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Original Articles

SOME SCIENTIFIC AND PRACTICAL ASPECTS OF VACCINATION.*

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Mr. President and Gentlemen of the Medical Society of the State of New York,—I have to express my appreciation of the honor conferred upon me through the invitation to address your Society on a subject which, however old and hackneyed, becomes, in view of its present importance, one of extreme interest.

After a hundred years since Edward Jenner's discovery had been accepted in Europe and by some of the more eminent physicians of America, we find a disease, which in the eighteenth and preceding centuries had its victims indifferently in the hovel and the palace, so little prevalent that until within the past three years the majority of living physicians in America and Canada had never seen a case of smallpox; and as it has happened the greater number of cases which have been seen on this continent recently have been so mild that we have to go back to the days of Sydenham, in the seventeenth, and Van Swieten, in the eighteenth century, to find a parallel for this anomalous type of the disease. It has not been, therefore, unnatural that to those inexperienced in the appearance of the disease, and even to those familiar with the type of the disease as it has appeared when introduced from Europe, much doubt has arisen as to whether or not the disease

* Read before the State Medical Society of New York, Jan. 27th, 1903.

which, brought from Cuba in 1898, has spread so widely over the Southern, Western and Central States and Canada, has been true variola.

One supreme test of vaccination has enabled us, however, to prove conclusively its nature, since it has been as successfully combatted by that wonderful discovery of Dr. Edward Jenner, as the numerous outbreaks which from time to time had previously appeared since 1800. What he taught, in brief, was that by vaccination we introduce by inoculation a disease which causes a vesicle of a particular character on the teats of a cow or on the tender skin of the belly of a calf, the virus of which when inoculated into a person produces a vesicle of a similar character. We now know, what Jenner and other experimenters of his time, believed, from their experiments in variolation or inoculation with smallpox virus, that a similar vesicle can be produced through inoculating several calves in a series with virus from a smallpox patient, and that this smallpox virus thus modified produces in other calves, in man, in monkeys, and in guinea-pigs a vaccinia which protects against smallpox completely in practically all cases for ten years, in a large percentage for twenty years, and which, though decreasing, continues to protect against the severity of an attack of smallpox to a large degree throughout life. In the absence of any knowledge of the germ theory of disease, it is natural that Dr. Jenner and his associates should not have arrived at any clear idea of how this protection was produced, further than that it was the same as that caused by other eruptive maladies, whether in man or animals.

Not until Pasteur's discovery of the germs of anthrax and chicken cholera, and his success in producing immunity by the cultivation of the micro-organisms of these diseases, did it become possible to formulate any theory as to how the protection by inoculation with the germs of a disease was brought about. Without discussing modern experimental evidence regarding immunity, we have only to realize the organism of any bacterial disease as a simple cell, having its environment within the body, subject to variations, just as in nutrient media, and multiplying and completing its life-cycle in the body, obtaining its pabulum from the fluid tissues and their contained cells, and producing substances peculiar to itself, acting upon and being reacted upon by the normal tissue-cells, in order to understand that its pabulum may be exhausted as in a culture medium, that its products may become auto-toxines, and that they may stimulate in the tissue-cells of the body the production of compounds inimical to the further development of the micro-organism of the specific infection.

We, therefore, very properly may conclude that as the bacillus of diphtheria grown outside the body produces its toxine, which, introduced into horses, produces the anti-toxine, whose quality and antidoting strength can be measured, so the variolous or vaccinal germ produces its toxine, which stimulates the tissue-cells to produce their anti-toxine.

That such is actually the case has been experimentally proved, especially by Beclere and Chambon, of Paris, who have shown that active vaccine lymph may be neutralized by adding to it in test-tubes the serum from vaccinated heifers, or from men, or monkeys recently having had variola. We have every reason, therefore, to conclude that variola is a bacterial disease, and that Copeman's, Klein's, and others' claims that they have isolated the micro-organism of smallpox or vaccinia are founded upon fact.

