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# The Canadian Journal of Medicine and Surgery

A JOURNAL PUBLISHED MONTHLY IN THE INTEREST OF  
MEDICINE AND SURGERY

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VOL. VIII.

TORONTO, DECEMBER, 1900.

NO. 6.

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## *Original Contributions.*

### ON PROLAPSE OF THE STOMACH—GASTROPTOSIS.\*

BY ALEXANDER McPHEDRAN, M.B.,  
Professor of Medicine and Clinical Medicine, University of Toronto, etc.

THE frequency with which we meet with this condition, and the grave disturbances, digestive and constitutional, that may accompany it, render its discussion of eminently practical character. Prolapse of the stomach rarely occurs alone, but with it is associated prolapse of some or all the other abdominal organs. In the majority of the cases that I have examined there has also been some degree of dilatation, although not sufficient in many of them to seriously affect the functions of the stomach. The abdomen may be prominent or flat, or even retracted. In the former class the prominence may be confined to the lower part, while that above the umbilicus is depressed; in such the stomach is very low and is partly the cause of the undue fulness of the lower zone. If the stomach is not atonic, but possesses fair motor power, so as to be able to discharge its contents into the intestine in due time, so as to be empty before each succeeding meal, or at least before the night's fast is broken in the morning, no symptoms need necessarily arise from the low position of the stomach, as its motor function is not interfered with. This is well shown in the following patient:

CASE 1. S., aged 57; a manufacturer; had been ailing for two or three years, complaining of epigastric distress, weakness, loss of weight, and inaptitude for business. He was thin and

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\*Presented at the meeting of the Canadian Medical Association, held at Ottawa, September, 1900.

debilitated looking. The abdomen was somewhat full in its lower part, over which marked splash could be elicited. The right kidney could be easily palpated. A breakfast of two eggs and some shredded wheat biscuit was taken at 7.30 a.m., and the stomach-tube passed at 12.15 p.m.; four ounces of grumous material was obtained, containing pieces of white of egg, starch remains and some rice grains, which must have lain long in the stomach, as he had not eaten rice for some days. On inflation, the stomach was shown to be below the umbilicus. (Fig. 1.) He was directed to massage the abdomen thoroughly morning and night after drinking one or two glasses of water, and to practise abdominal gymnastics. His diet was restricted to one egg and a piece of toast for breakfast, a glass of warm milk at 11 o'clock, some tender meat, one vegetable, and light dessert for dinner; a cup of clear soup at 5 o'clock, and an evening meal similar to the breakfast. His medication consisted of strychnine, with such antiseptics as resorcin, and bismuth naphtholate. For a time sodium salicylate in small doses was added to stimulate secretion of bile. After a time, dilute acid hydrochloric was substituted, being given before and after each meal, as his stomach secretion was found to be deficient in acid. He has been restored to comfort, has gained nearly twenty pounds in weight, and is quite able for business. From time to time, however, the motor power of the stomach fails, and splash is easily elicited; then his diet has to be reduced again for a few days, and massage resumed. In this case the prolapse led to atony, with some ectasia. The food, retained unduly long in the stomach, became fermented, and the absorption of the products caused some toxemia. The washing out of the stomach, the stimulation of its motor and secretory function, the limitation of the food to its capacity, and the retardation of fermentation of the food restored the digestive function to nearly, if not quite, a normal condition, although the prolapse was not affected.

CASE 2. Mrs. O., aged 30, is a similar one, but with different symptoms. She suffered from frequent severe attacks of headache, with nausea and vomiting of mucus. These attacks were induced by any excitement, and often occurred two or three times a week. She had been subject to them for eight or ten years, growing much worse during the last three years. She was well nourished, with a moderately full abdomen. On examination the stomach was found prolapsed, the lesser curvature being near the umbilicus. The right kidney was freely movable, the lower end falling as low as the iliac crest in the upright position. (Fig. 2.) Treatment similar to that of Case 1 relieved her of her headaches, and restored her to a comfortable condition.

Not all cases, however, do as well as these two, for the reason usually that a nervous disturbance exists in addition to and apart from the gastric affection.

CASE 3. Mrs. S., aged 35, with a physique and general appearance much like Case 2. She had recurrent attacks of vomiting for over two years. She was very neurotic. The lesser curvature of the stomach was at the umbilicus. Both kidneys were movable, and could be grasped in the erect position. (Fig. 3.) The right was slightly tender. She improved under treatment with massage, abdominal gymnastics, careful dieting, and out-of-door life. She was given strychnine and antiseptics. In addition, a well-fitting bandage was worn to support the stomach and kidneys. For a time she was quite relieved, then the symptoms returned with their old violence. Nephrorrhaphy was recommended, but

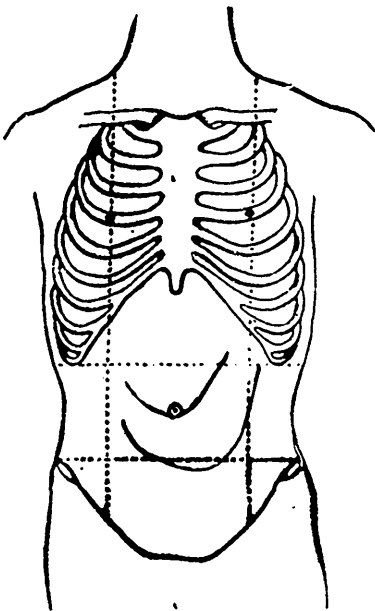


FIG. 1.—By inflation with air.

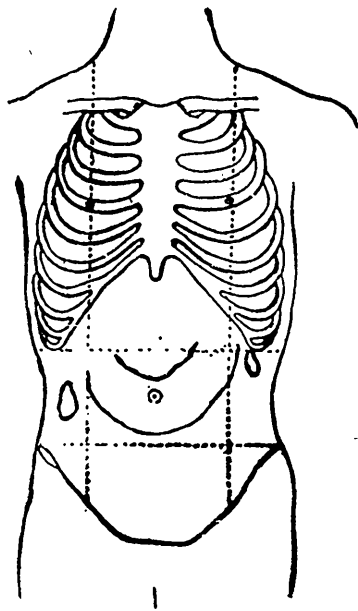


FIG. 2.—By inflation.

not assented to. In this case the symptoms were chiefly due to the hysteric or neurasthenic state, which was probably rather aggravated than caused by the enteroptosis that existed.

CASE 4. In a similar case in a postman, careful treatment resulted in no benefit, nor did a prolonged stay at a well-equipped sanitarium. I advised the fixing of the right kidney, which was freely movable. Later he came into the care of a surgeon who not only did that but also removed an unoffending appendix. He is considerably improved by the operation and able to carry on his work with some degree of comfort.

Suturing the kidney in place even when much dislocated and

there is pain in the right lumbar region may be of only temporary benefit, as shown in

CASE 5. Mrs. X., aged 32. She had never borne children. She complained of pain in the right lumbar region, great nervousness, and mental irritability. At times there was much epigastric distress, when there proved to be gastric insufficiency, large quantities of food being found in the stomach on passing the tube. On my advice she entered St. John's Hospital, and nephrorrhaphy was done by Dr. Alexander Primrose. For a few weeks she was completely relieved, but on leaving the hospital the mental state of unrest and discontent returned, and with it the signs of gastric insufficiency.

The next case is one of even greater disappointment; it is of much interest.

CASE 6. Miss C., aged 24, a tall, long-waisted girl, of hopeful and cheerful, but nervous disposition, applied for relief for severe burning sensation in the substernal region. She had never worn tight corsets. She had lived on a farm, and done a moderate amount of work. The stomach was much prolapsed, being wholly below the umbilicus, and somewhat dilated. (Fig. 4.) Quite frequently the remains of the previous day's food was found in it in the morning. The right kidney was movable, and lay below the costal margin in the erect position, but was not sensitive.

Not being relieved after a few weeks' careful treatment, I advised raising and suturing the stomach as nearly as possible in the normal position. This my colleague, Mr. I. H. Cameron, M.B., F.R.C.S., did, suturing it in as high a position as possible. In raising it, some small adhesions of the margin of the great omentum near the brim of the pelvis were broken. Most of the sutures were passed through the round ligament of the liver. She made a good recovery, and on examination the stomach was found in a good position, with the left part of the fundus somewhat lower than normal, as shown in Figure 5. The symptoms, however, returned after a few weeks, but were less severe. Six months later the stomach was prolapsed to its old position, and the burning had recurred with its former severity. The adhesions formed by the suturing had evidently become absorbed, showing that a more firm anchorage than simply the suturing of serous surfaces together is required to maintain any organ in a position from which gravity tends to drag it.

I am still of opinion that the advice to have the stomach raised and fixed in the normal position was sound, and that permanent fixation would have resulted in the relief aimed at; but permanent fixation is the difficulty. However, it is one I am glad to pass on to the surgeon.

In such cases especially those in which the dilatation is marked, the size of the stomach has been reduced by infolding the

anterior wall by raising the greater curvature and suturing it to the anterior wall near the lesser curvature—gastroplication. Such an adhesion is more likely to hold permanently, as the traction on it will be much less and the surfaces brought into contact are much broader. However, it would be interesting to learn the ultimate results in these cases.

This case is a fair illustration of the condition known as Glenard's disease, or enteroptosis, in which there is general ptosis of the abdominal organs. Glenard's articles appeared in 1885, and since then much has been written on it. In typical cases, complaint is made of epigastric distress, a sense of weight, a dragging in the abdomen, tumultuous action of the heart, constipation, vomiting, pain in the back, and general incapacity for the active duties of life. Some of them find marked relief in general firm support to the abdomen. That these symptoms are due rather to the neurasthenic condition than to the ptosis of the abdominal organs is proved by two facts: First, that similar symptoms occur without the displacement; and secondly, the displacement occurs in a marked degree without the nervous symptoms, even when the digestion is feeble and disturbed. These facts are not to be lost sight of in the prognosis and treatment.

CASE 7. Mr. B., a barrister who did a large practice for several years, consulted me a few days ago for symptoms typical of Glenard's disease, except that support of the lower part of the abdomen gives no sense of relief. On examination, the abdominal organs are in their normal position, except the stomach, and it is only slightly prolapsed and dilated.

CASE 8. Mr. C., aged 51, the principal of a large Collegiate Institute, is, on the contrary, an illustration of marked proptosis of the abdominal viscera in a man of weak constitution, but without the usual symptoms of Glenard's disease. He is quite emaciated, with a retracted abdomen, and with the stomach, which is a little dilated, lying below the umbilicus. (Fig. 6.) Unless the greatest care is exercised in regard to diet, considerable residue of the previous day's food remains in the stomach in the morning, causing much discomfort. With care, however, his life is fairly comfortable, and he is able to discharge his rather arduous duties with efficiency and regularity.

CASE 9. Mr. R., aged 27, a draughtsman, is a similar case. He complained of thoracic oppression, referred chiefly to the sternal region, and of much mental depression. He had lost weight gradually. His appetite was uniform and fairly good. There was some flatulence, but his digestion was otherwise without discomfort. He had been treated for neurasthenia, for which he spent some weeks last spring at Carlsbad. Those waters, however, caused flatulence, and increased his discomfort. He was fairly well nourished. The abdomen was slightly full, and splash could

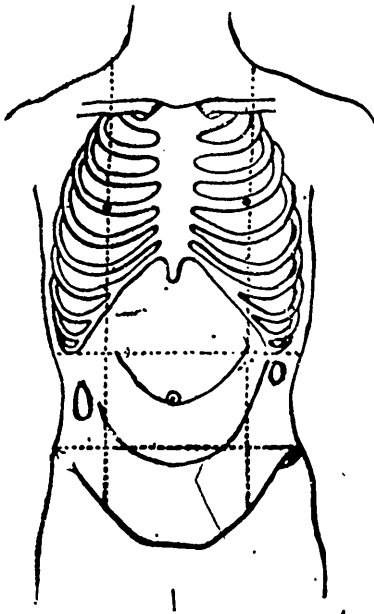


FIG. 3.—By inflation with air.

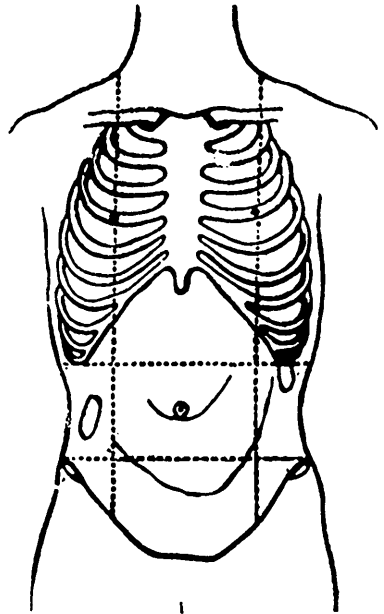


FIG. 4.—Before operation.

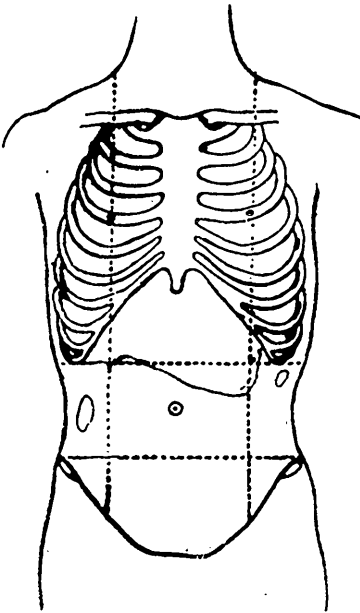


FIG. 5.—After operation, showing greater curvature only.

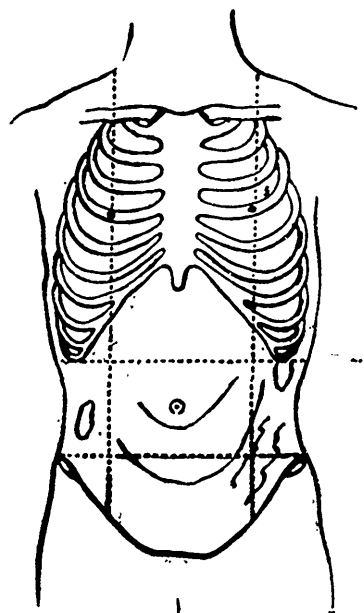


FIG. 6.—By inflation with air.

be elicited at the umbilicus. A stomach tube was passed five hours after an ordinary breakfast, and twenty-four ounces evacuated, and much more removed by washing. The stomach was dilated, as well as greatly prolapsed (Fig. 7), as determined by the gastro-diaphane: the lesser curvature is not definitely determined, but is about the position of the dotted line.

CASE 10. Mr. C. E. C., aged 46, presents the neurasthenic symptoms in a more marked degree. He is a manufacturer, who has closely attended to business for years. He is slightly built, weighing only 107 pounds; former weight, 118 pounds. He complains of weakness, mental depression, and epigastric distress. The abdomen is flat, but not retracted. The right kidney is barely palpable in deep inspiration. The stomach, on inflation, is much prolapsed, the lesser curvature being just above the umbilicus, and the greater more than half way from the umbilicus to the pubes. It is usually quite empty in the morning, but on syphoning it last week at 2 o'clock, some fruit taken the evening before was found in the contents, of which there were six ounces, and much more was removed by washing. After the water returned clear, he was put on a sofa with the foot well elevated, and on kneading the abdomen, four or five ounces of undiluted contents, thicker than that first syphoned, escaped through the tube. Free HCl was present on each examination, but in considerably reduced percentage. Most probably there is some kinking at the gastro-duodenal junction, but the obstruction must be slight, as the stomach is usually found empty in the morning. Treatment so far has not improved him, and I have recommended the St. Catharines Salt Baths with massage. If a few weeks of that treatment does not mend matters, I purpose advising gastro-enterostomy.

That these cases present nothing extraordinary I am fully aware, but they are types of the cases constituting the bulk of those met with, and in this lies their importance.

The causation of gastric and other visceral prolapses is a complex one. It is said to occur with much more frequency in women than men; with this, my own observations are not in accord. Of the last forty-five cases carefully examined, twenty-six were in females and nineteen in males. In six of the males and twelve of the females the ptosis was marked. Of the females, fourteen were married, but one of them had never borne children, so that pregnancy, which is looked upon as one of the chief causes, is excluded in one-half the females. The corset and tight lacing may, I think, be excluded in all these cases. Loss of fatty tissue was moderate in only a few cases; in the majority of the females there was the plentiful deposit of fat usually met with in chlorotic anemia.

A cause, common to all of them, both male and female, was debility and loss, or rather lack, of tone, because many of them



had never possessed a firm tissue. This was the one constant, as it is doubtless the most important, of all the causes of prolapse of the abdominal organs. The want of tone leads to relaxation of the ligamentous supports of the various viscera, resulting in some prolapse. This causes some impediment to the circulation, which in turn disturbs the function of the organs, and increases the want of tone in the ligamentous supports. Thus the one reacts on the other until the prolapse becomes pronounced. That relaxation of the abdominal walls plays at most but a subordinate part, is shown by the fact that in many cases of the most pronounced ptosis the belly is firm and retracted.

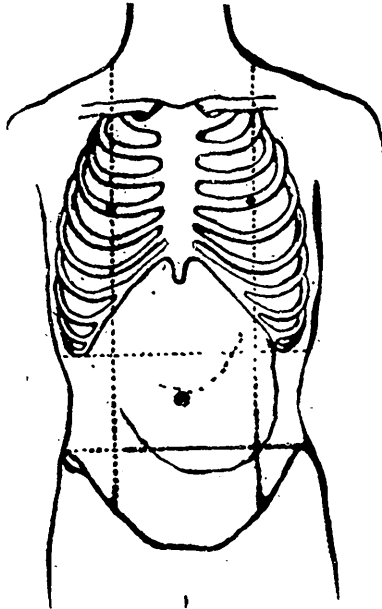


FIG. 7.—By intragastric electric lamp, lesser curvature not definitely located.

The diagnosis is not usually difficult. By inflating the stomach with air or  $\text{CO}_2$ , its outline, if not plainly visible, can usually be determined by percussion, especially by auscultatory percussion. To inflate the stomach, I prefer to use the stomach tube, if well borne, and a single large bulb. It is not necessary to pass the tube all the way into the stomach, as the air passes easily through the esophagus. If the abdominal walls are fairly thin and relaxed, each injection of the bulb full of air communicates a wave to all of the abdominal wall that is in contact with the stomach, at once showing its size and position, unless its lower part is overlaid by a distended colon. Inflation may also be done by generating

CO<sub>2</sub> in the stomach by administering about ʒi of bicarbonate of soda in solution, followed at once by a solution of an equivalent quantity of tartaric acid. The disadvantage of this method is that the inflation, not being under control, may be too great, and give rise to distress, or too little to serve the purpose; its advantage is that the unpleasantness of passing the tube is avoided, no small one to some people. Another advantage in favor of the tube is that, as soon as the examination is complete, the air may be allowed to escape, while by the other method the distension continues until the CO<sub>2</sub> is absorbed. Then, again, in many cases it is desirable to introduce the tube in order to obtain the contents of the stomach for examination, and to ascertain their volume.

