin, the kidneys, the bowels.

Hydrotherapy, internal and external, is a valuable measure here. The purer the water, the better. In the country rain-water, in cities and towns distilled water, are generally obtainable and should be used for drinking purposes to the exclusion of well or river waters.

The diet in the insanities of childhood

should be nourishing but largely liquid in acute cases; later, the four F's of Fothergill—Fish, Fat, Fruit and Farina—is as good rule of procedure as any. The lighter meats are desirable; sweetbreads and fowl, with eggs, oysters, butter and cream. Fruit had best be cooked and excess of sweetening is to be carefully avoided. The heavier farinaceous foods, as potatoes, etc., are less desirable than rice or partially converted starchy foods, such as zwieback. Alcohol in the form of egg-nog is advisable in rare cases with much physical depression. Should patients refuse food, which is rare with children, advantage may be taken of that innate propensity of humanity to appropriate what does not belong to it, by leaving within reach milk or other foods and noting whether they disappear.

The symptomatic treatment comprises drugs to alleviate constipation, constitutional toxemias, distressing mental or motor activity, insomnia, etc.

In cases of maniacal type, with great motor excitement and insomnia, sulphonal is perhaps our most valuable drug. It is slow in action, prolonged in effect, not objectionable in taste, and can be given in milk, soup or lemonade without the knowledge of the patient if necessary. I prefer it to trional and other quick acting hypnotics.

Hyoscine hydrobromate is also very effective in motor excitement, but should be given with caution and its effects watched for carefully. Doses of 1-200 grain every two, three or four hours may be increased to 1-100 grain, according to age of child.

Our second period—adolescence, from the twelfth to the twenty-fifth year—is a much more prolific period in psychoses than childhood. This is naturally to be expected on account of the important developmental changes, somatic and psychic, which occur. The forms of psychoses at this time of life may belong in either group, but there is apt to be a preponderance of the infinite or "borderline" cases as compared with later life. Home treatment is practicable in the great majority of these cases, and the results in first attacks are usually good under intelligent treatment. The rules already laid down as to isolation, nursing, hygiene, etc., are essential elements.

A rare form of insanity that occurs at this period of life and later is known as "typhomania" or "delirium grave"—"infectious delirium." Beware of a suddenly developed mania with "typhoid symptoms," and without a noticeable prodromic stage of mental depression, especially if accompanied with a temperature of 100° or 102° and great depression of pulse. Such symptoms are of unfavorable prognostic import, and a fatal termination within ten days is probable. It may be averted by prompt resort to active stimulation with alcohol, together with general nutritional and eliminative measures.

In the definite psychoses—mania, melancholia, etc.—at this period the use of hypnotics is generally needed for a time, and the choice lies between dormiol, sulphonal and hyoscine hydrobromate for the more active cases. Opium is to be preferred in those showing much depression, somatic or psychic.

Measures addressed to the blood-state are important. For the correction of lithemia, as shown by the urine, the free use of water with one of the lithia salts is generally advised. Where lithia for any reason is not effective, or disagrees with digestion, as it sometimes does, I have obtained very satisfactory results from lysidine as a uric acid neutralizer. This remedy is a liquid of synthetic origin, of which the dose for an adult is fifteen minims in distilled water three or four times daily, between meals. It is claimed to possess about seven times the power of piperazine, its predecessor. Both are expensive, and for this reason, perhaps, not in common use. Recently Tunnicliffe and Rosenheim have reported excellent results ex-

perimentally from the use of piperidine tartrate for the same purpose. This drug, however, has not yet made its appearance in our pharmacies. These observers find it far superior to either piperazine or lysidine.

Excessive metabolism, indicated by an abundant and persistent phosphaturia, is an occasional feature of insanity. This is more apt to occur in cases characterized by excessive mental activity, and is an indication for a carefully adjusted sedative and diuretic plan of treatment. Urotropin or citrate of caffein with lemonade has often given us good results. Sulphonal, opium and even chloral have their place in these cases, together with proper attention to foods and digestion.

Other blood-states which require attention are the various anemias. Iron, arsenic and the intestinal antiseptics, such as hydro-napthol, salol, etc., are of value here.

Under the head of causal treatment comes the administration of thyroid gland or its products, in suitable cases. This is as yet in the experimental stage, but as far as my experience goes, I find it applicable only to those cases which have not undergone the menopause or those in which cystic or fibrous degeneration is not present.

"Depressed conditions are improved, maniacal conditions made worse. The treatment must be carried out with the patient absolutely in bed, and the action of the remedy must be watched carefully. The remedy is contraindicated in acute insanity, tuberculosis, valvular heart disease, and in marasmic states generally."

Finally, the association of insanity with pulmonary tuberculosis in the adolescent should always be borne in mind.

The third life period—maturity—is generally considered the most prolific in mental disease. This assumption, however, it must be borne in mind, is based on institutional statistics. It is quite possible that, if all cases in both of our groups were considered, the indefinite as well as the more "fixed" types, this statement would be materially altered.

No account is taken in it of the numerous cases in earlier life of mild type and short duration; of the large number receiving home treatment in earlier years, but which become a burden to their familes in mature life and are sent to asylums; and of a third group which has dropped out of the race before reaching maturity. These cases included, it seems quite conceivable that the actual most prolific period, numerically speaking, is the second in our classification, namely, from twelve to twenty-five.

The insanities which do develop in mature life are apt to be of rather pronounced type, more definite in outline, more "fixed" in manifestation. Irregularity in evolution is not so important a factor. The organism is at its best, physically and mentally.

"High to soar and deep to dive
Is given a man at thirty-five."

Hence a break in the machinery is a more decided event, and apt to be attended with permanent damage to the organism. The influence of syphilis, gout, rheumatism and alcohol and the increasing "tension" of life at this period replace in a measure as causes the developmental defects and irregularities of earlier life.

Many of the cases of insanity in this period have passed through and recovered from earlier attacks, which have perhaps damaged their structural integrity, while leaving no decided mark—like the tree which has weathered a storm but yields a "wind-shaken" timber.

The paranoiacs are apt to attain their full and most troublesome development at this period. Their excessive egotism, unrestrained desires and passions and lack of "inhibition" generally, strongly suggest a recurrent or persistent childhood plus a certain amount of adult initiative and scheming shrewdness in a lim-

ited range of thought. Most of them are classed by society amongst its harmless "cranks." A decided element of danger exists in those cases with marked delusions of "persecution" in communication with threatening or revengeful expressions of feeling. Seclusion within an institution is the only safe advice in this latter class of patients.

Of manias and melancholias of mature life, it may be said that the prognosis on the whole is less favorable than in earlier life. This is particularly true where repeated attacks have gone before. They present no special indications for treatment other than those already stated for adolescents. Home treatment is feasible in these cases, if troublesome or dangerous delusions are absent, and facilities are obtainable for proper isolation and nursing; otherwise, institutional treatment is advisable. Paresis or paralytic dementia is the characteristic insanity of this period, and in mose cases the good of the patient, as well as that of his family and property interests, is best subserved by commitment to an institution as soon as the diagnosis is assured.

The fourth or climacteric period witnesses a return of the liability to "irregular and abortive types" of psychoses such as characterize childhood and adolescence, the evolutional irregularities in women especially being replaced by those of involution. As the former may be irregular and delayed, so may the latter. Hence the "border-line" or indefinable cases reappear in this period and present all grades, from a simple paresthetic neurosis to a most pronounced psychosis.

The electrical feature of the treatment, however, is best omitted, and this, I believe, is true of the insanities generally.

The "climacteric" period of life is not by any means limited to women. Men pass through it at a later age, oftentimes quite distinctly, though less abruptly, hence the slowness of the involutional changes renders accommodation to them less difficult and less disturbing.

The fifth period, the "lean and slippered pantaloon," varying in individuals between sixty and eighty, is one in which the effects of the dyscrasias, the degenerations and the disorganization are apt to express themselves or to accompany irregular psychic dissolution.

The most remarkable fact about the nervous dissolution of this period is that it is seldom or never primary; the psychic machine does not wear out its most active parts, but is clogged by the mal-development of inert tissues and the accumulated debris resulting from deficient excretory action. Hence the arterioscleroses, and the toxemias resulting from defective action of the kidneys, bowels and skin are important factors in the senile insanities.

The indications for treatment of these conditions are obvious, and the results often surprisingly good.

Here, again, the importance of treatment of the patient rather than of his disease is emphasized.

The "terminal dementias" of the various forms of insanity are to be viewed as types of premature senility in nervous tissues.