The progress of vaccinal immunity in calves has further been admirably illustrated by the experiments of Beclere and Chambon, in which subcutaneous injections of active glycerinized lymph were made, and subsequently epidermal inoculations were made on succeeding days from the 3rd to the 7th. The effect on the vaccine vesicles when the scarifications were made after the fourth day, were (*a*) vesicles appearing sooner than in normal vaccination; (*b*) vesicles modified in external appearance, rapidly arrested or aborted in development; (*c*) lymph having little or no virulence when taken from vesicles after the fourth day. Such, in brief, is the basis upon which the immunity caused by vaccination rests; and it must be satisfactory to all who have followed the marvellous results of the biological studies of infectious diseases carried on during the past quarter of a century. It is, however, a remarkable fact that while the practice of protective and curative inoculations in the instance of diphtheria have been generally accepted both by the profession and the public, there has yet grown up during the very period in which the experiments which form the groundwork of all our theories of immunity have been carried out, an opposition both to the theory and practice of vaccination against smallpox, which even in conservative England, which claims the honor of the great discovery of Dr. Jenner, resulted in 1898 in the introduction of the conscience clause in the Compulsory Vaccination Act.

Wherein, then, lies the origin of this opposition? Primarily, I believe it lies in the simple fact that vaccination laws are compulsory. We have, in fact, no other law compelling persons to subject themselves to inoculation with a disease at a time when

they are in perfect health, and when, as a matter of fact, no cases of the disease may exist in their community, nor, indeed, in their country. In the second place, the fact exists that in an occasional case unfortunate results have followed the operation, giving some reason for the objections which have been raised. What moral grounds, then, can we have for our insistence upon the necessity for such legislation; and if such can be shown to have a basis in reason, what are the logical deductions to be drawn as to the moral duty laid upon the State which institutes such legislation?

With regard to the first question, we have several answers: (1) That vaccination has during a century been the means of reducing the mortality from a disease which previously caused one-tenth of all deaths in European countries, to the lowest of any of the infectious diseases which we have to combat in temperate climates. (2) That the theory of the immunity caused by it is based upon experimental evidence which has completely revolutionized the practice of medicine, and produced results in the instance of such diseases as anthrax, rinder-pest, plague, and diphtheria, which are comparable to that of vaccination itself. (3) That inasmuch as the infectiousness of smallpox is incomparably greater than that of any of these diseases, experience in every country has shown that, while sanitation, isolation, and disinfection, play important parts in the work of prevention, even the most complete sanitary organizations have failed again and again to eradicate the disease from a community without vaccination. (4) That we have the marvellous fact that vaccination is adequate to protect completely against the disease after exposure has taken place, even up to the fourth day, and of reducing the severity of the disease to a non-fatal issue in almost every instance where vaccination is concurrent with the smallpox.

If, then, we have such potent reasons for persisting in our demands for compulsory vaccination, we must be prepared to accept the fullest responsibility for the position taken, which must be that, if we insist on compulsion, we shall not, through indifference or neglect, allow anything to exist or take place by which any element of danger can enter into the results of the operation.

I am quite prepared, gentlemen, to admit that while any serious results which have ever been shown to follow the operation are in practice infinitesimal compared with the total number of operations, yet the secondary effects of the operation at times from the ethical standpoint have been such as to clearly inculcate

either the producer, the operator, the patient, or two, or, indeed, all three together.

As regards the producer, we must realize that while bovine vaccine has been produced and used largely during the past twenty years in America, the methods adopted being in the hands only of private producers, would not be likely to be improved beyond the scientific knowledge of the biological theories, explaining the modes of its production. Not until bacteriology had made known to us the part played by staphylococci and streptococci in pyemia and septicemia, could we understand why the secondary infections were unnecessary and avoidable complications of vaccination, recognized, however, as to their existence, even by Jenner, who said, "That the most material indisposition, or at least that which is felt most sensibly, *does not come primarily from the first action of the virus on the constitution, but that it often comes on if the pustules be left to chance as a secondary disease.* Hence it was not uncommon, up to quite recent years for lymph to be taken from vesicles on a second or even third day, and for clamps to be used for extracting the largest amount of lymph possible from the vaccinifer. Within the last ten years, however, with the experimental work of Blaxall, Copeman, and others, all this has changed; and to-day we have producers everywhere supplying or endeavoring to supply a vaccine free from extraneous organisms. As usual, the very virtue of the method has become in some instances a defect, and it is found that at times the activity of the virus itself has disappeared. New producers have entered the field, widespread outbreaks have created unexpected demands for vaccine, and between the inexperience and commercial necessities the practice of vaccination has been injured by lymph at times of excessive virulence, and oftener by that having no protective value. It is, therefore, apparent that until all vaccine sent to the operator has been tested and indeed standardized, as diphtheria anti-toxine, by experiments on persons and animals, we must feel that the ethical demands of the situation have not been altogether met. That it would make lymph more costly can be no valid reason for its not being done, and no State with a compulsory law can evade the responsibility for neglecting to demand of producers that all vaccine supplied be tested, or, failing to secure this, must supply adequate facilities for its production by qualified State officers. When we turn to the operator, or public or private vaccinator, we find that while the State licenses medical practitioners, there seems to have been everywhere on this continent a growing neglect on the part of medical colleges to either teach the theory or illustrate the practice of vaccination. We find