Instead of inflating the stomach, we may illumine its cavity by the introduction of an intragastric lamp, as devised by Einhorn, and thus determine the position of the greater curvature, but that of the lesser is not usually indicated by the lamp. If the lesser curvature is low and sharply bent, forming a U as in Figure 1, the lamp will be arrested by the sharp curve, and not pass into the pyloric part of the stomach.

Of the treatment I will say but a few words. I have already referred incidentally to diet, medicines, and abdominal massage and gymnastics. Electricity may also be of benefit, an intragastric electrode being used. In the use of any of these means, material benefit can only result from perseverance for a long time. Patient perseverance is the most difficult part of the prescription to carry out. I am in the habit of directing massage and abdominal exercises to be taken morning and night, after drinking one or two glasses of water. In this way many patients can wash their stomachs out into the bowel. A young man recently under my care, in this manner could empty his stomach of a pint or more of water by ten minutes' massage, while lying on his back with the hips somewhat elevated.

No class of patients is more subject to depressing mental states than those with defective digestive and assimilative functions, hence in no class does greater benefit attend change of scene. Everything tending to give pleasurable mental stimulus does them good. Therefore foreign travel, with due regard to avoidance of fatigue, mental or physical, is of great benefit. Rest without pleasure is seldom of much benefit.

## MENTAL SANITATION.\*

BY R. W. BRUCE SMITH, M.D.,

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WHILE the spirit of the age of preventive medicine is invading every other field, comparatively few and feeble have been the prophylactic efforts made in psychiatry. Surely of all the diseases with which humanity is afflicted, insanity pre-eminently demands the utilization of every possible preventive measure. We study the preventability of epidemics, every new bacterium that investigations disclose is pursued with commendable zeal. In the realm of mind, however, where preservation means so much more than cure, where the damage is so often irreparable, we utter few words of warning, and make few comments regarding the possibility of preventing mental disease.

There is no longer doubt that the number of insane in Canada is increasing somewhat beyond the proportionate increase in population. Can this increase be correctly ascribed to the fact that the best efforts have been spent in the care and treatment of the insane, while there has been neglect in the consideration of preventive measures? An effective therapeutics should go hand in hand with an equally efficient prophylaxis. A thorough comprehension of the disease, its etiology, development and pathology is the only foundation upon which an intelligent prophylaxis can be based. The seeker after such a foundation is too often bewildered by the surfeit of philosophical theorizing and the dearth of scientific research. He finds the purely mental phenomena of insanity afford a foundation for little that is not speculative, and that all attempts to build up a science on such ground-work have brought to psychiatry a wealth of conflicting views. These have bred a bewildering profusion of terms and classifications that to a certain extent are barriers instead of helps to the student. The elaborate webs of philosophy woven by the old-school psychologists afford us no practical working basis. However, as natural philosophy paved the way for, and was gradually supplanted by natural science, so the philosophical abstractions of the psychology of a few years ago have given place to the experimental psychology of to-day. Since the founding of the first psychological laboratory by Wundt, at Leipzig, in 1878, problems have been solved that the philosophical school regarded as unanswerable. So the conflicting philosophies as well as the traditions of the alienists are gradually giving place to facts established by scientific investigation. Physical bases

\* Read before the Canadian Medical Association at Ottawa, September 14th, 1900.

have been shown or more clearly demonstrated for several symptoms and forms of mental disease, and the inter-dependence of mental vigor upon bodily health has become to-day a problem of most vital importance in psychiatry. Mental symptoms only show one of the many manifestations of the disease called insanity. They do not in themselves indicate the entire pathology. We must appreciate the necessity of not confining ourselves to our own investigations, and of bringing the results of every field of clinical and pathological research to our aid. In that way alone can we secure a better comprehension of the nature of mental disease and its treatment, and found upon the knowledge thus acquired, prophylactic teachings that may prove of untold value in mental sanitation.

Careful and painstaking analyses of the causes of insanity and the conditions of its development are the first requisites in the study of the preventability of mental as of any other disease. The origin of the disease, so often arising from congenital or hereditary defect, and the manner of its development, often covering a long period of time, are both so antagonistic to full recovery that prevention of the attack becomes a question of the most vital importance. The storms that sweep over the mental field are surely sufficiently serious to demand more careful study of their origin. Relying upon the clinical lessons gleaned in the study of psychiatry, I assert that when a given condition has resulted in a fully developed attack of insanity, such as comes under the control of our institutions for the treatment and care of the insane, it is utterly beyond the power of any one, skilled or unskilled, to re-establish a completely normal condition. True, to many a disordered intellect the light of reason has come as a beneficent ray, chasing away the shadows of doubt and the shades of gloom, but in every case there is left an increase in the susceptibility of the individual, which means greater weakness and less perfect restorative capacity. There will be evidence of restricted functional range, and in most instances marked evidence of disordered action. These conditions must exist when the course and development of mental disease is studied. In the larger number of cases the insanity is only the expression and outcome of conditions and causes which have been in existence for years, and which have been slowly but surely bringing about such weakness of the brain, such deterioration in structure, such impairment in recuperative power, that entirely healthy mentality is no longer possible. In another class of cases, where the insanity is the result of congenital defect, we find weak and imperfect tissues, susceptible in the highest degree to the outbursts of disease. Such cases can only recover to what they were by nature, and will in addition carry marks of the ravages of the mental storm through which they have passed. To restore wholly is, then, not even a possibility.

Granting that the causes and conditions for the development of insanity are the unequal adjustments between the demands made upon the mind organs of the individual, and their capacity for safe and undiminishing activity, we are guided to a conclusion as to prevention. We must seek either to lessen the demands on or to strengthen the resisting power of the brain.

All organisms are not equally equipped to resist unfavorable environments. Their powers of resistance vary, and the work of prevention in mental diseases must be largely in an intelligent investigation of this variability.

In this age of scientific research the study of mind disorder has led to the closest investigations to show the relations that exist between tissue degeneration and mental phenomena. The attention, however, must not be limited to the study of the changes which accompany the developed disease. For back of that development lie social and racial conditions, and in the careful and comprehensive analysis of these we must look for a partial solution of the great problem, the safe-guarding of the human understanding from destructive disease or premature decay. Without doubt, in fifty per cent. of all cases of developed insanity we find such evidence of ancestral defect or disease as would lead us to expect at some point in the line of descent a reappearance of this defect in the form of active disease of the mind. There is probably no other disease in which the probability of development may be so often and so certainly foretold by a study of the ancestry. That insanity appears in succeeding generations in the same line is well known to every one. The more fully we can persuade the public to the fullest comprehension of the dangers which attend the introduction of such defective strains the better will we be able to protect future generations. Parents and children are not half alive to the importance of guarding against such entanglements. They should be taught to look upon alliances with such ancestral lines not simply as discreditable or unworthy, but as fraught with danger. The awful responsibility of imposing such tainted heredity upon offspring should be clearly understood and carefully avoided. In a portion of one county of Ontario, through indiscriminate marriage and intermarriage, insanity has become most frequent, and I have known several members of one family, with numerous other relations from the same section of country, to be inmates at the same time of the same institution.

Dr. Blanchard, in his address before the British Medical Association, said:

"I have long been of the opinion that insanity is to be prevented chiefly by limiting the propagation of this most fearful disease through the union of affected persons. I am convinced that the only way to really diminish and finally stamp out insanity is by so educating public opinion, that those who have been insane

or are threatened with insanity shall, in the face of such public opinion, abstain from bringing into the world children who must certainly contain in them the potentiality of insanity, who will some of them develop it, even if others escape, and so will hand on the heritage from generation to generation till the race dies out."

It is a difficult question to decide whether or not there should be restrictions by legal enactment to forbid the marriage of any person whose ancestral line was tainted by insanity. In one of the American State Legislatures last year a bill was introduced but afterwards withdrawn, in which it was enacted that before marriage was allowed in any case certificates made by two medical practitioners must be filed, certifying that the family history was clear on each side of traces of insanity. I mention this as an instance showing that the influence of heredity as one of the great predisposing causes of insanity is becoming more thoroughly understood. Public opinion, however, must be further enlightened before restrictions will have the support and obedience required. The day may yet dawn when, as a nation, we will give the same attention to the breeding of children that we do now to the breeding of horses. If this great land, whose resources and vastness are now only commencing to be understood, is in ages yet unborn to be peopled by a hardy and vigorous race, there must be a wide dissemination among all classes of knowledge expressed so plainly that he who runs may read and understand how great and lasting are the influences of heredity. Thousands of dollars are spent yearly in Canada in spreading a knowledge broadcast regarding the evils of intemperance. The pulpit and the press vie with each other in the exercise of their potent influence for the suppression of many known vices. How seldom are these forces expended in warning the people regarding the fearful ravages wrought upon mankind by indiscriminate matrimonial alliances! How great the responsibility of the medical profession in this direction! The people look to the family physician, and quite properly trust to his judgment and advice in all matters relating to health. True, he may not often be consulted with regard to such matters, but how often is he made the silent witness of alliances which he knows are to say the least, unsafe. If the full significance and grave responsibilities involved by a marriage in which in the ancestry of either of the contracting parties there was insanity, were properly explained, both parents and children could soon be taught the gravely prejudicial nature of such a procedure. We can do a great deal to create a proper public sentiment in regard to this matter. No coercive measure enacted by any legislature would be respected or obeyed. The public must first be intelligently instructed as to the dangers involved, and when thus taught they will surely comprehend the importance of the subject.

I would not venture to assert that all persons with such defects

in their family histories should be condemned to celibacy. It is fairly safe to make an estimate of the probability or improbability of a particular individual of such a line of descent transmitting to his offspring the special defect which has appeared in his ancestry. Much may depend upon the intensity of the predisposition, the frequency of its appearance, and the relative proportions between damaged and vigorous branches. On the other hand I think there are instances where marriage is not advisable under any circumstances. For example, where experience has shown that in that particular family the defect so dominates and stamps itself upon the hereditary tissue that it cannot be made safe. I feel sure, too, in asserting that this absolute restriction applies to a small proportion of the cases in which insanity has appeared in the family history, and that in the larger proportion the defective members have been relatively few. There is, therefore, room for discrimination, and here the family physician may render invaluable aid. He will be comparatively safe in offering no objection where the particular individual is of strong and vigorous development, well balanced, and if the alliance is with a line which will tend to antagonize such a defect rather than to encourage it. But if there is evidence of physical or mental weakness, of instability or eccentricity, or if there is reliable trace of such defects in the family history, the prudent counsellor will not only withhold his sanction, but do all in his power to discourage such a contemplated union.

However successful the effort to guard against the alliance of persons having their ancestry tainted by mental disease, children will continue to be born handicapped by this unfortunate predisposition. Even where such defect has not been known in the ancestry, it may arise from accident, or it may be the fruit of individual elements, either of which in itself or in other combinations would be safe, but which plus the element with which it is united makes an uncertain and unsafe compound. Herein lies a great field for useful work in the prevention of mind disorders.

The family physician of the twentieth century will find a wide field for usefulness in the study of the variability of child-character and of the types and features of mind disease by early recognition of the susceptible or too sensitive brain, and by early detection of all indications of mental hyperesthesia.

When the physician has created an interest and shown the importance of thus early attending to and watching the mental development of childhood, he will stimulate teachers and parents to recognize the great importance of making a careful and intelligent study of the characteristics, tendencies and weakness of each child. With such recognition carefully studied and faithfully applied there could only be one outcome—a healthier and hardier race of children with all the after-blessings in the later years of life. The

examination-passing test is not now regarded as the only standard by which to estimate a pupil's merits in the Canadian school system, and the sooner teachers learn that there are other methods by which the mental growth of childhood is to be encouraged there will be a brighter prospect of healthier young Canadians. Those in charge of the education of child-character must exercise more discrimination in this work—making a careful study of the characteristics of each child, and giving to the parents such advice and such caution as the case would require. To secure this greatly-to-be-desired end, the physician must be the prime mover in the reform.

To lessen the demands on the brain means to regulate the burden to an organization which has already given evidence of weakness or susceptibility. The wonderful progress in every department of human affairs at the present day means an increased complexity in the human brain which is consequently rendered more than ever susceptible to disturbance and disease. No doubt many attacks of insanity could be warded off and wholly prevented by proper regulation of the conduct and surroundings of the individual.

There is no doubt that fifty per cent. of the inmates of Canadian asylums are drawn from the farming community. This must be accounted for largely by the mode of life which obtains in many farm-houses. Socially they are isolated from the world, especially in the newer districts. Imperfect hygienic surroundings, the monotony of their daily lives, a dietary that seldom varies, often the entire absence of bathing facilities, and we might draw a picture that reveals a state of domestic life that no wonder often ends in despair. The human brain demands diversity, and we must teach the farming community that they owe it as a duty to themselves as well as the nation to cultivate a higher ideal of home life.

Permit me briefly to mention a case which came under my care only a few weeks ago. An unmarried woman, aged 48, had lived all her lifetime in the centre of one of the best agricultural counties of Ontario. Her family were all hard workers, and seldom went from home, except to market the produce in a neighboring village, and to walk to a church close at hand on Sundays. She had never been five miles from home in all her life, and had never seen the railway cars until the day she was brought to the asylum. Like many other rural females, her daily life was one weary, monotonous grind at the mill of labor. Her only indulgence had been in regularly resorting to the old tea-pot and its too often vile decoctions, a pernicious habit which people in this age seem to encourage rather than oppose. This woman knew nothing of the outside world with its pulsating energies and quickening impulses. Her life had nothing in it to arouse the noblest emotions of the mind. And when I learned her history I little wondered that she became mei-



anaholic, and attempted to terminate such an existence by suicide, which she accomplished by use of a razor one day at home, making a terrible wound. When brought to the asylum she had every symptom of septic infection, from which she died in four days.

The class of literature which people read has a marked influence in moulding thought. Are there not many books published which we as physicians know are not conducive to soundness as well as purity of mind? If the literary tastes of the people may be judged by the class of trashy literature that is most popular, degeneration is surely manifesting itself. In the large majority of the most widely-read books of the year there is a dangerous element, which is sure to create impure thought and strongly tend to establish dangerous mental perversion. Our young people are now invited to feast at a literary repast that is decidedly dangerous. Some literature can only be described as damnable; so alluring and seductively attractive are the scenes, characters and incidents portrayed. We criticize not so much what is said as what is suggested. Many of the books that now find the largest sales, and are read by everyone, are polluted by a suggestiveness that can only prove injurious by inducing an abnormal individual attention which begets a neurosis. They stimulate a curiosity that tempts while it attracts. People now seem to be losing an interest in the world's best literature. Their lives must be influenced by their reading, and the perusal of doubtful books is directly antagonistic to sound mentality. The family physician should feel it his duty to point out to parents and children how helpful are good books and how injurious are impure books. Not a few cases of mental disease have already been traced to the influence of improper literature, and unless a more vigilant censorship is placed upon books coming years will witness a marked increase in moral and sexual perverts. It is far from me to be an alarmist, but I feel that this is a subject worthy of more strict attention.

None will deny that excess and dissipation, so frequently the excitants of mental disease in fertile soil, might be kept from those individuals who, by inheritance or by developed evidence of defect or unusual susceptibility, have shown the existence in their organizations of limitations below the normal. Parents should regulate with zealous care the surroundings of their children during their development. The susceptibilities of youth must be fully recognized. Here the importance of careful study of child-character and the proper instruction of parents and teachers is again seen. Where so much depends upon the school life in estimating the value of the after life of the child, how important it becomes for more attention to be given to the variability of pupils in their functional capacity. *The burdens must not be imposed on all alike.* The child-nature must be studied and understood, and the burden and future training be regulated accordingly.

Perchance much that I have herein submitted may seem visionary and impracticable, but I am convinced that from the study and consideration of this important subject much that will prove of lasting value may be accomplished along the lines I have thus imperfectly sketched.

From consideration of this subject I may submit the following:

1. That the public should be enlightened with regard to the nature of insanity in order that they may properly estimate the influence of heredity as the most potent factor in the causation of the disease.

2. That as a preventive measure the public should be taught that as the development of the morbid disposition is most insidious and is seldom recognized until late, the consideration of the family and personal history of the individual should demand and receive early and careful attention.

3. That there must be full recognition of the variability of individuals for bearing burdens and enduring strains.

4. That many cases of insanity are justly chargeable to the imposition of burdens beyond the capability of the individual.

5. The prevention of insanity is not promoted by merely studying the phenomena of the disease.

6. Public sentiment must be enlightened before any restrictive measures can be beneficially enforced.

7. That if the conditions under which many cases of insanity originate were properly understood, many attacks of the disease might be avoided.

8. That the study of child-character and the careful consideration of the variability in the development of mental phenomena during the period of growth in the child are all important.

9. That the steps necessary to secure the adoption of these and all other precautionary measures must first be taken by the family physician who in the future must be prepared to advise, caution and restrain in exercising his influence in the prevention of mental diseases.

10. The burden must be adjusted to the capacity of the individual in order that it can always be carried with safety when this is possible; and when it is not possible that the line of descent of every such defection shall terminate with the individual himself.

The subject of mental sanitation I look upon as one which must early in the years of the dawning century receive most careful consideration.

A CASE OF CONGENITAL PTOSIS, WITH ASSOCIATED  
MOVEMENTS OF THE AFFECTED EYELID, DURING  
THE ACTION OF CERTAIN MUSCLES.\*

BY JAMES MACCALLUM, B.A., M.D.

EVERY physician has, when examining children with some eye affection, seen them open the mouth as wide as possible, whereupon the lids, which had remained firmly closed in spite of the patient's every effort, at once open. Such an every-day occurrence is this that one scarcely stops to ask the explanation of it; whether the opened mouth drawing down the upper lip exerts traction on the lower lid at the same time that the upper lid is drawn up by the contraction of the frontalis; or whether the nerve impulse being directed to another portion of the body, the levator gets the upper hand of the sphincter. Just as when, failing to elicit the knee-jerk, one directs the patient to hold tight his flexed fingers and try to pull them apart, whereupon the reflex at once appears.