It has been said that "hypnotism" is of little or no value in the true psychoses. This is probably true in the pronounced types, so far as direct cure by hypnosis is concerned, but no impartial observer can fail to note the favorable influence of well-balanced nurses on the insane generally.

The importance of avoiding anything like "fussiness" in the management of these patients can hardly be overestimated. To tell the truth, avoid argument and utilize persuasion to the fullest degree, are cardinal points in the psychic treatment, which are always of great influence in securing what improvement is possible.

What may we expect as a result of our treatment of the insane? So far as I know, there

are no extended statistics of the results of "home treatment." The following figures from Maudsley, based on institutional statistics, are instructive:

About 50 per cent. of all cases recover. Of these two-fifths remain well, three-fifths have a recurrence (Thurnam). It must be remembered, however, that these figures do not include numerous cases that recover outside of asylums, and hence do not enter into statistics for obvious reasons. The proportion of developmental and "border-line" cases that recover is probably much larger.

We may summarize the treatment of the insanities as follows:

1. A great majority of first attacks are amenable to home treatment if proper facilities for isolation, nursing, hygiene and medical attention are procurable.

2. Treat the patient, not the insanity.

3. Treatment should consist of—

(*a*) Causal treatment, removal of excitants and depressants.

(*b*) Somatic treatment, eliminative and nutritional.

(*c*) Symptomatic treatment, to allay restlessness, to promote sleep, to secure development in adolescence, to favor involution in the climacteric.

(*d*) Institutional treatment is advisable in paranoia with dangerous delusions, in recurrent mania with violence, in paresis, in the terminal dementias following other insanities, and in all cases where proper isolation and nursing cannot be afforded, or where the associations are such (children, etc.) as to make the patient a menace to the psychic health of others.

However, there are certain mistakes made in the commitment of the insane, and to these I wish to draw your attention. In the first place, it is necessary to know the requirements concerning the legal commitment papers now in force. It was my privilege, through the aid of others to secure the adoption of a new commitment paper at the Legislature of 1900 and thereby do away with what to me seemed an obsolete document after my arrival here from the Massachusetts insane hospitals. The old commitment papers called for *Facts Observed* and *Facts Learned.* The new commitment paper calls for what the *"Patient said"*—what the *"Patient did"*—what the *"Appearance and manner were"*—and also as to *"Other facts"* which might be deemed as helpful to both the probate judge and the hospital authorities in a proper conception of the true nature of the malady.

How often do we see the reverse true! The committing physicians are in a hurry and wish to use as few words as possible. In other cases we observe gross neglect and carelessness of professional information, and in other cases the commitment paper will show a ludicrous amount of lucidity and ambiguity.

In order to give you some idea of what I mean, permit me to read one which we received accompanying a case of melancholia.

Patient said: "At the close of our examination Mrs. John Blank came in and said, 'Ann, had you not better pay these men or doctors?' She said, 'You know you are owing them some.' She, Miss Blank, said, 'I haven't any money.' Mrs. John Blank said 'Yes you have' —Miss Blank said 'No that is cursed money. My certificate was not good. I didn't have a good moral character.'" *Patient did:* "Most of the time she sat looking out of the window, but at times she would watch us like an insane person." *Appearance and manner:* "Those of an insane person." *Other facts:* "She tried to commit suicide by hanging on the 27th day of July, etc."

To illustrate the degree of ambiguity and lack of professional information which I have alluded to in some of the papers received, listen to the following in a case of amentia:

Patient said: "Puerperal insanity and usual symptoms of such disease."

Appearance and manner: "Indicative of puerperal insanity."

Other facts: "First symptoms of puerperal insanity appeared 10 to 14 days after childbirth."

The following information came with a case of senile dementia:

Patient said: Nothing.

Patient did: Sat in a listless position playing with a large doll.

Appearance and manner: Those of an insane person.

Now, it is not my purpose to ridicule any of my professional brethren nor to needlessly expose their faults, yet there are good reasons why the Hospital for Insane should expect the papers to be made out correctly, and as lucid and clear as professional information could make them.

Still another feature of the commitment of the insane compels me to say a word. It is concerning who are proper patients to be committed.

In cases of mild depression or melancholia occurring at the climacteric it is always well to exercise considerable caution about recommending removal to an institution, since many and perhaps most "border-line" cases can be isolated very well in their own homes, or in some private hospital, and treatment may often be attended with very satisfactory results. The Wier-Mitchell "rest cure" or some of its various modifications is an excellent measure in these cases, especially in neurasthenia or exhaustion following "Grippe." If cases of melancholia do not have self-accusatory delusions and ideas of a somatic nature, they should be cared for at home and the fear of suicide can be safely excluded.

After following the regular commitment to our hospital for the past four years, I am firmly convinced that physicians "lose their heads" and resort to "force and hypnotics" which are not in the great majority of cases needed. We have had men admitted who have been strapped down with ropes and harnesses to a degree which seemed entirely unnecessary and have had aged men and women who were often too weak to harm a child brought to us as if they had been maniacal and homicidal giants.

Another word of advice I have and it is this: That the best plan of procedure is never to commit a patient by "pretext," i. e., tell the patient where he is going, as we find it better in the long run and better to have it over with at once. Besides being a great mental shock to the patient to wake up and find himself in a hospital for the insane, it causes those who take care of him a great deal of trouble and annoyance by his rebellious attitude and expressions of lack of faith in his friends.

Last, but not least, physicians are sometimes liable to be influenced by family and friends in distortion of facts leading to the commitment of patients who may not be sane but yet not insane and harmful enough to be sent to an institution. I refer in large measure to the unloading of demented paupers upon the State and to the commitment of simple cases of senility who are brought to us to care for because of some son or daughter's laxity in regard to their personal responsibility concerning their father or mother.

Unless an aged person has delusions of a harmful nature, together with loss of sphincteric control rendering him a distinctly burdensome and difficult person to manage, he should not be committed to an institution.

In prostatis there is often pain at the end of the penis, as in stone in the bladder, but it is commonly less acute than in the latter. In cystitis the pain is chiefly before urinating, and supra-pubic as to location, although, when very severe, it may also be felt in the perineum. In stricture the pain is apt to be at or about the seat of the obstruction.—*Med. Sentinel.*

SOME OF THE CARDINAL POINTS IN THE DIAGNOSIS OF ABDOMINAL TUMORS.*

By H. C. Crowell, M. D., Kansas City, Mo. Professor of Gynecology, University Medical College, Kansas City, Mo.

We are living in an undoubted era of abdominal surgery; a time when, more than ever before, abdominal lesions are being successfully treated, due to the innovations of the gynecologist, aided by the bacteriologist. Surgery has compelled the internal medicine man to recognize the "interdependence of medicine and surgery." Diagnoses which have, until the intervention of surgery, remained doubtful, are now made possible and positive without danger of an increased mortality by the exploratory operation. A large per cent. of operations may be started as exploratory and, indeed, I think I speak advisedly when I say it should be so. The day has passed for the cock-sure diagnostician in matters obscure. While we should exhaust all available means to arrive at a diagnosis prior to operation, each step of an operation, once begun, should be exploratory, to the extent of proving the correctness or error of the supposed diagnosis. A diagnosis means a finding out, a divining of the existing lesion or lesions. A perfect diagnostician is one who exhausts every available means necessary to ascertain of what a given case is suffering. To the thorough diagnostician it is not conclusive, the finding of one lesion, but he sets about to ascertain if others may not be present; as, for example, a movable kidney found in a neurasthenic woman is quite likely to be but one of several lesions of which she may be suffering. In ill-defined stomach troubles we may find the gall bladder or its ducts at fault, the duodenum or pylorus may be the site of ulcers, acute or chronic, adhesions due to a previous inflammatory trouble about these organs may also act as causative factors, or, going still farther away from the stomach, we may find that an old chronic appendicitis is the cause of the entire ensemble of symptoms requiring, for their elucidation, surgical exploration.

I was forcibly impressed with the advantages of systematic thoroughness while spending a time with the Mayo Brothers of Rochester, Minn. It is their custom, once the abdomen is opened, to make a systematic exploration of the gall bladder, its ducts, the pylorus, kidneys, pancreas, pelvic organs, and remove the appendix, sure—and any other organ requiring it. It was noticed how frequently gall stones, or some other lesion was discovered which, if suspected before, was only an interrogation.