lymph which has been stored for weeks in a drug store used by the practitioner as if it were an inert mineral drug, incapable of change; and while, in a surgical operation of another kind, the practitioner may carry out aseptic precautions to an almost absurd extent, he will invade the uncleaned epidermis with, perchance, an unclean scalpel, and, after scarification, leave the unprotected wound to its fate, with an unthinking disregard of whether its course may be normal or a dangerous secondary infection supervene. In all this the personal elements as regards scientific knowledge and personal responsibility from the ethical standpoint are points which perhaps it would be too much to make the State responsible for; but if the credit of vaccinatic is to be lessened or a single person injured by the operation, then it is clearly the duty of the State to allow such compulsory work to be performed only by responsible, trained, public vaccinators, and to establish heavy penalties, as is done in Germany, for any unqualified person performing the operation, or for proved carelessness on the part of a public vaccinator.

It is apparent that to institute such a system legislation of a kind similar to that of England and Germany would be essential. In England, and especially in Germany, compulsory vaccination is accompanied by provisions for the production of vaccine by State establishments, where the responsibility for the production of tested lymph properly rests, and whence lymph is supplied to qualified public vaccinators, appointed by the municipalities. The system further provides for the regular and systematic vaccination of infants, and of vaccination on entrance to the schools and to army and navy. Such desiderata are making themselves felt more and more on this continent, where increasing urban populations and the facilities for the transmission of infection through the extending travel by railways, are yearly becoming greater.

With regard to the individual responsibility for unfortunate results of the operation, but little need be said. If the vaccinator does not warn the patient of the precautions to be taken we may expect that the latter too frequently, through ignorance, will be lacking in a knowledge of the care necessary to protect himself. He ought to be taught to know that he is inoculated with a disease, and that for the short time required, he must consider himself a patient. In the 1900 report of the medical officer in charge of the vaccinations at the National Vaccine Establishment, London, were are informed that out of 1,892 primary vaccinations, eleven on subsequent inspection showed some abnormal course, most of which consisted of "sore arm," caused by *domestic-mis-treatment*.

In view of the distribution by producers of lymph through the journals of this country, and through advertising circulars within the past three years, of statements regarding vaccination, which at times have been at variance with the authoritative teaching on the subject, it may not be ill-timed to refer briefly to the question of what constitutes a normal lymph and a normal vaccination. It must be remembered that we have for years looked upon a good vaccine as one which by its more rapid evolution will within eight days have developed so complete a vesicle that it will serve to protect a person inoculated up to the fourth day after an exposure to smallpox, the incubation period of which is from twelve to fourteen days. We learn, from report after report of the National Vaccine Establishments in England, Germany, and France, that the vesicle on the calf is mature within ninety-six to one hundred and twenty hours after inoculation. So fixed for many years was the period of maturation of the vesicle in man that the compulsory laws of England required all children to be brought on the eighth day for examination of the pock. According to Copeman, of the London National Establishment, glycerinated as well as crude lymph, if normal, will have produced by the seventh day a vesicle five or six mm. in breadth, with a glistening, translucent margin of a nacreous or pearly appearance, with the pale-red areola, the rest of the surface presenting a more opalescent, bluish-white appearance, while the patient suffers from malaise, with some inflammatory fever, and involvement of the axillary glands. From this pearly margin our old teachers took the lymph on the eighth day for arm-to-arm vaccination. With this picture so constant for a hundred years, it is astonishing that we should recently have had new teachers informing us that glycerinated lymph produced normal vaccination when a vesicle had matured on the twelfth day, without, as many of us know, presenting the pearly border and characteristic vesicle which we had been taught to look for. It is apparent that if we are to accept this new teaching, the protective inoculation after an exposure to smallpox would become impossible. Fortunately this new doctrine was short-lived; and, personally, I have been able to demonstrate even to the satisfaction of producers, that a normal lymph, even though it may have had to overcome some slight immunity, was able to produce in a patient so vaccinated an eighth day vesicle of a quite typical character. Such lymphs we have unfortunately had good reason to know, have not only not protected against another vaccine, but have not protected against the mild type of smallpox, which has so generally prevailed. It has, hence, become essential to the maintenance of the credit of vaccination that the public officials as well as the profession should