The phenomenon may become more complicated, forcing itself upon the attention of the most careless observer. Thus Adamuk tells of a man whose eyes at all other times were in every respect normal, but whose lids were with every movement of mastication drawn upwards, until scarcely the posterior third of the eye was covered by them. Willbrand and Sanger (1) saw a young woman in whom no sign of ptosis could be found, but whose left upper lid as soon as she began to eat, and the visual plane was directed downwards, made most energetic movements, lifting the edge of the lid far above the upper margin of the cornea.

More remarkable are the cases—one of which I relate—in which a lid affected with ptosis is opened involuntarily with every act of mastication, every opening of the mouth. Some observers have seen this occur during speaking, swallowing, and in one case even during the act of blowing out with the lips.

In all but two of the thirty odd cases recorded, the ptosis and associated movements were congenital. In one of these the patient was fourteen years old, in the other thirteen, before the phenomena appeared.

The opposite condition—associated movements of the facial muscles when the eyelids are widely stretched open—has been recorded (2).

A. B., aged 25; seamstress; has had since birth a drooping of the right upper lid. This she desires to have corrected if it will not make more apparent a divergent squint of that eye. She has

\*Read at the Meeting of the Canadian Medical Association at Ottawa, September, 1900.

discovered that when she opens her mouth, or shuts her teeth tight together, or chews, the lid is lifted. When she presses her finger forcibly on the upper lip, or when she closes the left eye, the lid lifts. The same thing happens when she is excited or angry. When the jaw is moved laterally to the left there is a wider opening of the lid than when it is moved to the right. Neither abduction or adduction of the eye causes the lid to lift. The range of movement of the right eye is limited upwards, upwards and outwards, upwards and inwards. When the lid is held open the range of movement is not increased in the least. The right eye is then seen to lie at a lower level than the left, but there is no complaint of diplopia. The vision in both eyes is normal, 5/5 no Hm.

There is no wrinkling of the forehead, nor any attempt to compensate for the ptosis by throwing the head back.

When she closes her eyelids there is seen a peculiar flickering or clonic contraction at the tip of the nose (of the dilator anterior naris and lower lateral cartilage.)

There is no anomaly as regards the pupil or pupillary reactions, nor any congenital, ocular, or other defect except the ptosis and the limitation of movement of the eyeball already described. No observation was made as to whether elevation of the lid on shutting the left eye was increased by opening the mouth or by lateral movement of the jaw.

The appearance of the lid shows that the ptosis is not due to any excess of tissue. The lid can be lifted perfectly under certain circumstances, so that it is not due to any defective muscular development. The fault must be in the innervation of the levator palpebræ superioris. There is, however, a divergent strabismus, and defective movement of the eyeball upwards, upwards and inwards, upwards and outwards. Now, rotation of the eyeball directly upwards is accomplished by the superior rectus and the inferior oblique; upwards and inwards by the rectus sup., rectus internus, and inf. oblique; upwards and outwards by the rect. sup., rect. externus, and inf. oblique. The rectus externus has, however, but little influence on this movement. The divergent squint shows that there is no paresis of the external rectus. The affected muscles, viz., levator palpebræ superioris, rectus superior, rectus internus, and inferior oblique are all innervated by the third nerve (motor oculi), so that the fault seems to lie in that nerve.

One cannot conceive of any condition of the levator branch of the motor oculi which would prevent the muscle acting at one moment and cause it to act the next. If, as is commonly assumed, there is a separate cortical centre for the levator branch, which also innervates the muscle of the opposite side, there cannot be any defect in that centre, for there is no sign of ptosis in the upper left lid. The only possible explanation of the ptosis of the right lid is some anomaly of innervation, for the drooping-right upper lid

is lifted perfectly when the lower jaw is depressed or moved laterally, or when the jaws are shut tightly together. The lower jaw is depressed by the platysma myoides, mylohyoid and digastric geniohyoid, which are innervated by the facial and trigeminus. It is moved laterally by the external pterygoid, while the temporal, masseter, and internal pterygoid raise it with great force against the upper jaw. All these muscles are innervated by the inferior maxillary nerve, one of the divisions of the fifth (trigeminus) nerve.

Hard pressure upon the upper lip just below the septum nasi causes the drooping lid to be raised. The orbicularis oris which occupies this region is supplied by the facial nerve, while the labial branch of the superior maxillary, a sensory nerve, and a division of the trigeminus is distributed to the skin and muscles of the upper lip.

In my case, then, a nervous excitation arising in the area of the trigeminus, or of the facial, in some way reaches the drooping levator palpebræ superioris and lifts it, without, however, affecting the innervation of the affected external ocular muscles.

It has been suggested that it is simply an exaggerated physiological association which causes the lifting of the lid. This is difficult to accept, for how can the opening of the mouth cause a levator, which responds imperfectly or not at all to a normal impulse, to act more powerfully than the normal levator of the other eye? The two levators must be differently innervated. That the nucleus of the motor oculi is defective is shown by the ptosis of the right eye, and also by the defective action of the rectus sup., rectus int., and inferior oblique. The strands to the levator on the right side must arise, not in the motor oculi nucleus, but rather in that of the facial, or in the motor nucleus of the trigeminus, or in both. Excitation in either of these will thus cause contraction of the levator. It is not necessary to surmise any common origin or connection with the motor oculi. The nuclei of the motor oculi, trigeminus and facial are adjacent. Under pathological conditions the innervation process may easily encroach upon neighboring areas, and give rise to associated movements. According to Bernhardt, the decussation of the innervation process in the facial area to monolateral associated movement of the upper lid may be explained as follows: The right upper lid cannot be raised voluntarily. The patient now closes the left eye; from a definite point of the cortex of the right hemisphere the impulse goes downward, crossing the middle line to that portion of the nucleus of the left facial which gives off the nerves for the sphincter of the left eye. At the same time this impulse strikes the point from which arise the strands of nerves for the paretic right levator, and innervate it. When the eyes are shut tightly there is a contraction of the fibres of the levator labii superioris aequæ nasi, and consequently

of the compressor and dilator naris. In this way, perhaps, arises the clonic contraction at the tip of the nose with shutting of the eyes.

As to prognosis, Swanzy (3) says: "No remedy can be applied for the relief of this condition," and "the condition always remains unchanged during life." (4) This latter statement is not borne out by the recorded cases. Kraus (5) had a case in which after nine years the ptosis had become greater, but the movement of the lid with the opening and shutting of the mouth had completely disappeared. On the other hand, in Block's case, the movements of the lid increased with years.

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**A BRIEF CONSIDERATION OF GANGRENE AND MORTIFICATION, TRAUMATIC AND PATHOLOGICAL, OF THE EXTREMITIES.\***

BY THOMAS H. MANLEY, M.D.,  
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In former times there was no subject connected with the literature of surgery, on which greater attention was bestowed, than that dealing with local death of the tissues from either injury or disease; but, since anesthetics and antiseptics have enabled us to institute a more effective technique and therapy in operative surgery, notably during the past twenty years, authors have given but indifferent notice to these phases of tissue degeneration; moreover, a modern classification, possessing no merit except in its novelty, has tended rather to confuse than to clarify the subject.

In the recent past, the very word gangrene conveyed a terrible significance. Purulent infiltration, and impending mortification after serious traumatism of a limb, was not infrequent, when amputation was involved as the only means of saving life, and oft-times suspicious signs of gangrene so inspired one with fear that many a limb was sacrificed before time for full reaction was established.

But those times are forever past, and as a contemporaneous writer well says of malignant infectious gangrene: "We now no longer witness it except in the laboratory of the investigator." Notwithstanding all this, gangrene and mortification of various types, we yet have, and will for all time, some of which we are better able to control, limit or prevent; while there are others, which we are powerless to either avert or control.

CLASSIFICATION AND NOMENCLATURE.

While making a recent review of surgical literature, it soon became apparent to me that, from a practical standpoint, the modern classification or arrangement of the study of gangrene is not only no improvement on the more ancient, but that it rather confuses than elucidates the subject, in including under one head every type of tissue death as "gangrene." Thus, Reclus defines gangrene as "a limited mortification of the tissues, not to be confounded with putrefaction or putrid fermentation." Now, *mortification*, in its proper meaning, is invariably attended with putrescent changes. "But," he adds, "putrefaction may follow

\*Abstract of essay delivered at annual meeting of International Association of Railway Surgeons, Detroit, May, 1900.

gangrene of various types." It follows *all*, when this process completely destroys the tissues. Bouchard strikes the proper note when he says, in his master-work on pathology, that "gangrene is a special process to which is superadded inflammatory changes."

Even so eminent a writer as the late Sir James Paget is anything but lucid or comprehensive in his description of tissues, the seat of destructive processes. "By mortification, or sphacelus, is meant the death of any portion of the body, while the rest remains living" he said. Nothing more concise or definite. "Gangrene," he adds, "is usually employed in the same sense. . . . The process of progressive dying is commonly called sloughing." But sloughing is the throwing off, not of "dying," but of dead tissue.

This celebrated author deals at length with the difficulty often experienced in distinguishing a part in a state of asphyxia or suspended animation, from complete death, and compares the resuscitation of localized parts to that which follows sometimes in the body after drowning.

The succinct definition of Boyer cannot be improved, as it, in a word, describes the wide and vital difference subsisting between two totally different conditions. Thus, he says: "Gangrene implies the dying state of the tissues, mortification, their complete death."

As an illustration, let us take a member which has been so completely crushed through that it hangs only by the tendons to contiguous parts. Here, if the lower extremity, the foot is instantly killed, its life is extinct, and decomposition at once begins; it is mortified. In another instance, the foot, or perchance a toe, was crushed in a minor degree, the bones exposed or fractured, with the tissues widely opened. Now, injudicious bandaging with a strangulation of the blood vessels ensues, or infection sets in. In either event, stasis, congestion and inflammatory changes set in, the foot swells, becomes the seat of excruciating pain; the tips of the toes become livid, and serous blebs cover the surface here and there. *Gangrene* has set in, its destructive work has *begun*, but the member is not dead, *is not mortified*, it is in a state of impending death, but it is *not dead*, and in traumatic types of gangrene, in a healthy subject, by appropriate, radical treatment, it should always be saved.

The latest definition of gangrene comes from a noted American pathologist, and further illustrates the error that has been committed, in departing from the etymological significance of the term, and following the unfortunate custom of the day. He says: "Gangrene is a term applied to the death of a part or the surface of the body, which is readily accessible to bacteria, and therefore, is almost invariably accompanied by decomposition. . . . Mortification is a variety of gangrene."



But, we have pulmonary, intestinal, and other anatomical types of gangrene of internal organs. Mortification follows the uncontrolled variety.

#### VARIOUS TYPES OF GANGRENE OF THE EXTREMITIES.

Clinically and practically, gangrene of the extremities may be divided into two varieties, viz., traumatic and senile.

*Constitutional* conditions play an important role in every variety of gangrene; in some instances, this is so positive that it might be regarded expedient to make a third class of this type; but, at the most, it can only be regarded as a predisposing factor.

*The pathological conditions* most obvious in the tissues after great violence, are four in number.

1st. *Suspended animation or asphyxia.*

2nd. *Inflammatory changes.*

3rd. *Gangrene.*

4th. *Mortification.*

The first is that state which we should be familiar with, following violent injuries, as a want of proper appreciation of it, in the days of primary amputations, often led to the needless sacrifice of limbs which could have been preserved. The mangled limb is blanched, cold and pulseless, the bone is shattered, and the soft parts are widely opened.

We sometimes encounter this state after bad frost-bites. Dr. J. C. Warren records such an instance, in which the patient, a young man, was brought to the operating-table for a double amputation, when it was decided to delay. Finally, he recovered with both limbs preserved, only two toes being removed.

La Motte chronicles a somewhat similar instance in a young man, whose fore-arm was injured by a violent blow from a billiard cue. He says that in spite of discoloration of the corneal layer of the integument, the arm being cold and pulseless, after six days pulsation, heat and sensibility returned, and all signs of impending mortification disappeared.

We must be on our guard for this ischemic condition, after fracture adjustment, as long as the present vicious custom prevails of immediate fixation after injury. We help it along by the pernicious practice of paralyzing the pain sense by large and needless morphine injections, after the fractured limb is adjusted.

*Inflammatory* changes invariably follow in the tissues of a mangled or injured limb, which has not been destroyed outright. Here, mortification or cadaveric changes immediately follow.

Intense inflammation, involving tissues but imperfectly fed by the arterial current, favors gangrenous mutations, whether attended by bacterial invasion or not.

"Inflammation," says Mr. Watson Cheyne, "has to do with gangrene in a variety of ways; it may be the direct factor in its

production, as a result of extensive stasis of the blood vessels. Septic organisms produce acute inflammation, but they do not directly destroy the vitality of the tissues."

If, therefore, we would prevent gangrene or arrest its ravages, we must be on the alert for, and by radical measures stamp out, its forerunner, rapidly spreading inflammation. The parts must be freely incised, mortified tissue cleared away, all tension relieved, the parts embalmed, loosely and comfortably supported.

*Gangrene* is essentially a vital process, which succeeds asphyxia or violent inflammation of the tissues, and tends towards *mortification* or the total death of the part, if not arrested.

Gangrene, according to the ambiguous definition of Duplay, is "a limited mortification of the tissues, not to be confounded with putrefaction of the tissues; but putrefaction may follow various types of gangrene."

Of the traumatic types, we have two clinical varieties, the acute and the sub-acute.

The acute, *gangrene foudroyant*, we will most frequently observe after a local infection, as the bite of a reptile; or, after injury or tight bandaging. In six hours after a man was bitten on the hand by a rattlesnake, his whole arm up to the shoulder was thoroughly mortified, and gangrene was rapidly advancing toward the trunk. He was bitten at midnight in the thumb. I saw him at 8 a.m. He was dead at 12 m. No amputation was undertaken.

A young man had his hand widely torn open by a butcher's hook, on Saturday morning, early. The wound was injudiciously closed by suture. Sunday morning gangrene had set in, and destroyed the whole arm. Amputation of the limb at the shoulder at noon.

In both of these cases, gangrene had advanced with appalling suddenness, in a few hours, leaving the limb cold, edematous, black and bloated.

A drunken man was brought into the hospital, with a comminuted, open fracture of the leg, good circulation in the foot. The limb was immediately placed in a firm adjustment. The next morning, the whole foot was cold, blackish-blue and dead; gangrene had nearly advanced to the knee. Amputation of the leg, twelve hours after admission; death from shock six hours later.

*Sub-acute* gangrene we witness more frequently. It is much the more docile, and in sound well-fed subjects, may any time be cut short by surgical intervention. It is quite invariably accompanied by pyogenic infection, which works ravage through the lowly organized connective tissues.

It follows most frequently from infected fractures of the digits or body of the hand or foot, or from those severe contusions attended with open fractures of the phalanges. We will sometimes witness it in open fractures of the leg.

*Acute* destructive gangrene is essentially the rapid death of a part, from mechanical occlusion of the main blood-trunk, or from the lethal action of some toxic agent, which immediately paralyzes the vaso-motor system. Sub-acute gangrene is an inflammatory process attended with a low grade of inflammation.

*Mortification*. This state implies the end of life in a part, and the beginning of decomposition. Therapeutics plays no role in dealing with mortification, as there are no vital influences in operation.

When the process is complete, all speculation as to restoration or preservation is out of the question; as our only concern now is how we shall detach the dead from the living, be it a slough, a necrosed bone, a structure, an appendage or a limb.

Whether it shall be left to processes of nature, or to art, or both, must be decided by circumstances. Mortification may occur in a part without the intervention of inflammation; when gangrene pursues a course fatal to the vitality of a part or a limb, *mortification* is the result.

#### INCOMPLETE STRUCTURAL GANGRENE OR MORTIFICATION.

From a lack of proper comprehension of what is intended to be conveyed by the term *gangrene* or *mortification*, and from an inadequate or faulty description of the terms commonly set forth, a large number of limbs or their appendages are annually sacrificed which should be preserved.

Let us remember that we may have the structural death of a part of specialized anatomical elements, while all the other structures practically preserve full vitality. Thus, a large plaque of integument may be thrown off, while all the underlying parts are preserved; a bone alone, or a part of it, dies; a tendon, a muscle, or an aponeurosis; the connective tissues part with their vitality the first and slough. The nerves and blood-vessels resist the longest. And hence we have:

- 1st. *Cutaneous gangrene or mortification.*
- 2nd. *Osseous gangrene or mortification caries or necrosis.*
- 3rd. *Muscular, tendinous or ligamentous.*
- 4th. *Of the connective tissues, the myxomatous, adipose or fibrous.*

To amputate a limb, the seat of only structural gangrene, would be a very serious mistake, which, in civil life, nothing can justify.

#### SENILE GANGRENE.

Senile gangrene is a phase of tissue destruction, in every particular, totally unlike the traumatic type. We have made no special advances in the treatment of this form of gangrene, which, like malignant disease, falls with equal force and frequency on all, regardless of former condition or habits.

Of late years, according to the experience of some, it is said to be on the increase.

It begins by a local asphyxia in the toes, or one of the joints of one, usually the little toe. It is always attended with great pain after ulceration begins. In 1851, Marshall de Calvi demonstrated the frequent co-existence of this lesion with glycosuria. Yet it is doubtful what relation the sugar disease bears to this condition, and M. Reclus, in his recent able contribution, declares that what the relation is remains very doubtful.

It has been maintained by Demarquay, that the modification which sugar produces in the tissues favors ulceration after a trifling trauma. But several very extensive injuries in the diabetic have come under my notice, without any gangrenous ulceration following; certainly the diabetic may do well after surgical operations.

Dodo Bujroid, however, has shown that glycosuric tissues provide a culture medium for the rapid growth of phylogogenic microbes, which stir into activity gangrenous phlegmasia.

Hayem describes at length the changes in the blood and vessels of the glycosuric, afflicted by gangrene. The most pronounced changes are in the arteries, though as Von Sweiten, Paget and others have pointed out, contrary to the generally accepted view, the veins are sometimes actively concerned as etiological factors. Treatment is tentative and radical. The suffering in these cases is generally so great that the afflicted are prepared to submit to any course which promises relief.

Amputation early of the toe involved may arrest the disease for a time. Amputation through the leg is very liable to be followed by gangrene of the flaps; and amputation through the thigh is followed by a large mortality. Moreover, after one limb has been successfully treated by amputation, gangrene may appear after an interval, in the sound foot.

Finally, it may be said that temporizing remedies are of no avail whatever in these cases, and we can promise little by amputation, unless adopted early.



*Selected Articles.*

TYPHOID FEVER.

BY WILLIAM F. WAUGH, M.D.