The purpose of this paper then, will not be that of an exhaustive dissertation on diagnosis, such as we would recommend in practice, but a sort of general outline of some of the tumors met in the practice of abdominal surgery, showing, we hope, the dependence which must be placed on surgery even for diagnosis.

Obviously, to go into every diagnostic detail would involve too long a paper for this occasion. My first thought was to consider but three forms of tumor, those most commonly met with, namely, Cystomas, Fibroids, and Pregnancy. While I feel that there is ample room for profitable study of these three forms of tumor, when I reflect that it is not fifteen years ago, when we were beginning active, work in the abdomen, and that the intervening time has made those growths almost commonplace, I feel that we may, perhaps, with more profit consider some of the features of the subject less common.

It has occurred to me, and doubtless to many of you, that we have arrived sometimes too quickly at a diagnosis without having eliminated all the possibilities, placing ourselves upon a sufficiently safe footing. It may matter

* Read at the 90th Annual Meeting of the Vermont State Medical Society.

little as to the differential diagnosis, in so far as the remedy is concerned, an operation being indicated in any event, but, even so, it is embarrassing to some of us to be found in error and realize that it is our own fault and not from a lack of knowledge or obscurity of the symptoms. Especially does this apply to those who teach or offer their services as consultants. I believe that I am correct when I say that the mistaken diagnoses which I have made and have seen made, some of them by the best men of the country, were not because of an obscurity in the case, but because of neglect on the part of the operator to avail himself of all the aids at hand in making positive that which seemed so simple.

Let us assume at once, then, the examination of a case with a large abdomen. We should first remember that it is possible to have what it does not appear; as, for example, it may be fat, flatus, muscular action, or a combination of them all. We will adopt one rule in all cases, that of seeing that the bladder is empty, thus removing one possible error.

Percussion is resorted to for the purpose of ascertaining the presence of free fluid in the peritoneal cavity. If we elicit a wave crossing the entire abdomen in all directions, we have reason to believe that we probably are dealing with an ascites. A very large cyst filling the entire abdominal cavity would likely give the same wave.

Inspection may aid us here; if ascites, the abdominal wall will flatten more than if a cystic tumor. If the enlargement is a moderate-sized cystoma without ascites, the percussion wave will be limited by the tumor confines, and the tumor will be surrounded by a tympanitic area called the "tympanitic corona."

It is well, when ascites is found, to look for a reason for the ascites in disease of the heart, liver, kidney or lungs, which, when found, serves to confirm the diagnosis. There are possible complications that may arise which will require careful analysis, as, for example, we may and often do get a large effusion following an acute pelvic inflammation. In this case, we are aided by a knowledge of a recent inflammatory trouble which should put us on our guard, and suggest a line of treatment which would disclose its true nature. Ascites, associated with tubercular peritonitis, is, perhaps, one of the most difficult of differential diagnosis. In quite a per cent. of these cases we may get a history of failing health. A careful percussion of the abdomen will often reveal a thickening of coils of intestine which do not float up on the fluid, but act rather to encyst and leave us in doubt as to whether we may not have a veritable cystoma. An exploratory operation alone may disclose its true nature.

The aspirator has little place with me in diagnosis, preferring a small incision which shall enable me to be more certain as to what I may be dealing with. I should very much dislike to aspirate a suppurating dermoid cyst or a papillary cystoma or, by any means, so very easy as it is, with the aspirator, to infect the peritoneal cavity and thereby prejudice the chances of the patient.

If we have a cystoma to deal with, we can usually establish that it originated in the pelvis but it is not closely and intimately associated with the uterus, as is the case in fibroids. If a fibroid, drawing upon the tumor draws with it the cervix uteri and vice versa. Some oedematous fibroids give a sense of fluctuation when percussed *hard* and *deep*, but *never* when percussed *lightly* and *properly* for the eliciting of fluid presence. In fibroids, the depth of the uterine canal is elongated, while, in cystoma, it is not usually the case. Interstitial fibroids may be regular in outline like a pregnant uterus and may be no harder; in which case, a careful analysis of all the signs of pregnancy must be embraced to avoid the most common error of mistaken diagnosis.

We should also bear in mind that a dilated stomach may occupy every region of the abdominal cavity except the upper part of the epigastric and may form considerable of a tumor at times; usually more to the left than to the right or median line, and, so it may be with an ovarian cystoma. The differentiation lies in washing out the stomach and percussion when distended with air. By this means, the size and position of the stomach is ascertained.

The stomach may be found so low (the lesser curvature being on a line with the navel) that it is possible to confound a dilated stomach with a cystoma, though there is usually less tumor. A dilated stomach may also be mistaken for a dilated intestine if we are not careful to note the gurgling to be obtained by palpating the pyloric orifice. The etiology of dilated stomach is usually some pathology at the pyloric orifice which should be looked for both before and after lavage of the stomach and noting any change of appearance and feel. It is now known that ulcers of the pyloric end of the stomach cause spasm and consequent dilatation. The outlines of the stomach are best obtained by the use of a stomach tube and a Davidson's syringe bulb, dilating it with air, and ausculating at the same time that the bulb is compressed; if the stethoscope is over the stomach, a clear tympanitic note, if outside the stomach area a dull note, will be elicited.

We usually test for acidity, motility, etc., when suspecting cancer of the stomach. Time and Mayo have shown that the only hope for the patient with cancer of the stomach lies in exploratory incision and that the chemical examination is practically worth nothing. If an abdominal growth should be hepatic, splenic or renal, careful palpation will usually demonstrate that such tumors do not originate in the pelvis and call for special signs of confirmation. As for example, if hepatic or a gall bladder, the tumor rises and falls with respiration. If a gall bladder, it cannot be held down during inspiration as can a movable kidney, but it follows the inspiratory effort back to its origin, while the kidney remain unaffected by the act of respiration. If the tumor should be an enlarged kidney, the colon will be found to pass over it and generally will give a resonant note on percussion or may be felt as a soft band. If the tumor be the spleen, we shall be able to grasp the sharp edge of the spleen and define the notch.

The one single tumor more than all others subject to mistaken diagnosis is pregnancy; simulating, as it does in many ways fibroid growths. More care and a better correlation of facts will obviate these mistakes. Conditions which might lead us to a doubt in making a diagnosis would be the statement, whether honestly or ignorantly made, by the patient, that she did not believe herself pregnant; an irregular outline of a rather firm uterine wall, a more than usually firm cervix uteri, which conditions would point to a fibroid growth and have led many into error. Briefly, without going into all the means for establishing the fact of pregnancy, we may fall back on the only sure sign, it being the foetal heart sound. If we can't find that, we may conclude that the patient is pregnant if there is a swelling in the belly which alternately hardens and softens, over which a blowing murmur is heard, the "uterine souffle," rising in loudness while the swelling is becoming hard and while it is becoming soft, and with this the vaginal mucus membrane is blue and the cervix softened. If the pregnancy exists with a fibroid, the uterus will be irregular in outline and the bosses or irregularities may be hard. Auscultate such a case. If no foetal heart sound is found, you may be obliged to rely on the changes in the breast, cervix and vagina and good judgment. The same may be said in regard to extra uterine pregnancy after death of the foetus, some-

times requiring an exploratory operation to confirm a diagnosis.

In recent years the kidney has figured very conspicuously in surgical practice presenting various phases. That form which might come within our present consideration of abdominal tumors from a diagnostic standpoint at least is hydronephrosis. These kidneys are sometimes perplexing from the phantom-like history they present; now here, and now gone, filling and emptying. That feature is now so well understood that it does not long confuse or lead astray. Movable kidneys constitute a lesion which now engages the attention of the surgeon with great frequency and may often prove troublesome in reaching a diagnosis by palpatation. In those cases of doubt we may often call to our assistance the valuable sign of Dietl, which consists of what we may properly term crises or explosions as it were, which are manifest by severe pain occurring at varying intervals, and which are thought to be due probably to a strangulation caused by a twist in the renal vessels.

Cancer of the bowel is another common tumor of the abdomen, which may present varying aspects, large to-day and smaller to-morrow, due probably to faecal masses in the vicinity which pass away. If we can elicit gas bubbling through an indurated mass, it will enable us to say that it is intestinal. Such intestinal growths are usually moveable, unless very large, especially those connected with the sigmoid and pylorus.