not only have perfectly clear ideas as to what a normal vaccination is, but that they further be placed in such a position in their several States and cities as to insist upon the use of only such vaccines as will produce normal vesicles and effective immunity.

One of the results of these new theories has been to cast discredit on the very great advances which have been made through the introduction of aseptic glycerinated lymph. Articles everywhere have been appearing in the medical press condemning unsparingly glycerinated lymph; and, from the standpoint of the results above indicated, with some reason. But it is apparent that when we can obtain statistical results collected from hundreds of public vaccinators under an organized system, where, as in England, in the year ending March 31st, 1902, lymph for 974,595 vaccinations had been sent out from the National Vaccine Establishments, and where for the quarter ending December 31st, 1901, 264,044 vaccinations showed a success of 97.9 per cent., and an insertion success of 93 per cent., we have a basis of fact which should wholly disabuse our minds of the idea that glycerinated lymph is a failure.

The actual figures published are:

	Cases.	Case Success per cent.	Insertion Success per cent.
Primary vaccinations	126,209	98.6	94.0
Re-vaccinations	134,835	97.2	92.0

Another theory which has likewise had its rise in these modern days of "sweetness and light" is that one scarification is sufficient for protective purposes. Contrary, perhaps, to what the theory of immunization might lead us to conclude, viz., *that so long as the system becomes inoculated, it does not make any difference how the lymph was introduced, whether by one or five scarifications*, we have the statistics of more than half a century proving absolutely that it does make a difference whether much or little lymph be introduced. We have long been accustomed to say that a well-pitted person will never take smallpox again; and we presume this is true. We say that a child which has suffered from a severe type of measles or scarlet-fever is absolutely immune against another attack; and in practice this is true. We surely then are justified in saying that, just as the very slight protection produced by a twelfth-day vaccine has not established an immunity even for a month against an active vaccine, so a single scarification does not allow the same absorp-

tion at one time, as several would, of a virus whose activity is to overcome the vital resistance of the tissue cells, and will not, therefore, call up the same degree the vital energy in these cells to produce those anti-bodies, whatever their nature, upon which we now depend to explain the immunity.

The table of Mr. Manson, surgeon to the London Smallpox Hospital from 1836-67, of 13,755 cases of smallpox, seems conclusive on this point:

13,755 CASES OF SMALLPOX CLASSIFIED ACCORDING TO THE VACCINATION MARK ON EACH.	PERCENTAGE OF DEATHS.	
	1835-1851 (3,094 cases).	1862-1867 (10,001 cases).
Stated to have been vaccinated, but no cicatrix	21.7	39.4
Having 1 vaccine cicatrix	7.6	13.8
“ 2 “ “	4.3	7.7
“ 3 “ “	1.8	3.0
“ 4 “ “	0.7	0.9
Unvaccinated cases	35.5	34.9

Such facts seem to be conclusive, and fortunately they do coincide with most of the knowledge we have concerning this wonderful fact of immunity against eruptive diseases, either through contagion or experimental inoculation.

It is apparent, gentlemen, that the few practical questions I have touched upon only serve to illustrate to what lengths the subject would lead us, if we attempted to do it justice. It is, however, the practical side to which public officers of health have constantly to direct their attention; and it is apparent that we on this continent, with our democratic methods, have been hitherto greatly limited in our powers to either control the quality of vaccines which have been supplied, or to produce in State establishments products which would fulfil the requirements.