I AM laboring under a very serious disadvantage of having scarcely anything new to say upon the treatment of typhoid fever. About fifteen years ago I began to use the sulphocarbolates, and since then have many times reiterated my advocacy of the antiseptic method. Indeed, so well known is this that I frequently receive letters asking me if I am still obtaining as good results from this treatment as formerly reported.

But I must plead two facts in excuse: The newest remedy is not necessarily the best, and many a good remedy is forgotten in the constant pushing forward of new ones, so that it is absolutely necessary to keep a remedy before the profession or it drops into oblivion. Witness the use of ipecac in alcoholism. Introduced with warm commendation, it had not had sufficient time to get into general use when digitalis came in with such a hurrah, such a crowding of all to greet it, that the little Brazilian visitor was hustled into a corner, and forgotten until I re-discovered it a few years ago.

The treatment of typhoid fever, as now practised by the *Clinic* staff, consists first in putting in complete sanitary condition the house and its surroundings. No miraculous remedies will ever make amends for the neglect of hygiene. Remove from cellar, house, yard, alleys, street, etc., every collection of muck in which microbes can live and multiply. The man with the hoe is needed, also his brethren with the wheelbarrow, the torch for unremovable rubbish, the privy-cleaner, the whitewasher, the plumber, and the person who opens the windows and keeps them open, letting God's air and sunlight in to destroy and sweep out the demons bred by dirt, darkness and disease. Were I compelled to choose between good hygiene and all other remedial measures, and the latter without hygiene, deeply rooted as is my faith in modern medicine, I should unhesitatingly choose the hygiene.

Next, regulate the sick-room. Let it be ventilated freely and constantly, not simply aired at intervals; have the mattress removed and lay the patient on blankets over a woven wire frame.

This insures coolness, dryness, equable pressure, cleanness, and so prevents bedsores. Have a bucket of strong whitewash made, and let the patient discharge his urine and stools only into this; and let them stand in it for one hour before being emptied. This will effectually prevent infection of the cesspool, and the development of other cases from this one. Were this precaution to be observed in every case of typhoid fever, new foci would cease to be formed, and the malady would become extinct as the old foci were discovered and destroyed.

In the sick-room place a tub of water containing a pound of chlorinated lime. All towels, soiled clothing, or bedding should be at once placed in this and soaked for hours before leaving the room. In another vessel the nurse must wash all dishes and other utensils before allowing them to go to the kitchen. She must also have a basin of disinfectant in which to bathe her hands before leaving the room. As to the choice of a disinfectant solution for these purposes there is room for individual preference, some preferring sublimate, others chlorine, chlorinated soda, the phenols, sulphydric acid. I prefer chlorine water, as cheap, effective, easy to replace when spent, while the air of the room is purified by the gas. For the latter purpose any of the volatile oils may be sprinkled on the floor. All carpets, curtains, pictures, and unnecessary furniture should be removed, as they often serve to nurture disease-germs or to annoy the patient in delirium.

The food should consist of raw white of egg, junket, freshly pressed fruit juices, coffee made with milk or richly creamed, oyster, clam, turtle or other animal soups, with a little rice. These foods should be given every four hours, about four to eight ounces in bulk, with eight ounces of water or some watery nutriment half-way between meals. This will insure a steady supply of fluids as well as the foods best suited to the case. A little ice-cream or water-ice may be given occasionally. If the depression is extreme, scraped raw beef may be added. I have long advocated the use of Bovinine, as affording a supply of food ready for direct absorption, not requiring digestion or assimilation. Give in full doses.

See that the bladder is emptied regularly. I have known doctor and nurse forget this until extreme retention resulted in the lowest period of depression and stupor.

Have the patient's position changed every four hours, and examine the back and heels for bed-sores, the lungs for hypostasis. Put a little pillow under his knees--no one can lie long in comfort with the legs completely extended. Let the patient be daily sponged with cool water containing hamamelis distillate, an ounce to the pint. Whenever he passes urine or feces the parts must at once be cleansed.

Do not let the nurse disturb the sick man by officiously pursuing a routine. Let her learn to recognize true sleep and respect it.

Do not let the nurse become worn out by too constant or too prolonged duty. Let her be relieved before she is fatigued or sleepy.

Keep the sick-room shaded, cool and quiet. Come in and go out quietly. Never allow the patient to feel any responsibility for himself. Tell him flatly he is to do as he is told, and let him have the comfort of feeling he may rest, and that he does not have to watch the clock for doses, or allow him to discuss his own case.

A duty every physician owes to himself and to his profession is to have his diagnosis of typhoid fever verified in every instance by the most accessible labor. We may be morally certain of the diagnosis, but absolute certainty is still better, and gives a value to our reports of results that nothing else will carry—no degree of skill, no amount of experience. The fever that results from fatigue, as of soldiers after prolonged marches, and that due to autotoxemia with deficient renal elimination, may simulate true typhoid fever so closely that only the laboratory report will differentiate them.

Begin medical treatment by clearing out the bowels. Give calomel 0.01 (gr. 1-6) every hour for six doses, followed by a teaspoonful of Saline Laxative every two hours until all accumulations of fecal matter have been carried out. If there is much pain and tenderness in the abdomen this may be better accomplished by the use of colonic flushing, with lukewarm water containing zinc sulphocarbolate or oil of turpentine 0.3 (gr. v.) to the ounce. This may be readily done by attaching a Wales bougie to a fountain syringe, placing the patient on his back with the hips raised, and passing the bougie, well lubricated, in for its whole length. If the tip catches, let a little of the liquid flow in and it will be disengaged. Let the flow be gentle, the reservoir raised but a few inches above the outlet.

The next step is to render the alimentary canal aseptic by giving the sulphocarbolates of zinc 0.3 (gr. v.), or a like dose of the W-A Intestinal Antiseptic, every two hours until the stools are free from odor, then just enough to keep them so. The theory upon which this treatment is recommended is as follows: In health the bile and other digestive secretions act as antiseptics, as is shown by the fetor of the acholic stools of jaundice. Fever lessens or suspends the secretion of these natural disinfectants, while the conditions favor increased activity of the micro-organisms in the alimentary canal.

It has been suggested that it is better to increase these natural disinfectants by giving calomel, etc. But to this there are several objections.

First, we do not comprehend exactly why there should be a decrease of these fluids in fever; and when we do not fully com-

prehend nature's doings it is an excellent reason that we should not interfere with them. *Vide*—We did not know the thyroid was of any use till we removed it, when cachexia strumipriva taught us the wisdom of letting it alone.

Second, it is unwise to call on nature, embarrassed by a febrile malady, to exert herself to do what we can do for her. Rest of

Third, experience has shown that we can asepticise the bowels this function seems to be one of her ways of rallying her forces at points where they are more urgently needed.

far more easily and effectually by the use of sulphocarbolates than by giving calomel.

What do these agents accomplish? That it is not the destruction of the entire invading army of typhoid bacilli is evident, since the latter are to be found in the blood, even before the outbreak of fever; and the sulphocarbolates act only in the alimentary canal, being eliminated with the feces unchanged. But the symptoms of the attack are so vitally modified by this treatment that its value cannot be denied for that reason. They probably destroy the typhoid bacilli and other micro-organisms remaining in the bowel, and thus cut off reinforcements; they may prevent their multiplication, the formation or absorption of toxins, or neutralize the latter, or increase the resistance of the gastro-enteric epithelium.

Whatever may be the true explanation of their action, the effects evident when the stools have become deodorized are: The fever falls one degree or more; the headache, bone and muscle pains, delirium, dryness of the tongue, nausea, anorexia, diarrhea, borborygmi, tenderness, flatulence and abdominal pain, become decidedly less, and a marked amelioration in the severity of the attack is manifest. From thirty to fifty per cent. of the total symptoms has subsided; and this may be held to represent the influence of intestinal autotoxemia in typhoid fever, the remainder being attributable to the direct effects of the bacilli in the blood.

The earlier in the attack this treatment is instituted, the greater will be the number of abortive cases; while those not aborted will run a milder course, the patient usually being out of the house and at work in three weeks. If the treatment is not commenced until later, when the damage has been done, its effects are less decidedly beneficial.

*Fever.* In the beginning, in young patients, there may be an active fever of sthenic form, requiring the Defervescent compound, a granule every half, one or two hours; but it will not be long before this must be changed to the Dosimetric Triad, for the sustaining effect of the strychnine. The veratrine and aconitine in these granules not only reduce the fever, but they mitigate the hyperemia of the intestinal tissues, and thus aid in preventing necrosis and phagedena later. If the fever rules above 103 degrees, the cooled



bath of Ziemssen should be employed, repeated whenever the fever rises above that height.

I am by no means opposed to cooled baths, and employ them whenever the fever requires them; but I cannot agree with those who make the suppression of this symptom the principal treatment of the disease. This measure neither strikes at the cause of the malady nor does it obviate its most dangerous effect, since hyperpyrexia is rarely if ever the direct cause of death. Besides, the treatment advised above usually renders the cold baths unnecessary as the fever is reduced below the bathing point, 103 degrees F.

Sponging the face, hands and body with cool water containing some mild antiseptic is agreeable to the patient. The mouth should be also washed out with aromatic antiseptics, like cinnamon water, several times every day.

The heart must be carefully watched. The continuous use of strychnine and digitalin in the small doses contained in the Dosi-metric Triad, 0.0005 (gr. 1-134), usually suffices to prevent dangerous collapse, if the vascular tension is carefully maintained at the proper point.

The lungs must also be examined daily, and if any indication of congestion arises the tract should be cleared by inhalations of vinegar fumes, the pulmonary tissues stimulated by sanguinarine 0.001 (gr. 1-67) every hour or two, and stimulating linaments applied to the skin.

If pus or blood appears in the stools, give silver oxide 0.01 (gr. 1-6), and oil of turpentine 0.3 (m. v.) every two hours, until the need has subsided. Hemorrhage will be rare indeed under the treatment here given, but if it occurs it should be promptly checked by atropine 0.00025 (gr. 1-250) every quarter-hour till the face flushes, followed by hydrastinine in full doses. No other hemostatic acts so quickly and so surely.

The value of nuclein in increasing leucocytosis indicates its use in this malady, in doses of 1.0 to 4.0 (m. xv—lx) daily of the standard solution. I hardly believe this remedy will have any effect on the microbes in the stomach and bowels, therefore do not depend on it exclusively, nor would I expect it to abort typhoid fever, inasmuch as fresh infections may constantly occur from the bowels. But when used in conjunction with the sulphocarbolates, nuclein is of great value.

The addition of calcium sulphide is questionable. This potent agent is so generally useful as a systemic germicide, that it may accomplish that part of the task that is beyond the power of the intestinal antiseptics—that of destroying the specific bacteria in the blood. But here at least the matter is experimental. I have had no case that required it, since I became familiar with the sulphides. But if after securing intestinal antiseptics the fever

still ranged high, the symptoms graver, I would assuredly add calcium sulphide, 0.53 (gr. ss.) every hour or two.

The malarial complication requires simply the addition of quinine arsenate 0.001 (gr. 1-67) every hour. Suppuration would undoubtedly be an indication for the sulphides; phlebitis for iodoform; rheumatism for quinine salicylate. Perforation has been treated so successfully by the surgeons that immediate operation is imperative.

Many other symptoms, complications and sequels might be mentioned, but the experienced Alkalometrist will have little difficulty in meeting each indication.

During convalescence the diet must be regulated, and if the attack were severe the patient must take a long rest before returning to business. Travel, recreation, salt rubs, massage and other restorative measures, should be used until recovery is complete.

We will glance at the recent literature on typhoid fever to see what new ideas are being exploited, and what old ones are still popular.

Anders speaks hopefully of prophylactic inoculations with typhoid virus. He praises the cold bath treatment, attributing it to the reduction of temperature, improvement of nervous symptoms, strengthening the heart, stimulating the lungs, increasing renal elimination, preventing bedsores, and shortening the stay in the sick-room. Of intestinal antiseptics he says that they "neither destroy the bacilli nor counteract the ill-effects of their toxins, since both become active after they pass the intestinal mucosa; but they are indicated in an affection in which extensive intestinal ulceration and moderate tympanites are usual manifestations." In this he speaks of the bacilli as if all left the alimentary canal at the same time, taking no account of those that do not leave the bowel. His antiseptic is salol, from which we have not been able to obtain effects equal to those of the sulphocarbolates.

The curative serum is thus prepared: "Guinea-pigs were given at short intervals, several intraperitoneal injections of bouillon-cultures of typhoid bacilli of progressively increasing virulence. When tolerance was established the animal was killed, and its thymus, spleen, bone-marrow, brain and spinal cord removed, finely divided and rubbed up in a mortar with a solution consisting of sodium chloride alcohol, glycerin and a small amount of carbolic acid. Subsequently a small amount of pepsin was also added advantageously. After standing on ice for twenty-four hours the mixture was carefully filtered, a clear reddish fluid resulting, which did not cause agglutination or sedimentation of typhoid bacilli nor exhibit their growth, though exhibiting the faculty in marked degree of neutralizing typhoid toxin. This anti-typhoid extract was employed in the treatment of eighteen cases of typhoid fever, being administered by the mouth in doses of from a tea-

spoonful to a tablespoonful every two hours, subcutaneous injections proving less serviceable. In the cases thus treated the characteristic temperature-curve was lost, the pyrexia becoming remittent and soon disappearing; the pulse declined in frequency and increased in strength, diarrhea ceased, the tongue cleared, the general condition improved, and convalescence speedily set in."

Anders does not appear to have attributed this to the antiseptic action of the carbolic acid, but how else is one to explain the better results from internal than from hypodermic exhibition?

William Gilman Thompson speaks highly of the bath, gives full directions as to its use as well as the hygienic and dietary management, and the treatment of special symptoms. His skin-rubbing is excellently done, and then—he surrenders. He does not believe in antiseptics and has nothing to take their place. He seems satisfied with a mortality of six per cent., reduced from sixteen by the cold baths.

Tirard also relies on diet, alcohol, and speaks highly of Yeo's antiseptic, chlorine water. He also mentions the use of asaprol by Ferreira, benzoin by Potter, salol by Bramwell, and carbolic acid by Quill.

From the *Year Book* for 1900 we learn that Walger, Spirig and Jez used serum with possible benefit.

Giglioli and Calvo gave normal salt solution, a pint daily, hypodermically, with benefit, but the reporters are not very enthusiastic.

Holladay employed the same remedy with distinct benefit, the nerves improving and fever falling when the liquid was used at 80 degrees.

S. Phillips relies on sublimate and salol with disinfectant enemas.

J. Stewart employed the Brand method in 408 cases with a mortality of 4.5 per cent., while J. C. Wilson, in 217 cases, treated by the Brand method, reported a mortality of 7.8 per cent.

Liebermeister also employed the baths, reducing the mortality from 23 to 6.3 per cent.

McReynolds and Blackburn found that hot mustard foot-baths reduce the fever about 0.4 degrees.

Eichberg terms the Brand baths "cruel, barbarous and dangerous," using acetanilid for fever above 103 degrees in 136 cases. mortality 6.6 per cent.

Lockard prefers the continuous ice-bag.

Thacker used carbolic acid in 79 cases, mortality 13.9 per cent.

Thistle treated 563 cases in hospital, largely by elimination, in which he antedates Woodbridge; mortality 6.7 per cent.

From *The International Medical Annual* for 1900 we gather the following:

Platt has collected 103 cases of operation for typhoid perforation, with 21 recoveries.

Brand's method seems to be gaining in popularity. Phillips, Cohen, Wilcox, Bittman and Thistle recommends intestinal antiseptics.

Miller reports good results in eight cases treated with Thernol, a coal-tar product.

Murray-Gibbes puts the patient in a continuous bath of cold air, the mattress being tubular and connected with hot and cold water pipes.—*Alkaloidal Clinic*.

Chicago, Ill.

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### NOSOPHEN AS A SUBSTITUTE FOR IODOFORM.

BY D. A. K. STEELE, M.D.,

Professor of Surgery Chicago Clinical School, President and Professor of Surgery and Clinical Surgery  
College of Physicians and Surgeons, Attending Surgeon to Chicago Hospital, West  
Side Hospital and Wesley Hospital, Chicago.

FOR more than twenty years I have been using iodoform as a standard antiseptic powder in a very large and varied surgical practice. On account of its offensive odor and occasional toxic effects, I have, from time to time, temporarily discarded its use in favor of some other antiseptic powder, only to return to the use of the iodoform on account of my failure to find a perfectly satisfactory substitute.

A little more than a year ago I began the systematic use of nosophen in place of iodoform. My results with this new antiseptic and its derivatives, antinosine and eudoxine, have been so uniformly satisfactory that I feel at last a reliable and permanent substitute has been found. Ever since 1852, when Magendie directed attention to the antiseptic properties of iodine, it, with others in the group of haloid elements, stands first in the list of substances that are very strongly antiseptic, and hence my continued partiality for the iodine compounds as the most reliable antiseptics at our command.

Nosophen is a light, impalpable, yellowish-gray, odorless, tasteless powder, obtained by the action of iodine on solutions of phenolphthalein, and contains 61.7 per cent. of iodine in combination. It can be heated to 220 degrees C. without decomposition. I use a 3 per cent. nosophen gauze exclusively after previous sterilization with live steam, and believe it possesses distinct advantages over the iodoform gauze. I have now used nosophen in more than one hundred cases of major and minor surgery, in hospital and private practice, and my experience has verified the observations of previous writers, that nosophen manifests its action only by coming in contact with the living alkaline fluids of the tissues, the secretion of an ulcer or mucous membrane.

My earlier observations in the use of nosophen were confined to the treatment of a large number of chronic, indolent ulcers of the leg, dependent upon varicose veins, syphilis, or diabetes. The

method I have followed in this class of cases was to curette the ulcer, or swab its surface thoroughly with Churchill's tincture of iodine, then dust the same thickly with nosophen; apply a light nosophen gauze compress, large enough to cover the ulcer, and over this a few overlapping inch-wide strips of rubber adhesive plaster, encircling at least two-thirds of the limb. Then a light layer of absorbent cotton and a roller bandage completed the dressing.

These dressings were changed every two or three days, and after the second dressing marked improvement in the appearance of the ulcer would be noted. Suppuration would have diminished, or ceased entirely, healthy granulations appeared promptly, and rapid epidermization and cicatrization followed, complete healing resulting in two or three weeks. Some cases were kept in bed, but many were of the ambulatory type, treated at the dispensary.