I feel that it is not too broad a statement, when I say that, not infrequently, diagnosis is sacrificed to treatment and to treatment that cannot by the very nature of things avail anything unless it be to prejudice the possible chances from timely surgical intervention. Sufficient is the evidence now at hand to establish the fact that most if not all abdominal lesions are amenable only to surgical treatment, that the subject does not admit of successful controversy. I am well aware that a great number of general practitioners do not agree with my position when considering appendicitis, obstruction of the bowels, and hernia, but, nevertheless, I feel, after a not inconsiderable experience, that I am well on the side of safety, when I counsel against temporizing, when a diagnosis of a recognized surgical trouble has been made. It is gratifying to see the enormous mortality from obstruction of the bowels and strangulated hernia greatly reduced, due to the fact that the general practitioner is becoming more and more impressed with the idea that poultices and internal medicine "availeth not," and he therefore earlier avails himself of the co-operation of some competent surgeon.

Added to what we know in a general way of a certain class of cases, we should exercise good surgical judgment in each given case. It is not possible, in my judgment, to lay down hard and fast rules to be adhered to, regardless, in every case. The time and condition of the case when seen, may affect the advice given.

Realizing the incompleteness of this paper, had I striven to make it exhaustive in its scope, I shall feel content if I have succeeded in any degree in impressing the general practitioner with the fact that success in the diagnosis and treatment of abdominal lesions will be much more satisfactory with a more perfect co-operation of medicine and surgery. Those who have had the greatest clinical experience are in perfect accord with this idea. I cannot do better than to quote the language of so great an author and teacher as Osler when he says, in speaking on disease of the kidney: "A very large proportion of the cases come first under the care of the physician, whose province it is to recognize the condition; but to do justice to his patient, he should be thoroughly familiar with the advances which have been made in the department of renal surgery."

THE TEMPERATURE AS A GUIDE TO THE EXISTENCE OF SUPPURATION.

By Lyman Allen, M. D., Burlington, Vt.

That usually one of the constitutional symptoms of suppuration is a rise of temperature (with or without an initial chill) followed by an irregular, elevated temperature which runs for some time, I shall not try to dispute. What I shall try to call to your attention is that the existence of pus in the body is not always accompanied by a rise of temperature; in other words, that if in a given case we find a normal temperature we can by no means be positive that there is no suppuration. By a normal temperature I mean one between 98° and 100° F. All authors agree that the body temperature is subject to normal variations of from 2° to 3½° F., being highest about 8 P. M. and lowest about 4 A. M., that digestion and exercise normally raise the temperature a little, and that sleep lowers it.

The body temperature is kept thus practically constant by the mutual relation between heat production and heat loss. Heat production is due to the potential energy of the organic food stuffs which are chemically decomposed and liberate heat *directly*, or produce energy which liberates heat *indirectly* by mechanical movements, friction, etc. Heat loss is due to radiation, conduction, and evaporation of moisture from the skin, lungs, etc. Heat production and heat loss go on as long as life lasts.

Temperature *variations*, therefore, show only that the balance between heat production and heat dissipation is disturbed. It is evident that a rise of temperature may be due to increased heat production or to decreased heat loss, one or both; or to a proportionately larger increase of heat production over heat loss, if both be increased; or to a proportionately larger decrease of heat loss over heat production, if both be diminished.

Some fevers certainly are attended and perhaps caused by a diminished heat loss, but most fevers are accompanied by an increase of heat production, and the rise of temperature is due to this factor. The proof of this is that the respiration is increased, more CO^2 is given off, the amount of urea is increased proportionately to the amount of proteid food taken in, and the body loses weight, largely proteid. This increase in oxidation-products shows an increase in oxidation and therefore in heat production. Heat loss also may be increased, by increased evaporation of moisture from the sweating skin, and from the lungs in the increased respiration, or from the increased radiation from the flushed skin with its dilated vessels. The nervous system regulates this matter, normally keeping the body temperature between the points named, and when this normal balance is disturbed we have either a rise or a fall (usually the former) of body temperature. To affect this balance the nerve centres must be reached, and this may be through the nerves or through the blood circulatiing to these centres: i. e. abnormal matrials in the blood may cause a rise or a fall of temperature by their effect upon the heat centres. This is very frequently the case when the bacteria of suppuration are growing in the body. It is a fact that the "products of many forms of bacteria are fever-producing *usually*, but no micro-organism can be relied upon to produce fever *always*." (J. Burdon Sanderson, Albutt 1, 157). This is an important point and expressed in a different form means that the toxins of no known form of bacteria, when taken into the blood, will surely and always produce fever. They may in one person and not in another, and at one time and not at another in the same person. Whether the products of the

* Read at the 90th Annual Meeting of the Vermont State Medical Society.

bacteria (the toxins) differ under certain unknown conditions, or whether some protective substance is formed in the blood, which neutralizes the toxins, or perhaps stimulates heat loss to an equal degree, or possibly benumbs the heat centres so that they do not react to the stimulus of the fever producing toxins, I do not know; but certain it is that clinically we sometimes see the other constitutional signs of suppuration, especially the weak, rapid or irregular pulse caused by the absorption of toxins from the suppurating focus, without any rise of temperature.

Clinically all pus is the product of the growth of micro-organisms. I know that in the laboratory pus can be produced by the injection of certain sterile chemical irritants, which pus, when examined, is found sterile, but such conditions are not found in our patients. Sterile pus (so called) when found clinically is produced by the action of the tubercle bacillus, or sometimes the gonococcus, and the cultures from such pus may not grow, from the well-known difficulty of growing these organisms on the ordinary culture media in the ordinary time. Again, to cause constitutional symptoms of any kind the toxins must leave the suppurating focus and be carried in the circulation so as to reach the various organs and tissues of the body. And therefore chronic suppurative processes are among those in which we most frequently see an a-febrile course; for the granulation tissue which surrounds abscess cavities is a very poor absorbing membrane, being nature's attempt to wall off the poison and prevent the spread of the germs or their toxins over the whole body, and so long as the pus is kept thus surrounded by an efficient wall of granulation tissue, especially if beyond that is scar tissue well developed (as is usually seen in chronic suppuration) there will be little absorption and usually little rise of temperature. For example: "In tubercular osteomyelitis febrile reaction is slight or entirely absent" (Senn in Dennis II. 258.) It is also possible that in chronic suppuration the heat centres become accustomed to the small amounts of pyrogenous substances absorbed and are not affected by them; or are, so to speak, "set" or regulated for greater heat production and a correspondingly increased heat loss, so that there is no rise of temperature.

These same chronic suppurations are frequently followed by amyloid disease of liver or kidneys, due either to absorption of something from the suppurating focus, which material is evidently not pyrogenous; or perhaps to the prolonged drain on the system from the loss of so much albuminous material in the long continued destruction of the formative cells and leucocytes and the escape of blood serum in the pus. If due to the former cause we must admit that there has been absorption enough of *certain* products from the chronically suppurating focus to cause extensive change of tissue without affecting the temperature.

Dr. Councilman says (Dennis I. 205): "It is no longer the custom to judge the severity of wound fever by the degree of the temperature elevation. Many surgeons consider the condition of the circulation and other things of far more prognostic value than the evidence given by the thermometer."

Severe cases of appendicitis are not rarely seen where the temperature does not rise above 100° F. and upon operation a catarrhal inflammation of the lumen with pus formation,or an ulcerative area approaching perforation, or even a circumscribed abscess outside the appendix is found. Of course the opposite is often the case and high temperatures are seen, but I am sure most of you will agree with me that the temperature is no guide to the conditions found in appendicitis. Butler says (Diagnostics of Internal Medicine, p. 783-6): "When an intense diffuse peritonitis or a gan-

grenous appendix is present, or a circumscribed abscess has formed, the temperature may be normal or sub-normal, but the associated symptoms are of too grave a character to be in keeping." Also: "The severest cases" (of appendicitis) "may have a subnormal temperature." The same is even more true of salpingitis. I have several times seen tubes removed full of pus, when no temperature over 100° F. had ever been found; and the same lack of fever in pelvic abscess outside the tubes is of frequent occurrence, so much so that it is somewhat of a saying that "pus in the pelvis gives no fever." Of course this is by no means always true, but the lack of fever *alone* should never weigh in making a differential diagnosis between salpingitis, ovarian cyst, uterine fibroid and other non-inflammatory conditions where the physical examination shows a more or less tender mass near the uterus. And this, too, although the pelvis is certainly well supplied with lymphatics and the peritoneal cavity is only a large lymph space, so that the conditions favoring absorption (and the resulting fever if the absorbed products were pyrogenous) could hardly be better.