Within the last year, however, official opinion has been crystallizing, and its conclusions briefly stated, would seem to be: (1) That official supervision of the products of vaccine establishments by either State or Federal officers is imperatively demanded; or (2) that the production in State or Federal vaccine establishments of adequate supplies of vaccine of established quality, to be sent out free or at cost to municipalities has become a necessity.

It is not necessary here to enter into a discussion of which scheme is preferable; since while Government production in Germany, England, etc., has proved a success, it cannot be forgotten

that in some respects our democratic methods do not always conduce to that permanency of the civil service and freedom from political complications which are necessary to efficient performance of scientific work. On the other hand, the unlimited capital and keen competition of the large commercial houses supply in many ways facilities for the production of standard articles, and their maintenance at a high standard of excellence, which perhaps few individual States could attain to. Personally I am convinced, however, that no matter which scheme is adopted, there is demanded before everything else adequate legislation whereby from year to year qualified public vaccinators must be appointed in every municipality, who shall be empowered to vaccinate systematically all children born in any year, and that through the responsibility laid upon them, and the routine methods established, such men will become experts in the art, and will gradually obtain such a store of information as will prevent the use of any except standard vaccine, and by the care exercised be able to anticipate and prevent those accidents which we have already referred to as seriously injuring the credit of this greatest triumph of modern medicine.

THE EXPLORATORY METHOD OF RIB-RESECTION IN OLD PYOTHORAX.*

BY CARL BECK, M.D.

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While the principle of Schede, to resect the pleura with the ribs in old pyothorax should always be followed, the method which he advises for that purpose is not to be commended. It is not advisable to outline any definite typical plan, starting with a horseshoe flap.

As recommended in the January issue (1897) of the *International Medical Magazine*, that rib should be selected which apparently forms the centre of the ceiling of the cavity. This can generally be ascertained by probing the pyothoracic fistula. After a long piece of this rib is removed, the cavity can be explored

* Author's abstract of paper read before the Medical Society of the State of New York, January 27th, 1903.

thoroughly, so that the further steps can be outlined. Usually the next lower and next upper rib, together with the costal pleura, are resected first, and the adjacent ones so far as the extent of the cavity suggests. No cavity situated above the fourth rib, can be cured by the method of Schede. I have recently resected the first rib in old pyothorax by exposing the axillary vessels first and shifting them aside so that I could gain access to the first rib. The pectoralis major muscle is freed by blunt separation, so that it can be retracted upwards. After the pulsation of the axillary artery is felt, then the vessel, together with the pectoralis muscle, is held upwards with a large blunt retractor. Thus the temporary resection of the clavicle can be avoided. If in exceptional cases the pulmonary pleura becomes so much thickened as to obstruct the healing process, removal of the fibrous portion must also be performed.

The surgeon should, in other words, not outline an extensive operation by performing an enormous horseshoe flap, but to choose a less extensive method from the beginning, and to give this the necessary elongation later, thus accommodating himself to the conditions as they come up in the further course of the operation. The results are most encouraging.

ABSTRACT OF PAPER ON HOW EYE STRAIN CAUSES HEADACHE.*

BY DR. LUCIEN HOWE, BUFFALO, N.Y.

In this connection we may understand "eye strain" as the pain which is experienced by some persons when they attempt reading, sewing, or other near work, this pain being referred to the eye itself, to the forehead, or some part of the head, or even to the shoulders. The theory that this pain or headache is essentially what we call "nervous," or "cerebral," has so little to justify it, either physiologically or pathologically that it may be dismissed without discussion.

A more natural explanation is that the pain is due directly to some muscular contraction. The object of this paper is to indicate what muscles these are, and how they are thus brought

* Author's abstract of paper read before the Medical Society of the State of New York, January 27th, 1903.

into a condition of painful contraction. For this purpose, let us consider, first, the pain of eye strain which is referred to the globe of the eye itself. Until very recently there was no way of explaining this which was quite satisfactory, this being for the reason that the mechanism of accommodation was not entirely understood.

According to the theory of Helmholtz, which is generally taught, the ligament of Zinn is tense when the eye is at rest, and it relaxes more and more in proportion to the degree of accommodation. Evidently this theory does not satisfactorily explain the facts of what we call eye strain, and this has long been a stumbling block, because we are still conscious of much increased effort when looking at a near point.