Tubercular ulcers yielded equally satisfactory results as when treated by iodoform, and tubercular sinuses or joints treated with nosophen emulsion rapidly improved. One of the most remarkable instances of rapid cicatrization of an indolent ulcer of the leg was the case of Mrs. J. D. E., aged 70, referred to me by Prof. W. E. Quine for treatment of a large, sloughing, diabetic ulcer on the calf of the right leg, which entirely healed under the nosophen treatment in three weeks' time, after having resisted all other forms of treatment for seven weeks. The favorable results obtained in this first series of cases induced me to extend the use of nosophen to other cases of surgery where the use of an antiseptic powder was indicated.

In recent wounds, and especially in the crushing injuries of fingers, railroad cases, etc., I found that it promoted rapid healing without suppuration or increased pain. In the treatment of phlegmons, felon, abscesses, and similarly infected foci, after free incisions, curettement and irrigation with a solution of bichloride, 1 to 2,000, I dusted with nosophen and dressed with nosophen gauze, securing rapid healing.

In appendicitis cases operated upon, where there was a necessity for drainage on account of septic peritonitis, gangrenous appendix, or local abscess at the point of perforation of the appendix, I have found it a most valuable application. My experience with the hygroscopic qualities of the nosophen gauze confirms the statements of Prof. A. C. Bernays, of St. Louis, and my results have been equally good.

I have also used the nosophen gauze for intrauterine packing after curettage; in fact, I now use and recommend it in all cases in which I formerly used iodoform or iodoform gauze.

In placing before the medical profession the experiences I have gathered in one year's use of this new antiseptic iodine compound, nosophen, I do so because I believe the preparation is deserving of

a far more extended use than it has thus far received, and I commend its use by all surgeons who object to the indestructible and offensive odor of iodoform, or who fear its toxic qualities, and desire a good substitute that is hemostatic, sedative and antiseptic. I believe nosophen possesses all these qualities.

103 State Street.

**HEADACHE.**

ONE of the most comprehensive articles on this subject in the present year is that by Dr. Joseph Collins. Those headaches accompanying the infectious diseases do not call for any particular treatment aside from the measures taken to combat the infectious processes, while the treatment of headaches due to the ingestion of vegetable or mineral poisons simply require the prevention of the further imbibation of the poison, be it tea, alcohol, tobacco, or poisonous substances, administered therapeutically or encountered in occupations, and the elimination of any poison remaining in the body. After that, the headache disappears on the restoration of general, including neutral, nutrition. In the treatment of headaches resulting from the absorption into the system of some endogenous poison, such as that of diabetes, uremia, and the auto-intoxications and infections, the general measures to be adopted do not differ materially from those already spoken of. The headache is combated when the formation of the poison and its absorption is interfered with. In this way diabetic headaches are treated by diet and by the utilization of remedies against the anemia and oligocythemia, while uremic headache is combated by measures that prevent the formation of urea, and by those that facilitate its excretion. In uremic headaches accompanying chronic interstitial nephritis the following prescription is recommended:

|                                |      |
|--------------------------------|------|
| R Potassii citratis . . . . .  | ʒ ij |
| Tinct. hyoseyami . . . . .     | ʒ ij |
| Spt. etheris nitrosi . . . . . | ʒ ij |
| Inf. scopariæ . . . . .        | ʒ vj |

Tablespoonful in water three times a day.

If it is necessary to increase vascular tension, infusion of digitalis may be added to this mixture. Headaches arising from such intoxication as that of ammoniemia require only local treatment of the cystitis, and the institution of measures to combat the anemia.

Headaches arising from auto-intoxication, the original source of the disease being stomachic and intestinal catarrh, functional perversion of the glands supplying the digestive juices, or through the activity of non-pathogenic bacteria taken in from outside, form an important class, and one that is happily amenable to treatment. It must suffice in this connection to say that after the general

measures of the alimentary tract and its associated functional dependencies, such as the overcoming of constipation, the adoption of suitable diet in catarrhal conditions, the stimulation of the liver to the production of a suitable kind and amount of bile, the exhibition of substances that contribute to the restoration of the pancreas and spleen, the treatment consists in the administration of substances that correct the apparent troubles of the digestion and of substances that quell the headache. The following is recommended:

|                    |   |       |      |        |
|--------------------|---|-------|------|--------|
| R Sodii bicarb.    | } | ..... | āā   | 3 j    |
| Bismuthi subgall.  |   |       |      |        |
| Pulv. acaciae      | } | ..... | 3 ij | 3 viij |
| Liq. ammonii anisi |   |       |      |        |
| Aque dest          |   |       |      |        |

Two teaspoonfuls before meals, repeated in three hours, if necessary.

In headaches associated with atonic dyspepsia, but without any considerable flatulency, and especially in the headaches occurring in women, the following is offered:

|                   |   |       |    |         |
|-------------------|---|-------|----|---------|
| R Ferri sulphatis | } | ..... | āā | grs. xv |
| Quinae sulphatis  |   |       |    |         |
| Sodii arsenitis   | } | ..... | āā | grs. x  |
| Pulv. rhei        |   |       |    |         |
| Pulv. zingiberis  |   |       |    |         |

Ft. Pil. No. 12. One three times a day after meals.

It is a very important point to bear in mind that some chronic headaches, when looked into, turn out to be the result largely of a condition of constipation. Patients sometimes exhibit the most wondrous carelessness in a matter which should be to them just as important as their morning ablutions, a regular daily stool. One of the best means of overcoming persistent constipation is the inhibition every morning of a half tumblerful or less of Hunyadi Janos mineral water. It produces a healthy action, and does not have the deleterious effect of the constant taking of purgative pills.

The headaches that accompany organic disease of the heart, whether they be associated with excess or deficiency of propulsive power, naturally require treatment directed to that organ. Headaches occurring with functional disturbances of the heart are often amenable to therapeutic measures, not drugs. For instance, a heart that is working violently as the result of great physical effort or excitement of the mind or body, may be so quieted by the application of a simple cold-water compress to the cardiac region, that the accompanying throbbing frontal headache disappears promptly, and the efficaciousness of stimulating foot-baths and hot sits-baths in combating a headache due to increased vascular tension within the skull, is very well known. It is rarely necessary to administer the more powerful cardio-vascular depressants in cases of this kind, the required equalizing of the circulation being obtained by hydric

procedures and the administration of a few doses of the bromides. When headache is an accompaniment of a sluggish circulation, there being no deficiency in the amount of the blood and no alteration in its constitution, the diffusible stimulants, caffeine and strychnine, may be relied upon to bring about its prompt relief. Cannabis Indica is a drug frequently used with good effect in this form of headache. It is given as follows:

R Ext. cannabis indica..... gr.  $\frac{1}{2}$  to  $\frac{1}{2}$   
 Ext. gentiane..... q. s.  
 Make one pill.

Headaches dependent upon general anemia are oftentimes extremely resistant to treatment, and although temporary improvement often follows tonic and stimulating treatment, the anemia must be fought unswervingly for a long time to effect a complete cure and to stay the recurrence of the headache. These headaches are usually accompanied by a very slightly sluggish condition of the digestive tract, to combat which he has used the following combination:

R Quininae sulphatis } ..... āā grs. xij  
 Ext. aloes aq. }  
 Pulv. capsici } ..... āā grs. vi  
 Pulv. ipecac. }  
 Glycerine..... q. s.  
 Ft. Pil. No. 12. One pill at mid-day.

Or, if associated with considerable vital depression, he uses the following pill instead, giving at the same time some absorbable form of iron:

R Ext. nucis vomicae..... gr. ss  
 Pil. rhei. comp..... gr. iij  
 Pulv. capsici..... gr.  $\frac{1}{2}$   
 Make one pill. One pill at mid-day.

Naturally, it is very often necessary to give at the same time for its immediate effect, some analgesic, or a combination of these with a stimulant, such as caffeine; and such a prescription, containing caffeine, phenacetin, and salol usually meets the requirements.

### INHALATION OF FORMALIN IN PHTHISIS.

THE *British Medical Journal* of Jan. 28th, 1899, published a most interesting paper by Dr. William Murrell, dealing with the essential oils and other volatile substances in the treatment of phthisis. The author discards the essential oils, but favors the use of Formalin, which he subjected to severe tests as regards the inhibition of growth of the bacillus tuberculosis. They showed that the addition of glycerin retarded the effects whilst Formalin pure and simple answered all the author's expectations.



The cases which Dr. Murrell reports all show that with the Formalin treatment, without any addition, he was uniformly successful. The patient was directed to inhale the substance by dropping it on lint, and thus allowing it to be absorbed.

We also wish to make some remarks on the paper of Dr. Lardner Green, which we find in the same journal under date of January 20th last.

The author fully indorses, from personal observation, the conclusions Dr. Murrell has come to, and it is satisfactory to notice that he also has used this gas by inhalation, to the great advantage of his patients.

Dr. Lardner Green, however, introduces into his prescription two incompatibles, which we consider it desirable to point out. Dr. Murrell's results confirm, from a bacteriological point of view, the advice not to introduce glycerin. There is an abundance of literature showing that glycerin forms a chemical compound with formaldehyde, named glycero-formal, which is toxic. Although this compound has been recommended for disinfecting purposes, closer study has shown that the more noxious properties of this body by no means assist antiseptic action, but rather impede it. As we said before, this has been confirmed by Dr. Murrell; and it is by no means desirable to encourage the mixture of these two bodies.

As Dr. Green has found, some persons are more susceptible than others to the fumes of Formalin; and for this reason he recommends, where indicated, the addition of aromatic spirits of ammonia. This will effect a material reduction in the penetrating power of Formalin gas; for the very simple chemical reason that Formalin gas has great affinity for ammonia, with which it readily forms a neutral compound—formamide. This results in binding up the Formalin, and very effectually reducing its activity as a bactericide.

If a patient finds the fumes of Formalin more irritant than he can conveniently bear, he should reduce the solution by a further addition of water to half the strength, or even much less, one-tenth, which would still be effectual as an inhalation. But it will be found that even a sensitive patient will gradually be able to bear the greater volume of gas, just as a visitor to the room of a patient where Formalin has been used will, after a very short time, fail to feel the least inconvenience from the presence of the gas.

The great advantage of Formalin gas in the treatment of phthisis is shown by a great number of authorities who advocate its use, and who claim that it is equal—nay, preferable—in most cases to the open-air treatment; except for cases that can go to the mountains far removed from the contaminations of a populous community. The simple reason for this is the great affinity of Formalin gas for all nitrogenous and sulphur compounds, which it

quickly eliminates from the air of the room occupied by the patient. For this reason it will, under all conditions, help the general treatment of disease, and minimize its symptoms. The use of Formalin for this purpose offers a subject for further study of what cannot fail to be most gratifying.—*The Therapist*, London, February 15th, 1900.

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### GOUT.

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THE *Therapeutic Gazette* says: "There is no class of disease of which we know so little in respect to their etiology and pathology as those which are classed as diathetic, or in other words, dependent upon some disorder in the nutritional processes which we call metabolism. Because of this ignorance, the use of all our remedial measures for this class of cases is to a great extent empirical and unsatisfactory, and the exhaustive studies of the last few years made by Carrod, Haig, Luff, and others, while seeming to promise far more satisfactory knowledge of these diseases, have not advanced as far as the practical clinician and therapist desires. That the disease, gout, does depend upon faulty metabolism, and that as a result of this fault uric acid is formed in the body in excess, is proved, but the causes of the faulty metabolism are undiscovered, and therefore our methods are chiefly devoted, aside from diet, to its relief rather than the cure of the malady. It is not our intention at this time to attempt to discuss the very important question of the pathology or pathogeny of gout; on the one hand we find the nervous origin urged, and on the other that an accumulation of uric acid is the factor to be combated. Much of Haig's suggestive work, however, is based on hypotheses which do not seem to us to be founded upon fact, and certain of his experiments, accurate in themselves, are equally hypothetical in origin. If, as he claims, uric acid in excess is the cause of the attacks of gout, we should have theoretically a most sovereign remedy in salicylic acid, but as a matter of fact it very often fails, and a decision to its anti-gout powers is to be sought, therefore, more in clinical observation than in experiment.

"About this point opinions differ most essentially, some clinicians asserting that the salicylates are most efficient, and others teaching that they are futile. Thus Germain, See, and Jaccoud believe them superior to colchicum, whereas Sir Dyce Duckworth, Barclay, Ebstein and Lecorche believe the salicylates less valuable. It is evident at once in studying this matter that we must divide it into two parts, namely, as to the value of the salicylates in the acute attack, and as a remedy for the condition between the attacks and for the cause of the attack. In respect to the attack, Duckworth reports that he has tried sodium salicylate in

a considerable number of cases of acute gout, and finds it very inferior to colchicum. He has, however, seen it do great good in a few cases in which colchicum failed, but he cannot predicate which will be benefited. Ebstein thinks that under the salicylate treatment the manifestations of the attack simply shift from joint to joint. Lecroche asserts that while salicylate of sodium often relieves the pain of gout it does not shorten the attack, nor does it prevent subsequent attacks, although he asserts that its use in full doses of one to one and one-half drachms, increases the elimination of uric acid in the urine, and Henry Soullier asserts that the salicylates are the best remedies if the kidneys are intact.\*

Many medical men have expressed themselves very favorably indeed as to the therapeutic action of Vichy (Celestins) water, taken regularly, not only during, but subsequent to the attack of gout. This natural alkaline water undoubtedly acts as an eliminant of uric acid from the blood, and has been pronounced by many as having almost curative properties. It has to be taken regularly, however, to have any permanent effect. Care should be used that patients get the genuine article in bottles, not syphons.

The following formulæ have also been recommended:

|                          |      |
|--------------------------|------|
| R Quin-sulph .....       | ʒ j  |
| Syrup. simplicis } ..... | ʒ ij |
| Syr. aurantii flor. }    | ʒ ij |
| Acid. citric .....       | ʒ ij |
| Aque destil .....        | ʒ vj |

M. Sig.—Ten drops in an ounce of water, to which are added twenty grains of bicarbonate of sodium, to be taken while effervescing.

|                                   |              |
|-----------------------------------|--------------|
| R Tincture colchici seminis ..... | M. xv        |
| Magnesii carbonatis .....         | gr. vj       |
| Magnesii sulphatis .....          | ʒ ss         |
| Aque menthæ piperita .....        | q. s. ad ʒ j |

Fiat haustus. Sig.—Repeat according to circumstances.

## DIPHTHERIA AND THE USE OF HYDROGEN DIOXIDE IN ITS TREATMENT.\*

BY DR. EDW. J. BERNSTEIN, BALTIMORE.

In this very elaborate paper, Dr. E. J. Bernstein says (p. 361):  
 . . . In my first case of diphtheria I began the use of Sulphide of Calcium, but finding that not only was it disagreeable to both the taste and smell, and that it also soiled the bed-linen and clothing of the patient, but that the patient continued to get worse, that the membrane which at first was limited to large necrotic

\* Read before the Chemical Society of Maryland, February 6th, 1891.

patches on the tonsils, now covered the entire anterior pillars of the fauces and the uvula, which was now considerably swollen, I discarded the nostrum and began the use of Hydrogen Dioxide, which I directed to be sprayed into the throat every hour of the day and night, gradually relaxing the number of night sprayings as the case went on to improvement. I also directed that the nose should be sprayed at least twice a day with the same solution. Within a few hours the mother said she noticed a change for the better in her child, and when I made my evening call it was quite perceptible. I also noticed, which fact I have since seen corroborated by others who had used the drug, the better color of the child. The lips, which before its administration were quite blue, were now of a healthy red color. The membrane in the throat had made no increase. By the following morning there was a decided decrease in the pseudo-membrane, and from now on began to disappear.

In conjunction with the above local treatment, I gave large doses of tinct. ferri chlo. in combination with tonic dose of quinia every three hours.

Cream of tartar lemonade was given ad libitum to appease thirst and to relieve congestion. The air of the room was regularly charged with steam, generated on a small alcohol stove, to which had been added an alcoholic solution of menthol, eucalyptol and thymol. It is well to say that the strength of the hydrogen dioxide was 50 per cent. of Ch. Marchand's 15-volume solution.

In three other cases which came under my observation, I followed out the same line of treatment, and each recovered without any untoward after effects. In the hope that some of you here this evening may be induced to try this plan of treatment, I submit this paper.—*Ext. Maryland Medical Journal.*

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PROF. SCHENK defends himself from the "jealous onslaught" of the profession in Vienna, and declares he will soon bring out a revised and enlarged edition of his work on "The Determination of Sex."

THERE died at his home in Mutual street, on Nov. 17th, Dr. John Robinson, for many years assistant at the Queen Street Asylum. Dr. Robinson has been the victim of a long lingering illness, and his demise was not altogether unexpected. A wife and three young children survive.

HARVARD University has a medical inspector, whose duty it is to care for the health of the students. A new infirmary is being built and donated by James Stillman, of New York, at a cost of \$100,000. Another gift to this lucky university is \$156,000 to establish a professorship of hygiene.

**REPORT OF DEATHS FROM ALL CAUSES AND FROM CONTAGIOUS DISEASES IN ONTARIO FOR  
THE MONTHS OF JUNE AND JULY, 1900.**

PREPARED BY P. H. BRYCE, M.A., M.D., DEPUTY REGISTRAR-GENERAL.

**JUNE, 1900.**

| Total Population Reporting. | Total Municipalities Reporting. | Total Deaths Reported. | Rate per 1000 per annum from all causes. | Scarlatina. | Diphtheria. | Rate per 1,000 per Annum. | Meningitis. | Rate per 1,000 per Annum. | Whooping Cough. | Rate per 1,000 per Annum. | Typhoid. | Rate per 1,000 per Annum. | Tuberculosis. | Rate per 1,000 per Annum. |
|-----------------------------|---------------------------------|------------------------|--|-------------|-------------|---------------------------|-------------|---------------------------|-----------------|---------------------------|----------|---------------------------|---------------|---------------------------|
| 2,151,000<br>95%            | 715<br>92%                      | 1,752                  | 10                                       | 6           | 30          | 0.03                      | 1           | 0.005                     | 7               | 0.04                      | 11       | 0.06                      | 200           | 1.0                       |

**JULY, 1900.**

|                  |            |       |      |   |    |      |   |      |   |      |    |      |     |     |
|------------------|------------|-------|------|---|----|------|---|------|---|------|----|------|-----|-----|
| 2,215,940<br>97% | 718<br>92% | 2,021 | 10.9 | 9 | 44 | 0.04 | 9 | 0.04 | 7 | 0.03 | 15 | 0.08 | 264 | 1.4 |
|------------------|------------|-------|------|---|----|------|---|------|---|------|----|------|-----|-----|

Population of Province ..... 2,283,182  
Registration Divisions of Province..... 777

# The Canadian Journal of Medicine and Surgery

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Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited. Contributors must kindly remember that all papers, reports, correspondence, etc., must be in our hands by the fifteenth of the month previous to publication.