Inguinal bubo, suppurating and operated upon, I have seen with no rise of temperature at any time before or after operation. In middle ear inflammation, even going on to perforation of the drum, we frequently get no temperature above the point named, and after rupture of the membrane and in the "chronic ears" the temperature is almost always normal. A specialist once said to me: "In suspected suppuration in the middle ear the absence of fever would have no influence upon my diagnosis."

I had a severe case of acne in my office recently with hundreds of pustules on back, arms and chest, several of which I opened and found to contain considerable amounts of pus—some of them being furuncles, oedematous, swollen, red, tender and painful, yet the patient's evening temperature was 98 3-5° F. In all, there must have been at least 1 oz. of pus in his skin with no febrile reaction.

A hasty glance over some temperature charts at the Mary Fletcher Hospital recently showed the following cases of suppuration without fever: Recurrent appendicitis (ulcerative), pilonidal sinus (suppurating), chronic abscess of tibia, chronic abscess of thigh, septic hand opened two weeks after injury.

From some other records I gathered the following cases: Double inguinal hernia, operation for radical cure on both sides. Both wounds suppurated freely on the eighth day after operation. Temperature never above 100° F. Stitch abscess with a little pus and stitch abscess with considerable pus; no temperature above 100° F. Abscess of ovary the size of an egg with a little pus around several of the stitches after its removal. No temperature above 100° F.

I must briefly speak of the opposite of these cases, namely those acute injuries or operations which are followed by a rise of temperature and in which there is no suppuration—the so-called "aseptic fever." From a large number of cases it is gathered that in about one-third of the aseptic cases there is no rise of temperature, in about one-third there is a moderate rise (101° F.), and in about one-third a considerable rise even to 104° or 105° F. This rise of temperature is not due solely to enterosepsis or to autointoxication as that word is generally understood, i. e. it is not due solely to the absorption of waste or putrefactive materials from the intestinal tract; or to the failure of the liver to change the poisonous leucomaines, which are elaborated in the tissues, into harmless waste products as is normally done; but it *is* due largely to the absorption of pyrogenous materials from the wound—materials normally there and not manufactured by bacterial action—such as fibrin ferment and broken down materials from the blood clot,

whose formation is the first step in the process of repair and whose absorption normally follows during the early stages of the healing. This "aseptic fever" is usually easily distinguishable, from the fact that it is unattended by the other constitutional signs of fever—the patient feels well, and the rise of temperature would not be suspected without the thermometer; while in my first mentioned class of cases, from all the symptoms and feelings of the patient we may suspect fever but fail to find it.

To sum up I wish to make the following statements, which, to my mind, are clearly proved and which anyone may prove for himself by studying the temperatures in any considerable number of surgical cases:

First—Chronic suppurative processes are very frequently unattended by fever.

Second—Acute suppurative processes are frequently unatended by fever; therefore in a given case the absence of fever must have little weight by itself in including the possibility of suppuration, and

Third—Since a rise of temperature above 100° F. occurs in about two-thirds of all aseptic cases, the presence of fever *alone* must have little weight in making a diagnosis of suppuration.

MEDICAL COLLEGE BUILDING BURNED.

The building occupied by the Medical Department of the University of Vermont was ruined by fire December 2d, entailing a loss estimated at $20,000. The origin of the fire is unknown, although it started in or under the amphitheatre shortly after eleven o'clock, when the building was occupied by students and professors.

A class in obstetrics was assembled in the amphitheatre for instruction by Dr. C. H. Beecher. One of the students noticed a tiny column of smoke coming from a crack in the floor beneath the seats and turned to a fellow-student with a question as to who was under the seats smoking. When he turned again the blaze was in sight and the alarm of fire was given. A hasty scramble followed, students rushing to take valuables from the building, to inform the janitor and to ring a general alarm, the latter being done by George C. Rublee.

The bell at fire station one did not sound but the one at St. Joseph's Church pealed out the number. The indicators at the fire stations responded correctly and the apparatus started for the fire. The janitor of the college was in the basement and rushed up stairs when the cry of fire was raised. He was assisted by the students who formed a bucket brigade but they could not smother the flames.

When he reached the first floor he discovered the fire directly under the amphitheatre. The amphitheatre is on the second floor of the building and extends to the roof, the floor being constructed upon a steep incline. The blaze started near the center of the amphitheatre and spread quickly, owing to the dry condition of the floors and seats. Just how it started is a mystery. It could not have started from the heating apparatus as there were no pipes where the blaze was discovered and furthermore the janitor says everything about the apparatus was in good order. The theory is advanced that a lighted match may have been dropped through a crack in the floor and in that way ignited the refuse collected below. Another theory is that gas might have escaped and caused the blaze.

Drs. McSweeney and Watkins had been instructing classes in obstetrics and anatomy, the former being in a room below the amphitheatre and the latter being in the amphitheatre proper, and had only left the college building when the fire engines dashed up the hill. They immediately returned to the building, to find it in flames.

When the fire department arrived upon the

scene everything seemed to go wrong. The connections with the hydrants were made with delay and the steamer was out of order. Fire protection in that section of the city depends almost entirely upon the efficiency of the steamer and as the machine was out of order it was a half hour before streams of any effectiveness could be poured into the burning building.

In the meantime the students and firemen had been at work taking valuables from the building and practically everything on the first floor was saved. A large number of books, the specimens in the museum, some of the valuable mechanical appliances and the cadavers were saved. The greatest loss was sustained in the destruction of the new stock of chemicals and mechanical appliances.

The fire was confined almost entirely to the stories above the first floor. When it reached the chemical laboratory there were several explosions but none that did serious damage. The fire was not rung out until about 3.30 o'clock in the afternoon and at that time the four walls were about all that was left of the building.

Dr. H. C. Tinkham, dean of the faculty, was holding a clinic at the Mary Fletcher Hospital when the fire caught. He was called from the room and notified of the fact by Dr. Andrews. Dr. Tinkham returned at once to the class and calmly announced that there would be no afternoon session as the Medical College was burning up. He gave the students permission to retire if they chose and they left one by one.

The loss was well covered by insurance. Hickok & Hickok have $7,500 on the building, T. S. Peck has $5,000 on the building, and M. L. Powell has $2,500 on the building and $2,500 on the contents.

The Medical College building was originally the residence of the Hon. Harry Bradley, a prominent citizen of Burlington, and at one time president of the Rutland & Burlington railroad, built by him some fifty odd years years ago. It was purchased later, and much enlarged and improved by the Hon. Levi Underwood, who occupied it for many years, during which it was the scene of ample hospitality and much social life. In 1884 it was purchased by the late John P. Howard and was enlarged and reconstructed by him for the use of the Medical Department of the University, and was given by him to the University. It was first occupied by the department in 1885.

The first main college building, a four-story brick structure of 160 by 75 feet, was wholly destroyed by fire May 27, 1824. Since then no college building occupied for instruction by any of the departments has been burned until this one.

The exercises and classes of the Medical Department have been held at the Hospital and in the Academic buildings without interruption since the disaster. An earnest attempt is being made to raise funds to commence rebuilding at once. The prospects are unusually bright and if the alumni of the institution continue to manifest their interest, the Medical College will have a building that will be a source of pride to all who have gone forth as its graduates.

The Faculty in their hour of affliction and embarrassment deserve loyal support, and it is pretty certain that such support will not be withheld.

NEWS, NOTES AND ANNOUNCEMENTS.

J. Fenton Underwood, M. D., University of Vermont, Burlington, 1896, died at his home in Penn Yan, N. Y., December 20, from pneumonia, after a short illness, aged 49.

Burlington and Chittenden Co. Clinical Society.—A regular meeting was held at

162 College St., Wednesday, Dec. 30, 1903, at 8.30 P. M. Following was the program:

Some observations upon the differential diagnosis of a group of obscure diseases of the nervous system, Dr. J. N. Jenne.

General discussion.

The paper was very interesting and instructive.

Work of the Tuberculosis Commission.—The Vermont State Tuberculosis Commission, consisting of Dr. Don D. Grout of Waterbury, president; Dr. H. Edwin Lewis of Burlington, secretary; Dr. W. N. Bryant of Ludlow, Hon. Henry Ballard of Burlington, and Dr. L. W. Hubbard of Lyndon, recently visited several sanatoria in New York and Massachusetts, with the view of determining what other States are doing in the interests of the consumptive poor. The Commission are studying the whole tuberculosis question with care and diligence, and their report to the State Legislature in 1904 will be a complete exposition of the tuberculosis situation in Vermont. Opinions and ideas from the medical profession are solicited and at an early date the Comission will hold a number of public meetings throughout the State in order to obtain the consensus of public opinion in Vermont on the subject of a State Sanatorium for Consumptives.