A better explanation has been given more recently, and for this our thanks are due especially to Prof. Tscherning. The gist of it is that the act of accommodation is not rather a passive one, as Helmholtz supposed, but in reality, when we look at a near point, we contract the ciliary muscle, and that tightening draws the edges of the lens, bending the central portion of the anterior surface further forward, thus making it more convex. It would lead to a long digression to attempt to give the reasons which lead to this conclusion. Suffice it to say that the facts in favor of this view amount practically to a demonstration. Now that we know that to look at a near point means entirely an active muscular effort, it is no longer difficult to explain the pain in the eyes which constitute the first features of ocular headaches.

Second, a certain amount of accommodation always means a certain amount of convergence of the visual axis to the point at which the eye is focused. This means tension of the internal recti, and also to a certain extent the superior rectus and the inferior rectus.

Third, the accessory muscles of the forehead and of the head are brought into action when any special effort is necessary to maintain the act of accommodation. It is the tension of those accessory muscles largely which give rise to the pain which is pre-eminently a headache. These accessory muscles are so numerous as to warrant more exact consideration. We easily recognize the corrugator supercillii as an accessory muscle in the act of accommodation, because when a person looks intently at a near object, there is an instinctive desire to "scowl," as we say, by contracting of these muscles.

Another important muscle in this connection is the occipitofrontalis. In many individuals the horizontal wrinkles caused by its contraction can be seen in the centre, and even at the side of

the forehead, when an effort at accommodation is long continued. But this contraction means also contraction of the posterior portion of the muscle, and that in turn is frequently manifested by pain, of which the patient complains, at the back of the head. As we know that in certain individuals the connection between the two portions of this muscle glides over the calvarium very easily, it is but fair to suppose that contraction of the anterior fibres produces also a very decided contraction of the posterior fibres. Indeed, it is only in this way that we can explain the fact that in certain persons the effort to read is accompanied by pain at the back of the head. The patient usually speaks of the base of the brain, although we know, of course, that the brain is not sensitive, and the seat of the sensation must be in the muscle external to the skull. In view of the foregoing, we are apparently warranted in the following conclusions: (1) The pain and headaches which are experienced in the so-called eye strain can be accounted for most rationally as due to excessive muscular contraction. (2) The pain in the eye itself, we are now able to explain, by our more recent knowledge of the process of accommodation, and the tension of the internal recti during convergence. (3) The pain over the eye in the forehead, which is caused by contraction of the fibres of the corrugator supercillii by the anterior portion of the occipito-frontalis, and by other fibres extending over the forehead, which are accessory muscles of accommodation. (4) The pain at the back of the head by contraction of the fibres of the posterior portion of the occipito-frontalis, and the upper fibres of the trapezius when also acting indirectly as accessory muscles of accommodation.

HEPATIC BALLOTTEMENT IN PHYSICAL DIAGNOSIS.*

BY A. L. BENEDICT, A.M., M.D., BUFFALO.

The size of the liver is, on the whole, best estimated by auscultatory percussion, as previously reported. This method is seldom vitiated by intestinal tympany, as is the case with ordinary percussion. Palpation readily detects an enlarged or prolapsed liver. It is always well to check the results of one method by applying another, and the level of the lower margin of the liver, as determined by auscultatory percussion, can usually be cor-

* Presented to New York State Medical Society, January 27th, 1903.

roborated by palpation. This margin is always apparently felt lower than it is located by auscultatory percussion, because the thickness of the body-wall intervenes between the examining fingers, or, rather, side of hand, and the organ itself. The fluoroscope usually shows the upper curve of the liver distinctly, whereas, neither ordinary nor auscultatory percussion can map out the summit of the liver. The fluoroscopic shadow of the lower margin of the liver is not usually very distinct, and, with tubes of very low or very high penetration, it may be impossible to gain any information as to this point.

Hepatic ballottement often furnishes important supplemental information of the state of the liver. This method is not applicable in obese patients, or those of very muscular or unyielding chests, but in comparatively thin persons, even up to the age of 40, it is usually successful. The physician should stand at the patient's right, palpating under the costal arch with the right hand, and pressing firmly, but intermittently, with the left hand, downward and backward, over the hepatic area. Meantime the patient should assist the manœuvre by breathing deeply. It is often possible to feel the liver plainly by this method when ordinary palpation, without resistance from above, fails.