Advertisements, to insure insertion in the issue of any month, should be sent not later than the tenth of the preceding month.

VOL. VIII.

TORONTO, DECEMBER, 1900.

NO. 6.

## Editorials.

### STATE SANITARY INSPECTORS.

IN *The Sanitarian* for October, we notice a reference to State Medical Inspection. "An epidemic of typhoid fever in Norwood (Mass.), has brought local boards of health face to face with the State Board in a contest that will not permit of arbitration. The Massachusetts State Board of Health recommends that a corps of State inspectors should be appointed, to co-operate with the local

boards in removing causes and conditions that would promote contagion. The duties of these inspectors would not conflict with local boards. They would help the local boards by acting in an advisory capacity, and by giving speedy information as to the existence of contagion. They would also serve to bring the local boards and the State Board into closer touch. For example, the Boston Board has no authority outside of Boston; its officials may know that impure germ-laden milk comes from some outlying district. They can tell the dealer that he cannot sell his milk in Boston; but they have no authority to deal with him outside of Boston, and often do not learn of any trouble until it is well developed. If a corps of inspectors existed, there would be direct and quick communication with the Boston Board of Health, in whose district the milk is marketed, and the Board from whose district it comes. It was to promote closer relations between local boards that the State Board was organized; but State inspectors might serve the purpose even better, and would be a mutual advisory committee for the boards."

We have long thought that competent inspectors, acting under the authority of the Ontario Board of Health, would, for the reasons mentioned above, be very useful in anticipating and preventing outbreaks of contagious disease in both large and small centres of population. It is true that by Section 70, Ontario Public Health Act, an injured municipality has power to proceed against another municipality, where the cause of nuisance arises without its own district; but a nuisance, such as milk contamination by foul water, for instance, is not patent, and skilled investigation is necessary to reveal its origin. By a letter and copy of a published report, received from Dr. Sheard, M.H.O., Toronto, we have obtained considerable information as to the condition of the dairy farms, from which a part of the milk supply of Toronto is derived. The report gives the location of every dairy farm supplying milk to Toronto, the number of cattle kept thereon, the quantity of milk shipped, the general condition of the premises, the general condition of the cattle, the water supply, the source of ice supply and the food for the cattle. Dr. Sheard says: "I may say that it is attempted by the Health Department of the city to cover this work once a year. We have no legal authority, however, to enter upon said premises, as they are outside our jurisdiction; but I may say that, in cases where we were refused, we

have taken steps to prevent the milk supply being shipped into the municipality, and have, so far, had no trouble. In fact, only one or two have ever raised the slightest objection to having a full inspection made of their premises." According to the report, 274 country dairies are inspected, and these dairies have 3,529 cows, which supply 5,619 imperial gallons of milk, about 40 per cent. of the city milk supply; the balance, 8,270 gallons, coming from urban dairies. We will not discuss the urban dairies here, taking it for granted that they are unobjectionable. In only 26 of the 274 country dairies were such unfavorable criticisms as "no ventilation," "dirty and cramped," "no drainage," "dirty," "too crowded," recorded against the premises. The general condition of the cattle is good. In twelve stables the cattle are characterized as "dirty," one case of actinomycosis is recorded; in one case the cattle are said to be "half starved," and in four stables to be "healthy but thin."

The water supply in 195 dairies was from wells; in 34 dairies from springs, and in the remaining 45 dairies from such varied sources as "creek," "river," "cistern," and "rain water in cemented tanks."

The greatest number of these dairies got their ice supplies from ponds; the next greatest number from the Humber River, a considerable number from the Credit River; a few from the Don River; a few from mill ponds, and very few from lake sources. The feed is of a varied nature. In one stable, where the cows were said to be "thin but healthy," they got shorts, chopped oats and hay, and gluten meal. In another stable, where they looked "healthy but thin," they got cut corn, chaff and clover hay, turnips and carrots. In a stable in which "they looked half-starved," they got hay, mill feed, and brewers' grains.

A general review of the above figures and remarks warrants the opinion, that the country dairies supplying milk to Toronto are with few exceptions, in good condition. Some of the ice supplies may not be above suspicion; but, if used for cooling purposes only, would not cause disease. As to the purity of the water supplies in these dairies, without chemical analysis or bacteriological examination in each case, no exact opinion could be given; but their condition should not be left open to doubt. There is no immediate or direct means of ascertaining the existence of contagious disease on any one of these dairy farms. If a contagious disease appears



in a city family supplied by a certain milkman, inquiry is made by the Toronto Board of Health at the farms from which the milkman obtains milk, for the existence of a source of contagion. As far as it goes, the inspection of rural dairies by the Toronto Board of Health is excellent. To obtain perfection in such a work would call for a corps of inspectors. In the meantime, as the water supplies in rural dairies are often dangerous, the Provincial Government might justly be asked to do this special work of inspection on sanitary lines, for all the municipalities of the Province.

J. J. C.

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### THE ETIOLOGY OF ALOPECIA AREATA.

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THE etiology of alopecia areata, which has so far proved to be a bone of contention among dermatologists, was discussed at the Thirteenth International Congress of Medicine in Paris, and we have much pleasure in presenting to our readers a *résumé* of some of the more important opinions expressed in the reports. Professor Pavlof, of St. Petersburg, stated that, without taking into consideration the opinions of authors who had studied the subject, alopecia areata in Russia had none of the characters of a contagious disease, and was thought to be a neurosis. Norman Walker, of Edinburgh, reported that the great majority of his cases were not due to nerve influence. He alluded to the opinions entertained by Jonathan Hutchinson, of London, who thinks alopecia a sequel of ringworm, and the more startling theory of Dr. Crocker, who regards alopecia as unrecognized ringworm. He confirmed the bacteriological studies of Sabouraud, claiming, however, to have discovered a blackish-brown organism in growths made from seborrheic scales and comedones, and that it is not identical with Sabouraud's brick-red organism. Sabouraud, after discussing the question, concludes that several distinct diseases are confounded under the general name of alopecia. He recognizes two principal forms: (1) Ophiastic alopecia (Arenæ Celsi); more frequently observed and well defined in children; commences on occiput, extends in a circular fashion on the scalp; slow in progress and disappears at puberty; hereditary origin; contagion extremely rare, if it ever occurs. (2) Seborrheic alopecia (Bate-man): adult life, middle age, first patch followed by others;

patches circular; microbacillary, seborrheic infection of these surfaces; contagion rare, but possible and certain.

These two morbid forms are distinguished from each other by the age of the patients, the shape, site and microbiology of the lesions and their therapeuses. Ophiasic alopecia he considers of nerve origin; seborrheic alopecia of parasitic origin.

Lassar, of Berlin, thought that there was not any predisposition to or any special resistance to alopecia. One cannot obtain immunity against this affection. In fact, persons of every age and condition are affected with alopecia areata, which, everywhere and at all times, presents the same aspect. An atypical course in particular cases is purely accidental. The same persons and the same parts of the body may be affected. In his opinion, the theory of the neuropathic origin of this disease is losing ground more and more every day. It demonstrates nothing by itself, as long as it does not prove a primitive alteration of the nerve territory supplying the affected region, or a participation of the nervous system in some form. But the isolated facts, recorded in medical literature in support of the theory of the neuropathic origin of this disease, lose their significance when studied in the light of the numerous cases observed every day, in which nothing is to be noted except an alteration in the hair. There is certainly no epidemic or endemic disease of the nervous system, which manifests itself solely by falling of the hair, in the shape of bald spots, which gradually extend. Moreover, the localization of the disease bears no relation to pre-established nerve routes. It may be unilateral, bilateral, or general, and if dependent on the condition of the nervous system, would indicate either the participation of a great number of peripheral nerve branches in the disease, or else the existence of a nerve centre devoted solely to the growth of the hair. Each of these hypotheses is unlikely; but one of them is indispensable, if we are to admit the neuropathic theory of alopecia.

The parasitic theory offers a much more satisfactory explanation of the origin of the disease. Its contagious nature naturally explains its appearance in families, schools and garrisons; and the outbreaks of the disease which are traced to barber-shops and the cutting of the hair. To these may be added its method of propagation, which cannot be explained, except by auto-inoculation spreading from one part of the body to a neighboring part. As besides, almost all diseases transmissible from man to man, directly

or indirectly, result from parasitic inoculation, there is no good reason to doubt that this disease is also due to a parasite. The complete proof of this view is, however, still lacking, the experiments made on animals to demonstrate the parasitic theory having failed.

Finally, it is possible that a cause, foreign to the affected organism, may yet be found, which produces, by an intoxication, an obstacle to the growth of the hair, without any local development of bacteria.

In Lassar's opinion, the therapeutics of alopecia areata should consist in the use of anti-parasitic and anti-toxic agents, the curative results of all the successful methods of treatment from corrosive sublimate and carbolic acid to different forms of electricity having been proved to be due to the possession of these characteristics.

J. J. C.

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#### SPURIOUS LOYALTY.

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A FEW years ago, upon leaving a theatre, a friend remarked: "Mantell is the only one I ever heard pronounce the name England perfectly. It seems to mean everywhere; it is worth walking a mile just to hear him enunciate that one word." England, grown tall and proud with its wealth of Colonies, and signing its full surname, The British Empire, to all Canadians does mean "everywhere." We cannot be too loyal—we can hardly be too expressive of our loyalty, provided we know what proper form the demonstration of it should take.

We have been honored recently by the sight of a procession in our city worthy of the name, a tribute to our brave soldiers upon their return from the front. Unfortunately as on all similar occasions, the amount of spurious loyalty expressed by the setting off of toy cannon, the firing of toy pistols, and the throwing recklessly about in the crowd of impish fire crackers, was cheap, vulgar fools' play, and a menace to the personal safety of the people. Time and again beauty has been marred, eyesight impaired and fingers or other members of the bodies of useful citizens blown off or destroyed. It is time such practices and pastimes were made a misdemeanor, and a by-law passed and rigorously enforced to put a stop to this harmful

nonsense. The fear of firearms or powder is not one of the Bogie-man-will-catch-you ideas inculcated in the minds of the children of this age. In almost every day's newspaper an account may be read of a shocking accident, the principals in the sad little tragedy both children fooling with a gun or igniting powder just for fun. Why are the youngsters allowed to be so reckless? That is a question that had many answers in the crowd the other day. One way to train them is by law and order, and a study of the proper idea of the value of human life might take up part of the time now devoted to the military—save the mark—training given the public school boys. Soldiers we need, and soldiers we will have in plenty, but the time for training is ample when the boy is old enough to understand the courage and the sacrifice required to respond to his country's call and, as a real soldier of the Queen, go forth the guardian of his people's honor—"to do or to die."

But now every youngster is ablaze with spurious loyalty, and ready to kill anything in sight. Whether he is a Toddie in dresses or a Willie in his first pair of trousers, he is "the man behind the gun." As an old man remarked, while watching the reception procession the other day, "Bless me soul, Doctor, the next generation will come into the world crying, 'Left! left! halt!'"

W. A. Y.

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### 1900-1901.

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WITH the passing of the old year comes again the privilege of thanking our subscribers for their many courteous words of help and good-cheer, and to again wish them the compliments of the Christmas season, and the rather (to the hard-working physician) novel pleasure of "a pause in the day's occupation," and a chance to fill it up on a good old-fashioned Christmas dinner.

As our new Big Ben, so long waited for, on our new City Hall tower, in this Toronto we call Home, rings out the old year and rings in the new century, may it ring in peace, happiness and prosperity to every reader of this medical journal, the wide world over. Our "New Century Number" we hope will greet the dawn all swept, garnished and bright with the pictures of some of the best-known hospitals.

W. A. Y.

## EDITORIAL NOTES.

**Treatment of Fractured Bones without Splints.**—The treatment of fractured bones by massage and mobilization consists of the early application of movement to the injured member. It must not be confounded with the secondary employment of massage, which is successful in removing stiffness of injured parts, nor with massage as commonly practised, the violence of which might cause pain and even accidents. The new treatment (glucokinesis) consists in the application of methodical movement, dating from the very beginning of the accident which caused the fracture. Lucas-Championiere, who has used it extensively in his hospital practice for the past twenty years, states that it is more difficult to apply than the common treatment by immovable apparatus; but that its results are incomparably better. During the last five years he has so treated the following fractures at the Hotel Dieu, Paris: Fibula, 65 cases; massage almost exclusively, without any splints. Tibia, 90 cases, subdivided as follows: Upper epiphysis, 10 cases (without splints); middle portion, 38, excepting two cases in which a combination of massage and apparatus was employed. Scapula, 3 cases (massage only). Clavicle, 64 cases (massage only, without apparatus). Humerus, 60 cases, subdivided as follows: 40 upper extremity (massage only, without splints); 8 lower extremity (massage only, without apparatus); 12 middle portion, combination of splints and massage, excepting three cases treated by massage only. Olecranon, 20 cases (massage only, with mobilization and without splints). Radius and ulna, 22 cases (different combinations of apparatus and mobilization). Radius, 124 cases, treated almost exclusively by massage and mobilization, without splints. Bones of the foot and hand, 7 cases, treated by massage without splints. The chief advantages claimed for the new system are: rapid disappearance of pain in the injured part; prompt and solid restoration of the bone; disappearance of contracture; reabsorption of effused blood and fluids; preservation of the vitality of the skin, and of the suppleness of the injured part.

**The Etiology of Eczema.**—After alluding to the presence of the staphylococcus albus in the early stage of eczema, and of the staphylococcus pyogenes aureus in the later stage, James Galloway

reported at the International Congress of Medicine, at Paris: "It appears that in the production of eczema more than one factor is at work, though the presence of such organisms as those mentioned which are well known to have pyogenic power, must be an important factor in every case. These organisms do not grow in such enormous numbers on injured surfaces without producing some results. From our knowledge of their effects in other situations, the result must be noxious. The local infectivity and chronicity of eczema are probably mainly due to the presence of the organisms mentioned. Other factors are probably concerned in the production of any attack of eczema, and of these, two appear to be of much importance: First, the predisposition of the skin, usually associated with the seborrheic state, to the free growth of many varieties of vegetable parasites. This is, probably, the most effective of all the conditions of susceptibility or of lowered resistance in the causation of eczema. Second, the clinical evidence seems to be conclusive, that certain conditions of imperfect metabolism predispose to the onset of eczema; or, at any rate, to its recurrence, and of these the most common are those associated with improper digestion and assimilation of food.

**Squeezing Bacteria to Death.**—We notice (*Literary Digest*) that B. H. Hite, chemist of the West Virginia Agricultural Experiment Station, has carried out a series of experiments to test the idea that bacteria in water or other liquids may possibly be killed by powerful squeezing. It was found that, while many germs may thus be killed, some always survived, no matter how great the pressure. Says the *Engineering News*, in an editorial on the subject: "Milk, subjected to hydrostatic pressures of 70 to 100 tons per square inch, kept from 24 to 60 hours longer without souring than untreated milk. Complete sterilization, however, was in no case effected, even at the highest pressures, and the milk in many cases acquired peculiar tastes and odors on keeping, indicating that certain species of bacteria were killed, while others were not." Tests were also made with milk inoculated with disease germs. The first of these ended disastrously, with the bursting of the tube containing typhoid-inoculated milk, which was scattered over the room, infecting one of the staff of experimenters with typhoid. The experiments were completed at a later date, but some of the germs always survived the treatment.

**Women's Medical College.**—At the opening meeting of the Medico-Literary Society of the Women's Medical College, October 30th, Miss Parks presiding, it was decided by the members to establish a college paper, and Miss Ross was elected editor. Miss Doyle explained for the benefit of new students the value of the college dispensary to poor women of the city. Katharine Bradshaw spoke of establishing in the near future a women's hospital in connection with the dispensary, and urged the students to interest their friends in it. A very interesting paper on "Mistakes" was given by Dr. R. B. Nevitt, and music in the shape of a violin solo was furnished by Miss Crawford. The class of '03 of the Women's Medical College has elected the following officers: President, Miss M. G. Bryson; Vice-President, Miss Rosemary Roche, B.A.; Secretary, Miss L. Patterson; Treasurer, Miss E. Lucas.

**The Tarrant Building, New York City.**—Awful indeed must have been the scene of the great explosion of chemicals which caused the loss of a score or more of lives and the entire destruction of the Tarrant Building in lower New York last month. Two of the oldest firms and best-known makers of proprietary medicines, Messrs. Tarrant & Co., and Messrs. M. J. Breitenbach & Co., occupied premises in the building. Fortunately the lives of the members of both firms were mercifully saved, but the scenes of terror and the loss of life and property must have left them appalled. We wish to express to Mr. Breitenbach and Mr. Wells especially, our sympathy in the great personal shock the disaster must have caused them, and also the hope that their splendid financial concern may, Phoenix-like, speedily arise out of its own ashes.

**Sardines as a Food in Tubercular Diseases.**—We notice in *Le Progres Medical* an article written by Dr. Chermidy, in which sardines are recommended as a food in cases of scrofula, tuberculosis, and rickets, instead of cod-liver oil. Sardines are very rich in fatty matters, and possess considerable medicinal value, since they contain phosphorus and iodine in easily assimilable forms. Dr. Chermidy says that, to get the best results, the fish should be perfectly fresh and just caught, passing, so to speak, from the living state into a conserve, so as to prevent the development of ptomaines. The olive oil used should be of the highest quality, and the boxing should be done with care and minute attention to cleanliness.

## Correspondence.

The Editor cannot hold himself responsible for any views expressed in this Department.

NEW YORK, November 2nd, 1900.

To the Editor of THE CANADIAN JOURNAL OF MEDICINE AND SURGERY:

DEAR SIR,—In your journal of November, page 346, in an article, "Mosquitoes and Malaria," you say: "Dr. Elliott's observations ought to be of great interest, more particularly his views as to the reasons why the negroes in Africa escape, or, at least, do not suffer as much from, malaria, as the white men visiting that country." And you quote from Ewart Grogan's address before the Royal Geographical Society of England, that "The Dinkas (a tribe in the lake region of Africa) smear themselves with a paste made of wood ashes to protect their naked bodies from the mosquitoes." Permit me to observe that by greasing the body before retiring at night time, with any oil *mixed with Eucalyptol*, will protect Caucasians even from mosquito bites, therefore from malaria. I have put this procedure into practice, in South America. My brother, a civil engineer, engaged in constructing a line of railroad from Quito, Ecuador, to an elevation of 12,000 feet up the Andes Mountains, is using this method of prophylaxis with success. I have written an article on the subject, which will shortly appear in the *Sei-J.-Kwai Medical Journal*, of Japan. In my opinion, this immunity of naked negroes in malarial countries is due to the offensiveness of their perspiration, a natural antagonism to mosquitoes, which nature has gradually given them. Oil of eucalyptus is most offensive to mosquitoes. Those insects refuse to breed in California in eucalyptus groves. Why, then, can we not utilize this important fact to ward off the night attacks of those pests on our white skins. The greasy red-skin of America and the *bear-greased* Aino of Japan have also their special immunity against malaria.