Positive Results.— The *Medical Examiner and Practitioner,* issue of May, 1903, says: "As far as positive results are concerned it is safe to assert that no preparation of iron ever introduced to the medical profession has met the requirements to the extent that the pharmaceutical product, Gude's Pepto-Mangan, has done. Unlike many articles claiming to be "Just the same," or "Just as good," it has stood the test of years in the hands of the practitioner, and has been submitted to the severest clinical investigations by eminent men in the profession, both in hospital and private practice."

Threatened Abortion and Miscarriage.—This constitutes one of the most valuable indications of Hayden's Viburnum Compound. Instead of narcotizing the patient like opiates it arrests pain and checks hemorrhage in a far more efficient and agreeable manner. In view of the marked antispasmodic and anticongestive power of this preparation, its value will be readily appreciated in the treatment of these cases when employed in connection with perfect rest.

The dose at the beginning should be one dessert-spoonful, followed by teaspoonful quantities when required. When, however, miscarriage has occurred or is inevitable, Hayden's Viburnum Compound is equally indicated for the control of the bleeding, the relief of the pain and the prevention of complications, such as inflammation of the uterus or appendages.

Ideas of Gynecology.—After vaginitis, leucorrhea or gonorrhea have existed unchecked for a few weeks, the family physician often sees the necessity of a complete exfoliation of the membrane attacked.

There is no method of accomplishing this so surely and without untoward results as the use of Micajah's Medicated Uterine Wafers, alternated with the English hot water douche (100° to 114°).

These wafers are of unexampled usefulness to the practitioner, because they can be safely prescribed for use by patients living at a distance as they are self-retaining and need no tampon.

The Vermont Medical Monthly.

A JOURNAL OF REVIEW, REFORM AND PROGRESS IN THE MEDICAL SCIENCES.

Burlington, Vt., December 25, 1903.

EDITORIALS.

Vol. IX.

With this issue Volume IX is complete and the Vermont Medical Monthly is about to enter the tenth year of its existence. When it was started, January 1st, 1895, many predicted its early demise and to others it appeared all but still born. It certainly was a weakly infant. But Time has made many changes and the earnest painstaking care that was given the young journal has accomplished far more than even its originators hoped in the early days of its youth. We do not wish to felicitate ourselves, nor appear boastful, but we are proud of what has been accomplished, and this is our right, for we know what obstacles, what adverse influences have been encountered. Several disinterested friends have recently spoken of the Vermont Medical Monthly as "the leading local journal in the country." This is our aim and we feel that the last two years have carried us nearer this goal.

We wish to take this time to tender our sincere thanks to all those who have contributed so materially to the success of the Vermont Medical Monthly,—our subscribers, our contributors, and our advertisers.

The Need of Good Roads.

Although not a medical subject, the question of good roads should always be one of vital interest to medical men. The country physician (and most of the doctors in Vermont are country physicians), spends nearly half of his professional life on the roads of his locality, and if those roads are bad his usefulness is certainly decreased fully one-third.

If it is true that good roads are an index of the progress of a community, then Vermont towns, with few exceptions, are pretty far in the rear of the procession. The average Vermont road is bad, almost bad enough to require a forcible adjective in describing. To one who has traveled over nearly the whole of our State and observed the local uplifting influence exerted by the few good roads on the farms and people using them, and the reverse influence of the numerous bad roads, there can only come surprise that the people of Vermont do not throw more energy into the building up and repair of their highways. For nearly ten months of the year the average Vermont road is really unfit for travel, to say nothing of its fitness for hauling heavy loads; the other two months the average road is passable, but very far from being good. In an enlightened State this ought not to be so, for all people must realize the value of good roads. Bad roads depress the people who are obliged to use them, lower their earning capacity, decrease their ambition and certainly increase drunkenness, depravity and slothfulness. Good roads bring people who use them in closer relation with the outside world, facilitating the marketing of their produce, thus stimulating production, cultivate thriftiness and in every way make the people happier, better and more useful citizens.

The people can make no better or safer investment than in building good roads. State legislation along this line should meet with the

approval of every intelligent person, as far greater benefit will result for Vermont in population, industry and general progress by the development of highways under State supervision than in any other way.

An important measure is before the National Congress which aims to distribute $8,000,000 yearly among the different States for the purpose of building good wagon roads. The bill has been introduced by Hon. W. P. Brownlow of Tennessee, and is causing a great deal of interest all over the country. Each State receiving National aid from the Government must add a like amount to the sum received, according to the measure. This will place in each State from one hundred to five hundred miles of hard road which will not be affected by frost or spring rains and on which the farmer can haul his loads the year around. It will be a great advantage to those living near it, but it will be a far greater change to the whole country because it will be an object lesson proving that a good hard road is a good and desirable thing.

Recognizing the paramount importance and necessity of good roads, perhaps better than any other class, the doctors of Vermont ought to use their influence in showing the people the advantages to be derived from this important bill. It is to be hoped that it will pass and become a law.

Physical Exercise for Young Girls.

The period of adolescence is a very precarious one to young girls. Impressions at this period are more lasting than those made at any other epoch of a woman's life, and their influence for weal or woe is consequently more evident on her future character and physical condition. The peculiar susceptibility of the nervous system as she merges from girlhood to young womanhood, places many a young girl on the border line of chronic invalidism. It is but a step for her to become a chronic pelvic sufferer or a confirmed neurotic, and it may require the united efforts of parents, doctor and relatives to pilot her safely into the path of health and robust womanhood. In a great many instances the solution of the whole problem rests on proper suggestion. A young girl who is allowed to think herself an invalid soon becomes one even if there is no real pathologic condition at all. She is psychologically sick if nothing else, and this is the worst form that any malady can assume.

Fortunately the limits of conventionality have become broadened to the extent of encouraging physical exercise for young females. The result is better physiques, better minds and stronger characters. The mentality grows as the lungs expand, and though perhaps culture and personal accomplishments are less evident, they are well replaced by physical and mental strength. A good healthy girl is worth a hundred cultured and accomplished invalids, not only for herself but for her race.

Good hygiene which implies good food, ample rest, proper habits, and last but by no means least, a proper amount of regulated exercise, will do more for the average girl in making her a healthy woman, than all the medicine and medical treatment in the world. The conscientious physician will recognize this and govern himself accordingly.

EDITORIAL NOTES and CLIPPINGS.

Ochsner Treatment of Appendicitis.—It would seem that Dr. Ochsner has found the ideal method of treatment of appendicitis. In 416 cases of acute appendicitis, he has a mortality of less than four per cent.

The Ochsner treatment is simple, and, if figures prove anything, effective.

Earlier in his career Ochsner operated on every case of appendicitis as soon as he saw it, and he found his mortality was too large. A great number of deaths occurred after the

first thirty-six hours from the commencement of the attack. From that time until ninety-six hours, the death rate steadily increased, after which period a decrease was noted. These conclusions led Ochsner to devise a method of treament which would limit the peristaltic action of the intestines, so that the patient would be carried beyond the fourth day, when operative measures might safely be taken.

The alimentary canal is relieved, the stomach washed, if there is vomiting, and the colon emptied by a high injection of normal salt solution. The only nourishment given is nutrient enemata. The patient is allowed no food and is kept in a condition of absolute quiet.

If these ideas are carried out to the letter, Ochsner says the results will be of the best. It is necessary, however, that no slight detail should be omitted. After the period named the operation, if necessary, can be performed. —*Gaillard's Med. Jour.*

MEDICAL ABSTRACTS.