At first sight, the liver seems much more movable during respiration when viewed by X-rays, than when palpated or percussed. On more careful inspection, it will be noted that the liver is about twice as movable with reference to a fixed horizontal plane, as it is to the ribs, which are the landmarks in palpation and percussion, and that, in tidal respiration, the respiratory movement of the liver with reference to the ribs, is not sufficient to invalidate them as land-marks.

GYNECOLOGICAL CASES OPERATED ON AT THE SAMARITAN AND WESTERN HOSPITALS.

BY A. LAPHORN-SMITH, B.A., M.D., M.R.C.S. (ENG.)

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for Women, Montreal, Que.

Having been away for my holidays, the patients who entered my service during that time were waiting for me, on my return, a day or two before the meeting of the Canadian Medical Association, on the 16th, 17th and 18th of September; and as several patients had been sent by members who were to

attend the meeting, as well as by physicians in town who were desirous of being present at the operations on their patients. I arranged to do the following eight cases, in the mornings between 7 and 10 o'clock, so as not to interfere with the regular business of the meeting.

Mrs. G., 32 years of age, was sent to me by Dr. Heaslip, of Picton, Ontario. She had begun to menstruate at fifteen years of age, her periods always lasting five days. She was married at 17, and had two children, the last one four years ago. One child had to have craniotomy performed on it, and the other had to be delivered by instruments, after a very severe labor, owing to narrowness of the pelvis; both being, in her own words, "terrible labors." After that child was born she menstruated during lactation, and after weaning the child, the periods came on every three weeks, and were very profuse. During the next four years she dragged along, complaining of pain in the right inguinal region and of a bearing-down feeling, and her menstruation was so profuse as to keep her very weak and anemic.

On examination, the perineum was found to be lacerated, and the uterus lying low in the pelvis. The tubes and ovaries were so tender that it was impossible to touch them until she was anesthetized.

On September 16th, assisted by Drs. Field, Johnston and Allan, I performed the following five operations, at one sitting: 1st. The uterus was thoroughly dilated. 2nd. It was well curetted, and a mixture of iodine and carbolic acid was applied to its interior with a swab, through the uterine speculum. 3rd. Tait's flap-splitting operation was then done on the perineum. 4th. The right ovary and tube, and part of the left ovary were removed. 5th. The uterus was scarified and attached to the abdominal wall with two buried iodoform silk ligatures.

Her recovery was most satisfactory. She was more free from pain two days after the operation than she had been for four years previously; and she went home on October 10th, feeling very well, being six days less than a month from her coming in.*

Immediately after these operations, assisted by Drs. Johnston, Fisk and Harvey, I removed a suppurating Bartholin's gland from Mrs. G., aged 32, sent in by myself from the Montreal Dispensary. Menstruation began at 14, and was painful and scanty. She was married at 24—never pregnant. She was only married to her first husband two and a half years, and during that time

* Since writing the above I have heard that the buried silk stitches have suppurated and had to be removed, which occurs very rarely with this material.

was very well; but he was killed by an accident. She was married again about a year later, but was never well afterwards; probably having contracted gonorrhoea from the second husband. She has not lived with him for five years, earning her living since that as a saleslady in a dry goods store. Regularly, about twice every year, the left Bartholin's gland would become inflamed and would suppurate, rendering it impossible for her to keep at work; so that no store would employ her, because at their busiest time she would break down. For this reason, I dissected out the whole gland, which I find to be the quickest and most complete cure for this trouble, especially if we can succeed in doing it without rupturing the sac and infecting the wound. In this case it was already ruptured when she came to me. I might mention that on one occasion I removed such a gland from an opera singer, on a Saturday morning, and she was able to appear on the stage the following Monday night.

The present case had retroversion and some trouble with the tubes, causing adhesion; but she would not consent to laparotomy at present, because she was so anxious to get back to work. She went out quite healed; although it was necessary on several occasions to inject peroxide of hydrogen into the raw place from which the gland had been dissected out, owing to slight suppuration.