ALBERT S. ASHMEAD, M.D.

DR. WARNER has moved to 41 Carlton Street.

DR. W. A. YOUNG left last week for New York and Washington.



# The Physician's Library.

## BOOK REVIEWS.

*A Reference Hand-book of the Medical Sciences*, embracing the entire range of scientific and practical medicine and allied science, by various writers. A new edition, completely revised and rewritten, edited by ALBERT H. BUCK, M.D., New York City. Volume I. illustrated by numerous chromolithographs and four hundred and ninety-eight fine half-tone and wood engravings. New York: Wm. Wood & Co. 1900.

It is now thirteen years since the first edition of this comprehensive medical work left the press-room and was launched upon the market. It was well received by the medical profession all over, the firm who published it having little difficulty in securing many subscribers, as the name of its editor was alone sufficient to insure for it a hearty reception. Seven years after the first edition of the "Reference Hand-book of the Medical Sciences" was published, a supplementary volume came out, which to some extent made up for what changes had taken place in the different departments of medicine, and thus brought the system up to date. During 1898 and 1899, as still newer ideas regarding etiology, diagnosis and treatment of disease came under discussion and were gradually adopted, it became requisite that once again the work should either be rewritten from cover to cover, or another supplementary volume issued. We are glad for more than one reason that Dr. Buck did not consent to a repetition of the latter idea, as after the lapse of thirteen years it is too long to get out one volume in which it is attempted to bring an entire system up to date in anything like a satisfactory manner. The editor, therefore, decided to rewrite the whole work from beginning to end, and there and then waded in upon what was almost a Herculean task. The result of his labors to date is that a handsome and almost ponderous book, composing Volume I., has reached us, and, without going into the actual merits of the book as a work of medicine, we cannot delay congratulating Dr. Albert H. Buck upon the bravery he exhibited in starting upon a work which would, from its magnitude, have frightened many a man.

The new edition of the "Reference Hand-book of Medical Sciences" will be published in eight imperial octavo volumes, each containing about eight hundred pages. With the editor-in-chief there have been associated a large number of specialists, so that it can be readily seen that the material presented will be the best procurable and the work as a whole one which will more than compare favorably with any other in existence.

On going over Volume No. I. we find that each page is printed in double column. The type is smaller than what is usually employed in books of this character, thus admitting over double the amount of text on each page. We question the advisability of the publishers having arranged the pages in double column and having employed such small type as has been done. We do not think that the former makes a book just as readable as a single-column page, and the use of a small type is not as welcome to the short-sighted or the weary eye as a larger one is. That does not in any way, however, detract from the actual value of the matter presented. The book is, we are pleased to find, arranged alphabetically. This enables anyone to find their subject with wonderful ease, and, we think, adds greatly to the value of any system of medicine. The first volume covers A to B1, and contains, therefore, a perfect wealth of

information. The colored illustrations are very good, the one which most attracted us being Plate VII., showing Amyloid Degeneration in different organs. The coloring is very delicate, Figure 2, illustrating Amyloid Kidney, stained with aniline violet, being nothing short of dainty. We read with a great deal of pleasure the article upon Aneurism, Thoracic, revised by our good friend, Dr. F. G. Finley, of McGill University. He says that pain is a most frequent symptom in that disease. In some cases, he thinks that pain is the first indication of trouble. When the aneurism is seated in or near the innominate artery, pain is complained of at the back of the neck on the right side and behind the right ear. When the tumor affects the transverse arch of the aorta, the pain is often across the top of the chest and down the entire length of one arm. The writer warns us as medical men to search for internal aneurism in cases of pain of this kind. As to physical signs, Dr. Finley states that the pulse may and may not give us absolute information. When a sphygmographic tracing is taken, the curve is found to differ from the normal one. The ascent of the systole is less abrupt and more gradual, the descent also taking place without the same sharpness. The apex of the curve is rounded. The larger the aneurismal sac, the better is this kind of tracing brought out, whereas stiffening of the walls makes the tracing resemble the normal curve. Under the head of treatment, he says that complete coagulation of the contents is a very rare occurrence. Notwithstanding that, every effort should be used to bring about as nearly this condition as we can. The recumbent position for months should be resorted to; but, if circumstances prevent that being accomplished, most stringent injunctions must be given the patient to use as little muscular exertion as possible. The most valuable drug is iodide of potassium, all agreeing that it had a tendency to increase the coagulability of the blood, reducing the blood pressure and relieving the tension, in consequence. Tannic acid, ergotin and acetate of lead have also been recommended for this purpose. Lancereaux has strongly advised the hypodermic injection of a 1 per cent. solution of gelatin in normal saline solution with a view of causing coagulation in the sac. Christopher Heath and a few others have in some cases resorted to ligature of one or more of the great branches of the aortic arch, but in most instances this would be applicable only to cases in which the tumor was sacculated and involved the root or was situated close to the origin of some of the large vessels. The first volume is, apart from the extent of the information contained in it, exceedingly handsome, and, we think, will adorn the shelves of many whose object it is to gather around them a library of the latest and best books in print.

W. A. Y.

*The Medical Diseases of Childhood.* By NATHAN OPPENHEIM, A.B. (Harv.), M.D. (Coll. P. and S., N.Y.), author of "The Development of the Child"; Attending Physician to the Children's Department of Mount Sinai Hospital Dispensary. With 101 original illustrations in half-tone, and 19 charts. Pp. 653. New York: The Macmillan Company. London: Macmillan & Co., Limited. 1900.

This work is undoubtedly one of great value, and it is appreciated the more because of the fact that it represents the individuality of the author, and is not a mere compilation of the work of others. The illustrations are wholly confined to the reproduction of photomicrographs of diseased tissues. The most of these are excellent; it is remarkable that such good results could have been obtained by the half-tone process; the original photographs must indeed have been unusually successful, and we congratulate the author on the effective style of illustration of pathological conditions which he has thus been able to produce. The pathology of the various diseases of childhood is very thoroughly discussed, and etiology fairly considered, so that the author approaches the question of treatment after establishing a true scientific basis upon which to found his therapeutic measures. The chapter on Tuberculosis is one of the most interesting in the book, and it gives the student an excellent idea of lesions of this character as they are met with in the different organs of the body; the photo-

micrographs are used here with excellent effect, in graphically illustrating the text. After acknowledging that "many cases of tuberculosis are curable," the writer proceeds to detail methods of treatment, and insists upon the paramount importance of untiring attention to minute details in the successful care of patients afflicted with this disease. He utters a somewhat uncertain sound regarding the curability of tuberculous meningitis, when he says, "In cerebral and meningeal infection the result is practically always death." The statement is rendered somewhat ambiguous by the introduction of the word "practically"! We have not space to review in detail the various sections of the work, but we unhesitatingly record our appreciation of its value as a contribution to our literature on the subject. Perhaps it is hardly fair to criticise the necessarily abbreviated statements regarding congenital malformations and deformities, but we must take exception to the very definite statement on page 51, as to the existence of such a thing as true hermaphroditism where the genital glands of the male and female exist in one individual. Doubt has recently been cast upon the formerly accepted statement to that effect; many of the cases on record as "true hermaphrodites" have never been submitted to microscopic examination, and, without this, one is apt to be misled in mistaking an ovary for a testicle, as was in fact done, beyond all doubt, by many investigators in former days.

We have great pleasure in recommending this work, and we feel confident that it will be greatly appreciated by both students and practitioners. A. P.

*A Practical Treatise on Medical Diagnosis for Students and Physicians.* By JOHN H. MUSSER, M.D., Professor of Clinical Medicine in the University of Pennsylvania; Physician to the Philadelphia and Presbyterian Hospitals; Consulting Physician to the Woman's Hospital of Philadelphia and to the West Philadelphia Hospital for Women; Fellow of the College of Physicians of Philadelphia; Member of the Association of American Physicians, etc. Fourth Edition, revised and enlarged. Illustrated with two hundred and fifty wood cuts and forty-nine colored plates. Lea Bros. & Co., Philadelphia and New York. 1900.

It is but a few short years since Dr. John H. Musser launched upon the market the first edition of his work on Medical Diagnosis. At that time, as a result of his labors, the author received a very flattering reception, and the book met with a substantial sale. Musser's "Treatise on Medical Diagnosis" was in a short time found upon the shelves of medical men all over both the United States and Canada, and but a limited time had elapsed before the first edition became exhausted and Dr. Musser was called upon to publish a second and still fuller edition of his work. A little later and a third edition was noticed for sale, and now the author presents to the American profession still a fourth and a thoroughly revised and enlarged issue of his book. One reason, we think, why the author has met with such success is, that he has based his opinions upon the one great fact, viz., that the only way to arrive at a correct diagnosis of any case, and the only sure and certain method whereby any medical man can become a successful practitioner of medicine is to bring into play at all times and under all circumstances the laboratory, to make the laboratory his headquarters, and before even expressing the merest passing opinion upon any matter or case in charge, he should betake himself to his "inner room," and first of all find out whether he has the proper grounds bacteriologically for such a view. It is not many years since it was almost unheard of for any doctor to trust to anything outside of his own everyday "gumption" in the treatment of a case. The clinical laboratory had as yet not been heard of. How different is it to-day, where without such assistance but few cases would be correctly diagnosed and ultimately properly treated. Now the attendant physician can foretell with a degree of certainty the outcome of his case and give to the patient's friends a prognosis moderately sure—that change having been accomplished by the clinical laboratory having become a factor in the practice of medicine which it did not occupy some years ago.

The author has largely rewritten his fourth edition. The work is larger

and more complete than any previous one from his pen, and we are pleased to see that the number of illustrations has been very materially added to. Dr. Musser is to be congratulated, and the publishers, too, upon the last edition of his book. It is thorough, complete and in every respect up-to-date. We feel sure that the profession will extend to the doctor the same hearty support accorded him in connection with previous editions.

*The Practice of Medicine.* A text-book for practitioners and students with special reference to Diagnosis and Treatment. By JAS. TYSON, M.D., Professor of Medicine in the University of Pennsylvania and Physician to the Hospital of the University; Physician to the Philadelphia Hospital; Fellow of the College of Physicians of Philadelphia; Member of the Association of American Physicians, etc. Second Edition, thoroughly revised and in parts rewritten, with one hundred and twenty-seven illustrations, including colored plates. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut St. 1900.

Dr. Tyson has doubtless spent a great deal of time in revising his work on "The Practice of Medicine," ere publishing a second edition. We find on looking through it that in many sections the text is almost all new, so that the author has not resorted to the plan adopted by too many in so-called revising their books, consisting simply in the correction of typographical errors and nothing more; but, on the other hand, Dr. Tyson has added to his volume very materially, so that his book is thoroughly up with modern ideas and represents medicine as practised in this, the dawn of the twentieth century. He has divided his work into fourteen sections, commencing with Infectious Diseases and then going on with Diseases of the Digestive and Respiratory System, Diseases of the Heart and Blood Vessels, Blood and Blood-Making Organs, Thyroid Gland, Urinary Organs, Supra-Renal Gland, Constitutional Diseases, Nervous System, Muscular System, and The Intoxications. Section XIII is devoted to Effects of Exposure to High though Variable Temperature, and the last section to Animal Parasites and the Conditions Caused by Them. To the alienist, the three hundred pages dealing with Diseases of the Nervous System will naturally be of keen interest. The author has materially altered this section since the publication of the first edition of his book, and has consequently lengthened it, giving his readers the benefit of the very latest views in treatment. We read with a great deal of interest the pages devoted to Localization of Cerebral Disease, the Motor Areas of the Cortex, and the Sensory Areas of the Cortex and Sensory Paths. In no work have we had the satisfaction of perusing a few pages written upon what is really a very profound and difficult subject in so clear and comprehensible a manner. We can safely say the same of the chapter upon Aphasia, and in fact of the entire book. It is written in such a manner as not necessarily to appeal "to the gods," but to be appreciated by and be a source of profit to the profession as a body.

*A Text-book of the Practice of Medicine.* By JAMES M. ANDERS, M.D., Ph.D., LL.D., Professor of the Practice of Medicine and of Clinical Medicine in the Medico-Chirurgical College, Philadelphia; Attending Physician to the Medico-Chirurgical and Samaritan Hospitals, Philadelphia, etc. Illustrated. Fourth Edition, thoroughly revised. Philadelphia and London: W. B. Saunders & Co. 1900. Canadian Agents: J. A. Carveth & Co., Toronto, Ont.

A work of this magnitude requires prolonged acquaintance, prior to adequate review. Such examination as has been made of the more important articles leaves a sense of satisfaction. In the article on the treatment of pneumonia, the author states that "the patient should not be allowed to leave his bed for at least one week after the occurrence of the crisis, and as pneumonia is a self-limited affection, the principal object is to support the powers of life until the crisis is passed. To this end nothing contributes so much as proper feeding." The use of alcohol and strychnine as cardiac stimulants in pneu-

monia, and saline injections given intravenously or subcutaneously, are favorably noticed. The use of oxygen in cyanosis is mentioned as a respiratory stimulant. Hydrotherapy also comes in for a deservedly favorable notice. As the author says: "Fortunately internal antipyretics, for the purpose of combating high temperatures, are not so largely used at the present day as formerly."

It is a source of satisfaction to a physician, conversant with modern views on the etiology, diagnosis and treatment of diphtheria, to peruse the chapter treating of that disease. The necessity of obtaining a bacteriological diagnosis is strongly affirmed. The farrago of drugs, that used to be recommended by medical writers, is conspicuous by its absence, alcohol and strychnine being the only drugs whose use is advised in the medical treatment of this disease after the early employment of serum. The article on Influenza (La Grippe) is readable and suggestive. The author believes firmly in the advantages to be derived from strychnine and alcohol in the severer forms of that affection.

Several formulæ, such as the author's experience has shown to be of therapeutic value, have been advantageously introduced into the text. Particular stress is laid on the differential diagnosis of diseases, a characteristic of the work which, of course, increases its practical value.

The author writes with precision and clearness, and is evidently a practitioner of wide and varied knowledge. We do not admire the new spelling, and prefer to write quinine and strychnine, instead of "quinin" and "strychnin." A number of errors in Latinity are observable: e.g., at page 23, under the head of Experimental Typhoid, and at page 54, last line. The illustrations add to the value of the work.

The volume is well printed on thin paper, stays open when opened, and, altogether, is a credit to the publisher. J. J. C.

*Practical Gynecology*: A comprehensive text-book for Students and Physicians. By E. E. MONTGOMERY, M.D., Professor of Gynecology, Jefferson Medical College; Gynecologist to the Jefferson Medical College and St. Joseph's Hospitals; Consulting Gynecologist to the Philadelphia Lying-in Charity. With five hundred and twenty-seven illustrations, nearly all of which have been drawn and engraved specially for this work, for the most part from original sources. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. Price \$5.00.

Among the many good points in Dr. Montgomery's "Practical Gynecology," the most significant is that, instead of dividing the book into chapters, as almost all works are arranged, the author has subdivided his into sections. After considering the introduction, he devotes a section to Diagnosis; then the succeeding ones to Pelvic Examination, Abdominal Examination, Therapeutics, Medical Treatment, Local Therapeutics, Electricity, Anatomy, Physiology, Malformations, Inflammation, Inflammation of the Cervix and Body of the Uterus, Deviations of the Pelvic Organs, Genito-Urinary Hemorrhage and Ectopic Gestation, Genital Tumors, e.g., of the vulva, uterus, Fallopian tubes, broad ligaments, the last section of all being devoted to Ovarian Tumors. It will thus be seen that each subject is "considered with reference to its influence upon the entire genital tract." We are strongly of the opinion that the value of a book is decidedly increased by the adoption of this method, and feel sure that prospective authors will see fit to "do likewise." A subject treated in this manner can be studied with much greater ease, and is much more apt to be borne in mind and put to practical use later on. It was with considerable pleasure that we read, amongst others, the section on Malformations. The subject is treated in a thoroughly practical and up-to-date manner, and the illustrations in half-tone and the drawings are among the finest in the book. Those, especially, illustrating Outerbridge's suture, Cleveland's suture, Dudley's operation, Denudation for Martin's operation, Edebohl's operation, are perfect. The author, also the publishers, are both to be congratulated upon the work. It is exceptionally good.

*Modern Medicine.* By JULIUS L. SALINGER, M.D., Demonstrator of Clinical Medicine, Jefferson Medical College; Chief of the Medical Clinic, Jefferson Medical College Hospital; Attending Physician to the Philadelphia Hospital; and FREDERICK J. KALTZEYER, M.D., Assis. Demonstrator of Clinical Medicine, Jefferson Medical College; Hematologist to the Jefferson Medical College Hospital; Pathologist to the Lying-in Charity Hospital, Philadelphia; Assis. Pathologist to the Philadelphia Hospital. Illustrated. Philadelphia and London: W. B. Saunders & Co. 1900. Canadian Agents, J. A. Carveth & Co., Toronto. Price, in cloth, \$4.00; in half morocco, \$5.00.

It would not be correct to say that there is anything like a dearth of works written upon the Practice of Medicine. There are, as a matter of fact, too many, and it is no easy matter for either the advanced student or the practitioner himself to know exactly what to purchase, almost all of the books on Medicine having their good points. Not a year elapses without some new author coming to the front, he, like his predecessors, trying to show that his book covers a field as yet almost untouched by another. It is but right, however, to say that Drs. Salinger and Kaltze yer have in their "Modern Medicine" so arranged their subject that there is practically no repetition anywhere. Their work is eminently a *Clinical Medicine*, is thoroughly practical and is all through readable, enjoyable, and in every respect up-to-date. The twenty odd pages devoted to Clinical Bacteriology is very interesting, and refers, in some instances too briefly, to the different pathogenic germs, thus saving space when the author takes up the different diseases individually. The book is divided into eleven different parts, the different sections comprising Infectious Diseases, Diseases of the Circulation, Respiratory System, Digestive Tract, Kidneys, Constitutional Diseases, Diseases of the Blood and Ductless Glands, Diseases of the Nervous System, Muscles, Intoxications and Sunstroke, and Diseases due to Animal Parasites. "Modern Medicine" will find many readers, and we prognosticate for it a considerable sale.