Tuberculosis.—In *Medicine,* for November, Norman Bridge takes the position that a tuberculosis lung should not be "exercised." It has been fashionable for a very long time both for the laity and for the profession to advise lung exercises in cases of threatened or actual pulmonary tuberculosis. As a result, numerous schemes of lung exercises and expansion have been proposed and practiced. Physicians have kept measurements of the chests of the sick and have thought that if the circumference can increase from month to month the patients must be improving. The suggestion that all this should be changed and that we should stop purposely exercising the sic klung, that we might even sometimes put such a lung to rest completely, strikes the average mind as distinctly heterodox; to many it is the rankest heresy. The only real argument in favor of lung gymnastics and stretching in tuberculosis is that some patients recover while enduring them. That is not enough; it must be shown that to some degree at least they recover because of those agencies. This he believes is impossible of demonstration. On the other hand it is true that such patients recover better and faster with as much quiescence of the sick lung as possible. The contention is not that the sick people can or ought to do with less than the usual amount of oxygen. On the contrary, they ought to have more. They must be kept out of doors as much as possible, and breathe the best air at all times. Nor is it possible, save in the few early cases of unilateral disease whether the inflation treatment can be used, to completely immobilize a tuberculous lung. But various devices, such as adhesive straps, splints, jackets and the like, may be used to very considerably abbreviate the motions of a lung; and these ought to be used in eligible cases whenever it is possible. Above all things, pumping and stretching the sick lung by useless and straining cough, by voluntary deep breathing,by devices of all sorts calculated to stretch the air vesicles, ought in all cases of active pulmonary tuberculosis to be abandoned completely. They are irrational and harmful; the evidence heretofore thought to be in their favor has been misunderstood and wrongfully interpreted, and we ought to be as prompt to abandon them as we have been assiduous in their use.—*Cleveland Med. Jour.*

Glaucoma.—The long prevalent theory of increased tension as the cause of glaucoma is combatted by Wahlfors. It is true that increased tension exists in the acute, inflammatory type of disease, but in the simple form it is absent. He does not, however, consider the two types as distinct. The real origin of the trouble he thinks is in atrophy of the choroidal elements. This destroys the nerve sensory apparatus and leads to increase of tension by paralysis of the muscular network of the cho-

roid, slowing the course of the currents of liquid. The channels of exit thus become blocked and cause retention. It is here and not in the uveal region that the cause of increased tension is to be found. Excavation may occur without an increase in the tension, as it is liable in simple glaucoma where there is no increase of tension. He ascribes excavation to atrophy of the connective tissue composing the framework of the lamina cribrosa and the diminished resistance of the papillary tissues. Atrophy is probably primary and excavation secondary. As regards treatment he thinks that there is little that can be done for the processes in simple glaucoma excepting by repeated injections of strychnin, which in a certain proper proportion of his cases have been beneficial. By giving these injections one a day for ten or twenty days, repeated three or four time a year, he has been able to preserve vision for many years. In acute glaucoma iridectomy is of value as it prevents venous stasis—the last link in the chain of congestive glaucoma. It may also be of prophylactic value in simple glaucoma as preventing acute exacerbations.—*Archives of Ophthalmology—Jour. of the A. M. A.*

Home Management of Tuberculosis.—The second Phipps lecture, delivered by Dr. Osler, December 3, had for its subject "The Home in Its Relation to the Tuberculosis Problem." A fact not always appreciated in the present enthusiastic crusade against tuberculosis is that 98 percent of the sufferers from this scourge can not receive the sanatorium treatment which is now so much to the front as the remedy *par excellence* for this disease. It is only in the home management that this large per cent of sufferers can have any hope, and this hope depends on the family physician. It was a good idea on Dr. Osler's part to call attention to this fact, for it is in this particular direction that the principal victory over the disease must be won. Sanatoriums must have an educating effect and are undoubtedly of immense value to the few that are able to receive their direct benefits, but if we are to look for any great decrease of consumption it must be mainly due to the general practitioner in his management of the cases that come under his care. Dr. Osler accepts the view that nearly all of us are infected, and that in old age but few of us will be found free from some focus of the disease. He also refers to the unsatisfactory present status of the theories of the origin of the disorder, and does not feel authorized to accept the recently enunciated views of Behring and others as to the incorrectness of the hitherto prevalent theory of air infection. While it matters a great deal how tuberculosis is acquired, nevertheless if its acquirement is such a universal thing the principal task in the fight against the disease must be to strengthen resistance. It is encouraging to think that about nine-tenths of all those that are attacked at some time in their lives must recover to account for the statistics as we have them, but the other one-tenth should be reduced to a still lesser fraction at the earliest possible moment. Dr. Osler's remarks are timely in that they bring out certain circumstances that are not always duly estimated by the general public or even by the members of our profession.

—*Jour. of A. M. A.*

STRAY THOUGHTS.

DISCORD.

As o'er an untuned lyre I swept my hand
  And through my soul the jangling sounds were poured,
I thought I could a little understand
  Of God's great grief when heart-strings do not chord,
As bending from his throne, he singles out
A thrice-blest player, bids him strike the strings--
When lo, instead of concord, din of doubt,
  Babel of griefs, and cry of bitter things!

—*Clarence Urmy, in Lippincott's Magazine.*

The kind of woman I love: A keen, sensible, tactful little woman, who would make it the business of her life to study me, as I would make it the business of my life to study her; a woman who could be in turn, according to circumstances, a housewife, a counselor, a "pal," a wife, a sweetheart, a nurse, a patient, the sunshine of my life, and always a confidante, a friend and a partner.—*Max O'Rell.*

The capacity for growth is the greatest factor in a successful career. He who cannot grow, branch out and get a broader view of things as the years speed by, is truly unfortunate, for he lives in vain. Life is growth, physical, mental and spiritual. That there are limits to the physical, no one can deny, but there are no limits to the mental or spiritual growth of man. If he stops growing mentally or spiritually, he is a failure, and no matter how high he may have reached, he is remarkable ever after for only what he might have been had he gone on.

THE WEALTH OF A SONG.

An old man paused as he passed along,
With feeble and faltering feet,
To list to a maiden's snatch of song,
That sounded strangely sweet,
As it rose and fell with trill and swell,
Above the din of the street.

And a gentle smile touched his face with light,
As the words of the song grew clear,
And he caught his breath as his thoughts took flight,
To another day and year,
When the self-same song as he passed along,
Had fallen sweet on his ear.

So he lived again with visions clear,
Those earlier, happier days,
When his eyes were free from hint of a tear,
Or Time's swift gathering haze,
And he felt no pain as he basked again
In the light of a loved one's gaze.

But the singer stopped, and he moved away
The happiest in all the throng,
Still feeling the tingle of mem'ries sway,
As he painfully hobbled along,
Ragged and cold but with riches untold—
The memories brought by a song.—*H. E. L.*

BOOK REVIEWS.

THE TREATMENT OF FRACTURES With Notes Upon a Few Common Dislocations. By Chas. L. Scudder, M. D., Surgeon to the Massachusetts General Hospital. Fourth Edition. Thoroughly Revised, Enlarged, and Reset. Octavo volume of 534 pages, with nearly 700 original illustrations. Philadelphia, New York, London: W. B. Saunders & Co., 1903. Polished Buckram, $5.00 net; Sheep or Half Morocco, $6.00 net.

Four large editions of this work in less than four years testify to its value. The book is intended to serve as a guide to the practitioner and student in the treatment of fractures of bones. The student sees the actual conditions as they exist in fractured bones, and is encouraged to determine for himself how to meet the conditions found in each individual case. Methods of treatment are described in minute detail, and the reader is not only told, but is *shown* how to apply apparatus, for as far as possible, all the details are illustrated. This elaborate and complete series of illustrations constitute a feature of the book. There are 688 of them, all from new and original drawings and reproduced in the highest style of art. Several chapters of special importance are those on Gunshot Fractures of Bone; The Rontgen Rays and Its Relation to Fractures; The Employment of Plaster-of-Paris, and the Ambulatory Treatment of Fractures.

In this fourth edition many new illustrations have been added, thus increasing the accuracy of this part of the work. The text has been thoroughly revised, thereby bringing the book

absolutely abreast the times. X-ray plates of the epiphyses at different ages have been arranged. These will be found of value not only as an anatomical study but in the appreciation of epiphyseal lesions. An important addition is that of a chapter upon a few Common Dislocations. This chapter, like the rest of the book, is amply illustrated, and the accepted methods of treatment described.

A Text-Book of Legal Medicine and Toxicology. Edited by Frederick Peterson, M. D., Chief of Clinic, Nervous Department of the College of Physicians and Surgeons, New York; and Walter S. Haines, M. D., Professor of Chemistry, Pharmacy, and Toxicology, Rush Medical College, in affiliation with the University of Chicago. Two imperial octavo volumes of about 750 pages each, fully illustrated. Philadelphia, New York, London: W. B. Saunders & Company, 1903. Per volume: Cloth, $5.00 net; Sheep or Half Morocco, $6.00 net.

This work presents to the medical and legal profession a comprehensive survey of forensic medicine and toxicology in moderate compass.