*The American Illustrated Medical Dictionary*, a new and complete dictionary of the terms used in Medicine, Surgery, Dentistry, Pharmacy, Chemistry, and the kindred branches, with their pronunciation, derivation and definition, including much collateral information of an encyclopedic character. By W. A. NEWMAN DORLAND, A.M., M.D., assistant obstetrician to the University of Pennsylvania Hospital; editor of the American Pocket Medical Dictionary, Fellow of the American Academy of Medicine; together with new and elaborate tables of arteries, muscles, nerves, veins, etc.; of bacilli, bacteria, diplococci, micrococci, streptococci, ptomaines and leukomaines; weights and measures; eponymic tables of diseases, operations, signs and symptoms, stains, tests, methods of treatment, etc., with numerous illustrations and twenty-four colored plates. Philadelphia and London: W. B. Saunders & Co. 1900. Canadian Agents, J. A. Carveth & Co., Toronto. Price, \$4.50 plain; \$5.00 indexed.

It takes but a few minutes for the recipient of "The American Illustrated Medical Dictionary" to conclude that it is a book well worth the price asked for it. It comes to us bound in rich red full morocco limp cover, giving the work at once a feeling and an appearance of richness. The author deserves a great deal of credit for the manner in which his book is arranged, and when he announces on his title page that, besides being a complete dictionary, it includes "much collateral information," he is well within the truth. We do not think that there are many medical terms which will not be found in Dorland's Dictionary, and though the book as a whole does not compare in size and bulk with Gould's Dictionary, yet for suitability to the uses of the medical practitioner "The Illustrated Medical Dictionary" will be found to fill the bill. The half-tone illustrations, both in black and colors, are exceedingly good; the paper used all through could not be improved upon, and once again has Mr. Saunders added new laurels to his reputation as a medical publisher with few peers in any country in the world.

W. A. Y.

*Modern Surgery, General and Operative.* By JOHN CHALMERS DACOSTA, M.D., Professor of Principles of Surgery and Clinical Surgery, Jefferson Medical College, etc. Four hundred and ninety-three illustrations. Third Edition. W. B. Saunders & Co., Publishers. Canadian Agents: J. A. Carveth & Co., Toronto. Price, cloth, \$5.00; half morocco, \$6.00.

Once again the mill has been in operation, the author at the engine *spring*, the compositor oiling the machinery, and the printer's *devil* "sawing wood," and we have as a result the third volume of DaCosta's "Modern Surgery."

The work presents in a clear but "concise form the fundamental principles, the chief operations and the accepted methods of modern surgery." The work, instead of at once rushing into the subject of inflammation, wisely devotes the first chapter to the subject of Bacteriology, and the next chapter appropriately deals with Asepsis and Antisepsis. If the instructions laid down are carefully followed, few slips in asepsis and antisepsis will be made.

A discussion of the purely special subjects is avoided; but the common deformities, under the head of Orthopedic Surgery, such as Morbus Coxæ, Club Foot, Flat Foot, and Potts' Disease of the Spine, are fully discussed. Fractures and dislocations are dealt with at some length. Though many and various forms of splints are described for use in fractures of the humerus, yet those of us who were students of the late Dr. W. T. Aikins cannot help but regret that the splint devised by him fails to receive recognition at the hands of the author, for it is by long odds the best splint for all fractures of the humerus, for by means of this not only may the fragments be fixed in position, but at the same time extension may be successfully kept up. A prominent place is given to the treatment of fractures about the elbow-joint by means of acute flexion, devised by Jones, of Liverpool.

Throughout, the work is a useful one to both student and practitioner, containing, as it does, so many of those practical hints frequently left out of a text-book. The bookmaking is also good, upon which the publishers are to be congratulated.

F. N. G. S.

*Rhinology, Laryngology and Otology and their Significance in General Medicine.* By E. P. FRIEDRICH, M.D., Privatdocent at the University of Leipzig. Authorized translation from the German. Edited by H. HALBROOK CURTIS, M.D., Consulting Surgeon to the New York Nose and Throat Hospital, and to the Diphtheria and Scarlet Fever Hospitals. Philadelphia and London: W. B. Saunders & Company. 1900. Canadian Agents: J. A. Carveth & Co., Toronto. Price \$2.50, net.

We heartily welcome Dr. Friedrich's book to our office, especially for the reason that up to the present there have been few works written on Rhinology and allied subjects, of which it could be said that they were of any interest to any ordinary practitioner of medicine, but, on the other hand, were confined to a discussion of the subject of interest only to the specialist. This book, as the title would indicate, is devoted to Diseases of the Nose, Larynx and Ear, with their "Significance in General Medicine," so that we feel sure that it will at once interest the general practitioner, and have a large sale in consequence. The different sections are devoted to Diseases of the Respiratory Organs, Circulatory and Digestive Systems, Diseases of the Blood, Chronic Constitutional Diseases, Acute and Chronic Infectious Diseases, Diseases of the Kidneys, Skin and Eye, Intoxications, with the last chapter on Nervous Diseases. Each chapter is written very racyly, all the information being recent, and the book as a whole a welcome addition to medical literature.

*Dr. North and His Friends.* By S. WEIR MITCHELL, M.D., LL.D., Harvard and Edinburgh. Toronto: The Copp, Clark Company, Limited. Cloth, price \$1.25.

"To give the coin of reflection," said the poet, "is my business and my delight. Thou art welcome to all I have." Fittingly do these words seem to apply to Dr. Mitchell's latest story of "Dr. North and His Friends." It almost

seems a story of reflection, in the sense of looking backward. The author impresses his readers with the idea that he is himself enjoying the luxury of re-living bygone days. Around a fireside, or a dinner table, the world shut out, Dr. North and his friends talk of many things, people, and lands near and distant. Quickly and with never-lagging-interest flows the tide of conversation, from sculpture to Italy, from law to labor, from love to art, from spiritualism to religion. Soon the reader unconsciously changes his attitude and becomes one of the circle, an eager listener, but as children say, "Listeners never hear any good of themselves," and as though resenting the intrusion, one of Dr. North's friends speaks of Canada, and this is what he says (page 151): "Look at Canada, older than we, what has she to show? Colonies have no adult life. They are overgrown children. They are simply imitative, and imitation implies weakness." Of course, some of Dr. North's friends are supposed to represent poor human craft with their sails not full set, or perhaps just one little jib missing. No great sailor, who has made the wonderful study of humanity tossed on a sea of nervous unrest, his life-work, and found so often "bits of wreck" cast upon the shore, could draw a perfect chart of his voyage without indicating the idiosyncrasies of the great fleet made up of men and women of the nineteenth century.

The novel is rare of its kind. So comprehensive in discussion of its varied subjects, so pleasing in description and quotation, occasionally it reminds one of a delightful book published some few years ago by a young author, called "Conversations in a Studio." Lucky the physician who finds in his stocking on Christmas morning, "Dr. North and His Friends" come to "take turkey" with him. Won't somebody give old Santa Claus a timely hint? W. A. Y.

*Notes on the Modern Treatment of Fractures.* By JOHN B. ROBERTS, A.M., M.D., Professor of Surgery in the Philadelphia Polyclinic, Mütter Lecturer on Surgical Pathology of the College of Physicians of Philadelphia. With 39 illustrations. Pp. 159. New York: D. Appleton & Co. 1899. Canadian Agents: J. A. Carveth & Co., Toronto.

It is refreshing to peruse this small volume, which is full of valuable suggestions in the treatment of fractures. It is not a complete account of all the various fractures met with, but deals largely with general principles in the treatment of fractures in general, and there is free discussion of certain special fractures (e.g., those about the elbow-joint,) which is exceedingly valuable, and will prove of great practical utility to the surgeon who is confronted with the difficult problems which present themselves in the treatment of such cases. Roberts advocates the exposure of the fragments in a certain limited number of closed fractures—"where there is ignorance of the exact lesion, impossibility of reduction, imperfect immobilization or failure to deal efficiently with complicating lesions." "An aseptic incision is almost devoid of risk in such cases, even if it opens a joint." This forms the text of a most interesting chapter on "The Modern Treatment of Fractures."

We can most heartily recommend this volume; it is thoroughly practical, suggestive and original. The author arrives at his conclusions after a logical process of reasoning, which cannot but commend itself to the critical reviewer.

A. P.

*A Text-book of Pathology.* By ALFRED STENDEL, M.D., Professor of Clinical Medicine in the University of Pennsylvania; Physician to the Philadelphia Hospital; Physician to the Children's Hospital, Philadelphia, etc. With three hundred and seventy-two illustrations. Third Edition revised. Philadelphia and London: W. B. Saunders & Co. 1900. Canadian Agents, J. A. Carveth & Co., Toronto. Price, in cloth, \$5.00; half morocco, \$6.00.

There are purchasable at the present day several very good works on the subject of Pathology. The great fault, however, with many of them is, that too little attention is given to pathology from a clinical standpoint, and too great space devoted to this branch of study simply and solely as concerning



diseased tissue, and not applied, as it ought to be, to the practice of medicine. Dr. Stengel, on the other hand, as we took occasion to say when reviewing the first edition of his book, determined that he would avoid the pit-fall we have alluded to, and make it not dry and tiresome reading, but in every sense of the word, bright, interesting, and above all practical. There is one thing we regret, viz., that the author excluded the pathology of the skin and the organs of special sense. It is true that this might have necessitated a larger volume, but yet we consider that the value of the book would have been rendered greater had he done so. But small space has been devoted to methods of examination. That is, we think, but right, as such can be procured in volumes devoted to technique. The third edition of Dr. Stengel's work is considerably enlarged, and has been revised from first to last. The department on Pathologic Physiology has been added to quite materially, and that on Neuropathology also all rewritten. The book, as before, is composed of two parts, the first devoted to General, the second to Special Pathology.

*Practical Urinalysis and Urinary Diagnosis.* A Manual for the use of Physicians, Surgeons, and Students. By CHARLES W. PURDY, LL.D., M.D., Queen's University; Fellow of the Royal College of Physicians and Surgeons, Kingston; Professor of Clinical Medicine at the Chicago Post-Graduate Medical School; Author of Bright's Disease and Allied Affections of the Kidneys; also of Diabetes: Its Causes, Symptoms, and Treatment. Fifth revised and enlarged edition, with numerous illustrations, including photo-engravings and colored plates. Philadelphia, New York, Chicago: F. A. Davis Company, Publishers. 1900.

It is with great pleasure that we review another, the fifth, edition of Purdy's "Urinalysis," as we have become accustomed to look upon this work as the standard authority on the subject of Urinary Analysis. We are pleased to notice in the fifth edition that more attention is paid to the wide range of usefulness of the centrifuge. The author has introduced a number of useful tables, showing how the bulk and gravimetric percentages and grains per ounce of chlorides, phosphates, sulphates, etc., are rapidly and accurately obtained by centrifugal analysis. The interests of the student and beginner have been looked after in the chapter on the Microscope. There will be found in that chapter a full description of the several parts, the uses and the care of a microscope; how to prepare the sediment for examination and the diagnosis of the same.

The chapter on Albumen has been entirely rewritten, with many additions of value. Superfluous matter has been eradicated. The publisher's department is up to the usual degree of excellence, the photo-engravings and colored plates being especially good.

W. H. P.

*Three Men on Wheels.* By JEROME K. JEROME, author of Three Men in a Boat, Idle Thoughts of an Idle Fellow, Second Thoughts of an Idle Fellow, etc., etc. With illustrations by Harrison Fisher. Toronto: The Copp, Clark Company, Limited. 1900.

This work coming from the clever and racy pen of the author of Three Men in a Boat, has been hailed everywhere with expressions of pleasure. It is not a novel, but a comic history of the later lives of the three men already met with "in the boat." It is full of the keenest humor, and to be fully appreciated should be read aloud. The fun begins at once in the schemes of the men to get away for a holiday, unhampered by their wives' companionship.

In chapter three we find a laughable sketch of the man who, out of kindness, insists upon helping his friend by taking his wheel apart, and leaving it unfit for anything but the old iron pedlar. There are many pleasing and lively episodes of German life and customs, intermingled with a harmless ridicule of German character. The numerous illustrations of Mr. Harrison Fisher are exceedingly clever and add greatly to the realism of the various situations.

We congratulate the publishers, Copp, Clark Company, Limited, on the excellent style in which the book is gotten out.

W. H. P.

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*Physical Diagnosis of Diseases of the Chest.* By RICHARD C. CABOT, M.D., Physician to Out-patients, Massachusetts General Hospital; Assistant in Clinical Medicine, Harvard Medical School. Pp. 310; 142 illustrations. New York: William Wood & Company.

This is one of the best of the smaller manuals on physical diagnosis that have been issued of late years. The facts are clearly and vigorously stated, and the illustrations are excellent and do much in elucidating the various subjects, especially those on cardiac murmurs. Some of the illustrations, however, appear superfluous, as, for instance, those on errors in the use of the stethoscope on pages 88 to 90. Bowles' stethoscope, lately introduced, is most highly commended. It seems to be on the principle, if not the exact counterpart, of Marsh's stethophone, which has been in use here for some years back.

With his view that in mental disease the displacement of the heart to the left is due to dilatation of the right ventricle, we are not prepared to agree, because in mitral regurgitation much displacement may occur before the right ventricle is materially affected, and in cases of mitral stenosis, in which there is little regurgitation, the displacement towards the left is never great even in the last stages, when the right ventricle is greatly dilated.

The work would be improved by a more copious index, a fault easily rectified in future editions.

Of the publishers' part we have no criticism to offer; the work would be a credit to any house.

A. M'P.

*Wanted: A Matchmaker.* By PAUL LEICESTER FORD, author of "The Honorable Peter Stirling," "Janice Meredith," etc. With illustrations by Howard Chandler Christie; decorations by Margaret Armstrong. Toronto: The Copp, Clark Company, Limited. 1900. Price \$2.00.

A charming Christmas gift; in very truth an *édition de luxe*. The pages eloquent with their story, and almost fragrant with the breath of the flowers, and honey bees graven on every leaf, thanks to the decorator's skill; and then here and there a picture of lovely Miss Constance, clever Dr. Armstrong, and the cute gamin, a "newsy" who answers to the fearful and wonderful name of "Swot," and adds by his presence a laugh, a dimple, and mayhap a tear to the enjoyment of the reader, whose eyes love themselves just for looking at the splendid typography which adorns this story. What a treasure this exquisite little book would be to the sick one with its tasteful binding, its good illustrations, and its every page a flower garden, and often a single violet dropped by artist's pencil between the leaves just to add its message—"Je pense à toi." And then the story, but that's not to be told. Get it, read it, and give it, all ye love-sick, bashful young doctors, and let it speak the good word for you. "What is it?" "Love!" whispered Constance, softly.

W. A. Y.

*Tommy and Grizel.* By JAMES M. BARRIE. Toronto: The Copp, Clark Company, Limited. Cloth.

Barrie has made his reputation as a story-teller. In his own admirable style, he has one by one introduced the quaint people of Thrums, and has gained and merited the thanks of Scotland and America. How easily can the well-interpreted Scotch types be recognized in all his former stories. In the character of poor sentimental Tommy, the author has given, perhaps, a joke on humanity, or maybe a composite picture in a story book, following the lead of a recent custom in American Sunday newspapers. The other characters are natural and quaint as ever, following the old lines, all except Grizel, and of course when the author made his hero he had to make a mate for him. Posed by Barrie with his consummate artistic skill and effect, one can contemplate with a smile and a sigh poor Tommy, and never feel the hour go by, and forgive Mr. Barrie for his one unclassified microbe, and thank him for the purity of the gelatine in which he has enclosed his culture.

W. A. Y.

*Saunders' Pocket Medical Formulary*, with an appendix containing posological table; formulae and doses for hypodermic medication; poisons and their antidotes; diameters of the female pelvis and fetal head; obstetrical table; diet list for various diseases; materials and drugs used in antiseptic surgery; treatment of asphyxia from drowning; surgical remembrancer; tables of incompatibles; eruptive fevers; weights and measures, etc. By Wm. M. POWELL, M.D., author of "Essentials of Diseases of Children"; Member of the Philadelphia Pathological Society, etc. Sixth edition, thoroughly revised. Philadelphia: W. B. Saunders & Co. 1900. Canadian Agents, J. A. Carveth & Co., Toronto. Price, \$2.00.

We do not think that we can add anything as to what the "Pocket Medical Formulary" contains further than what appears upon the title page as above. It certainly includes a perfect mine of information upon points which are all essentially practical, each chapter so much so that the possession of the facts at the opportune moment (and it must be remembered that "Medical Formulary" can be carried around constantly either in the pocket or the satchel) would be of immense advantage. The indexing alphabetically of the leaves renders the list exceedingly handy, each subject being able to be referred to in a moment.

*Essentials of Histology*. Saunders' Question Compend. By LOUIS LEROY, B.S., M.D., Professor of Histology and Pathology in Vanderbilt University Medical and Dental Departments, City Bacteriologist to Nashville, Tenn., Bacteriologist to the State of Tennessee, etc. Arranged with questions following each chapter; seventy-two illustrations. Philadelphia: W. B. Saunders & Co. London: 161 Strand, W. C. 1900. Canadian Agents, J. A. Carveth & Co. Price, \$1.00.

"Essentials of Histology" is compiled largely in a similar manner to those of the rest of this Series of Question Compend. It is, of course, a book for first year students, though yet containing much information that the physician is but too apt to forget. It will serve, therefore, also as a means of "rubbing up" one's knowledge of a subject which must form the basis of a successful practice of medicine.

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#### LITERARY NOTE.

W. B. SAUNDERS & COMPANY desire to announce that they are about to establish a branch of their business in Great Britain. Mr. Saunders has recently spent several weeks in London, where all the arrangements preliminary to the opening of an English house have been completed. This London branch will be operated in immediate connection with the home establishment, and the same methods that have been so successful in building up the business in this country will be employed in the conduct of this new branch. The details of the various departments of the firm's affairs have now been developed to such a state of perfection that the House feels the time has come for extending its field of operations. For a number of years Saunders' books have been sold in England through the agency of a London publisher, and, although they have already met with remarkable favor, the House is confident that by applying to the English market the same policy that has proved so successful at home, the sale of its publications in Great Britain and her colonies can be enormously increased.

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THE third Pan-American Medical Congress will convene at Havana, Cuba, from December 26th to 29th.

THE medical profession will be pleased to know that Dr. Adam Wright is recovering from his recent severe illness. We extend to the Doctor our sympathy, and trust it will not be long ere he is up and around again.