For convenience of reference the treatise has been divided into two sections, Part I and Part II, the latter being devoted to Toxicology and all other portions of Legal Medicine in which laboratory investigation is an essential feature. Under "Expert Evidence" not only is advice given to medical experts, but suggestions are also made to attorneys as to the best methods of obtaining the desired information from the witness. The Bertillon and Greenleaf-Smart systems of identification are concisely and intelligently described, and the advantage of each stated. An interesting and important chapter is that on "The Destruction and Attempted Destruction of the Human Body by Fire and Chemicals;" for on the determination of the human or animal source of the remains frequently depends the legal conduct of a given case, and the guilt or innocence of the accused. A chapter not usually found in works on Legal Medicine, though of far more than passing significance to both the medical expert and the attorney, is that on the medicolegal relations of the X-Rays. The responsibility of pharmacists in the compounding of prescriptions, in the selling of poisons, in substituting drugs other than those prescribed, etc., furnishes a chapter of the greatest interest to everyone concerned with questions of medical jurisprudence. Also included in the work is the enumeration of the laws of the various States relating to the commitment and retention of the insane. In fact, the entire work is overflowing with matters of the utmost importance, and expresses clearly, concisely, and accurately the very latest opinions on all branches of forensic medicine and toxicology.

International Clinics.—A quarterly of illustrated clinical lectures and specially prepared original articles on all branches of medicine and surgery of interest to students and practitioners, by leading members of the profession throughout the world. Edited by A. O. J. Kelly, M. D., of Philadelphia. Volume III, Thirteenth Series. J. B. Lippincott Company, Philadelphia.

The latest volume of this admirable series is the best which Dr. Kelly has edited. The feature of the work, which takes up over a third of its pages, is a symposium on Diseases of the Gall Bladder and Gall Ducts. The six articles, all of the intensest interest, are written by Musser, Rudolph, Stockton, Weber, Lejars and Deaver. The authors go to the very bottom of gall stone disease, and present several entirely original ideas.

The remainder of the volume includes fifteen articles on Treatment, Medicine and Sur-

gery. Malarial Infections, by Dr. Charles F. Craig, U. S. A., is especially helpful, while each of the other articles are timely and to the point.

The International Clinics should be in the library of every progressive physician.

NEWER REMEDIES.

Prize Essays.—About December 15th we shall have ready for distribution the two essays on Preventive Medicine to which we awarded prizes of one thousand and five hundred dollars respectively. They will be bound in permanent book form and we will send them without charge to all physicians who request us to. Address:

The Maltine Company,
Brooklyn, New York.

Sanmetto in Frequent Incontinence in the Aged, in Enuresis Nocturna in Children and in Pre-Senility.—I have had good results from the use of Sanmetto in nocturnal enuresis of children; also have prescribed it in cases of frequent micturition in old people, with marked benefit; also find it beneficial in pre-senility. I think it is a good medicine in all cases where anything of its nature is indicated.

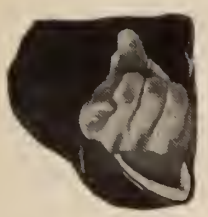
S. W. Badger, M. D.

Athens, Pa.

H. Campbell Thomson corroborates Lauder Brunton's observations (British Medical Journal) on the use of of alkalies for the relief of pain in neuralgia and other peripheral nerve lesions. In a severe and obstinate neuralgia great relief was experienced from an alkaline mixture of which ammonium carbonate was the principal ingredient.

Suppressed Menstruation.—Dr. Boardman Reed states that two or three drops of the tincture of cimicifuga and gelsemium—sometimes one drop of each—every hour or two are among the most certain means of bringing on the menstrual flow when delayed by passive congestion, cold, grief or similar cause, and acts similarly with the lochial discharge after parturition. Dragging pelvic pains arising from the same causes may be relieved by the same combination.—*Medical Summary.*

Rheumatic Pain and Fever.—In *The Medical and Surgical Bulletin* we find the following under the caption of "Acute Articular Rheumatism," by Dr. E. G. Evans: "Salol is the best intestinal antiseptic we have and Antikamnia as a pain reliever is, without doubt, unsurpassed, therefore, the combination of these two remedies in the form of the well known 'Antikamnia and Salol Tablets' affords us the ideal medicanment for pain and fever in rheumatic conditions. Patients appreciate the fact that when administering Antikamnia, you relieve the pain without giving them morphia, while the salol acts as a germicide and antiseptic, tending to ameliorate generally, the symptoms of the disease. Antikamnia and Salol Tablets (each tablet contains 2½ grs. Antikamnia and 2½ grs. Salol) are best given in doses of two tablets every three hours until ten or twelve tablets are taken during twenty-four hours. The patient's bowels must be kept open and the diet should be light. Alcohol is contra-indicated and water should be freely and frequently given. The bed covering should not be too heavy, but warm. Cold water packs, as well as hot fomentations are very beneficial."



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SUPPURATING APPENDICITIS OPENING INTO THE BLADDER.

By Dr. Enrique Fortun.

Surgeon of Hospital No. 1, Havana.

From *Revista Medica Cubana*, of July, 1903.

Juan G., a Spanish merchant, 37 years old, with evident syphilitic antecedents, began to suffer about two months ago acute pains in the right iliac pit, while a tumefaction was observed in that region.

He became an inmate of a clinic in this city, where his case was diagnosed as malignant neoplasm. After remaining about twenty days in said clinic, the patient decided to leave for Spain; in the meantime, he stopped at a hotel here. While there he was taken with violent fever and ague, with a temperature of about 41 degrees C., and the first micturition following this attack did show the presence of a great quantity of pus.

Dr. Parra, who was attending the patient, did me the honor to ask me to assist him. I called on him the night after the evacuation of pus had occurred.

The first symptom to which my attention was called upon examination was the dimension and hardness of the liver, with swellings, the massiveness of which continued uninterruptedly in connection with the massiveness of the iliac pit, in which region (the right iliac pit) an accentuated muscular resistance was observed, though that region instead of being swollen presented a depression, at the bottom of which the rim of the hepatic gland could be felt by the hand. The temperature was 38 degrees, the pulse beat between 80 and 90, and the general condition of the patient was rather satisfactory.

The diagnosis offered no doubt in our opinion: Suppurating Appendicitis with evacuation into the bladder (the urine which was shown to us was extremely fetid and mingled, and it did contain a large quantity of pus) and syphilitic cirrhosis of the liver.

We advised the patient to consent to be operated upon, which he did. On the following day an incision of about seven centimetres was made into the middle of the depression observed in the iliac pit. We rapidly reached a perfectly defined cavity, which contained a little pus mixed with mucosities. We washed out the cavity with Hydrozone and plugged it with iodoform gauze. On the following day, when we dressed the wound, upon careful examination of the cavity, we did not find any connection with the bladder, but we could extract the appendix which was affected by faeces.

A complete cure was accomplished in a month, and during that time the liver decreased considerably in volume. Since the third day of the operation antisyphilitic treatment was followed.

The communication between the cavity of the abscess and the bladder healed after twelve days of treatment.

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THE VERMONT MEDICAL MONTHLY

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VOLUME IX.

JANUARY TO DECEMBER, 1903.

THE VERMONT MEDICAL PUBLISHING COMPANY,

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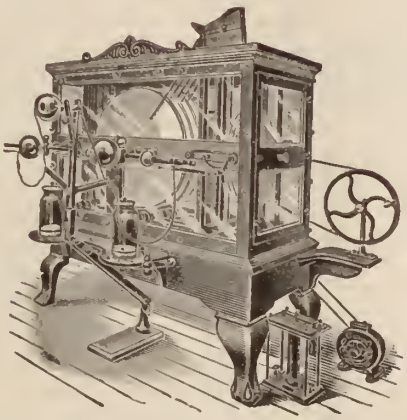

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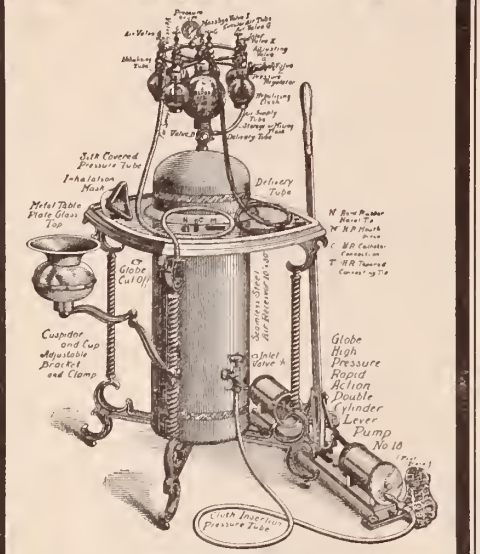

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