On the same morning, about 9 o'clock, Mrs. V., aged 23, was operated on for tubal pregnancy. She was sent in by Dr. Virrol, of Point St. Charles. She menstruated first at 13, but it was always painful and scanty. She was married at 18, and had two children, the last one two years ago. She ceased to menstruate on May 4th, and on August 4th she was taken with intense pain in her right side, and fell on the floor in a faint. Dr. Virrol was called in, and finding her temperature subnormal and her pulse very fast, and also finding a slight flow from the vagina, he was clever enough to at once diagnose the condition, and sent her to me. I would like to say, in passing, that his example should be imitated, for I feel convinced that tubal pregnancy occurs much oftener than is generally supposed, and that if practitioners would look for it oftener, they would find it more frequently; in proof of which I might refer to the fact that Dr. Warren, one of my former pupils and present friends, has sent me no less than four cases of tubal pregnancy, simply because he was on the lookout for them.

Assisted by Drs. Johnston and Field, I removed a mass the size of an orange, from the right side. It consisted of the right tube and ovary, the fetus, placenta, and a large blood-clot, which

had probably killed the ovum. I also removed the left ovary and tube, because the ovary was the size of a large plum, and consisted largely of a thin-walled cyst, which broke on handling it. She made a good recovery, and went home four weeks after the operation.

With regard to this point of removing the other ovary and tube, in cases of one-sided tubal pregnancy, I have been surprised to see the large number of cases reported in the medical journals of these unfortunate women being subjected to a second laparotomy, after having run the gauntlet of their life with the first tubal pregnancy; and I was still more surprised, on reporting one of my cases at our own Medical Society, to hear one of the members, a general surgeon, criticize me for having removed both ovaries and tubes in several of my cases of tubal pregnancy. It seems to me cruel to leave a woman in abject fear of having to undergo a second risk of her life before operation, and another risk from the operation itself. With such a dread on her mind, how can she perform her duties as a wife? Although not one of my 25 tubal pregnancies has died, still we know that many deaths do occur, both before and after operation. When one ovary and tube is diseased enough to have a tubal pregnancy, I take it that both tubes are more or less diseased, and it is only a question of time when the other tube will meet the same fate as the first one.

The next morning, September 17th, I did the three following cases at the Western Hospital, in the presence of about twenty visiting physicians:

Mrs. R., aged 21, a Caughnawaga Indian woman, was admitted on September 9th, for coccygodynia, from which she had been suffering since six months, at which time she was thrown out of a sleigh and struck the end of her spine by falling on the stump of a tree.

She had begun to menstruate at 14, and was always regular and normal. She had been married a week when the above accident happened to her. On examination, the coccyx was found to be bent almost at right angles with the sacrum, and moving it caused distressing pain. She could not sit down without pain, and after sitting for any length of time she suffered greatly in getting up. The region was sterilized, and an incision made the whole length of the coccyx, which latter was freed from its attachments with scissors and periosteal elevator, so as to leave as much of the periosteum and muscles attached to it as possible. The bone was then disarticulated from the sacrum, and removed without any difficulty. There was very little bleeding, and the cavity

was packed with iodoform gauze, which was left in for two days. She suffered very little, but there was no object in refusing morphia, and she was given one hypodermic of one-quarter gr. The day after the operation she assured me that the pain which she had had almost steadily for six months, was completely relieved, and that the pain of the operation was as nothing compared to that which she had had before. She had a rise of temperature to 101 4-5 degrees, on the day following the operation, but her pulse remained normal; and I believe this rise was entirely due to the iodoform dressing; but as I took care to use very little of it, when this small amount was absorbed and excreted, the temperature returned to normal next day.

At 7.30 in the morning of September 17th I operated on Mrs. T., aged 27, who had been admitted to the Western Hospital on September 8th, complaining of pain in both iliac fossæ, especially on the right side, ever since the birth of her child, in July, 1901; also of occipital headache and loss of appetite. She was a servant, and suffered so much that she was obliged to give up one situation after another, until her means were exhausted, and she was reduced to despair. She gives the following history: Menstruation at 14, normal until after the birth of her child; since which it had lasted seven days, and was very painful; she also complained of much leucorrhœa. On examination she was found to have endometritis, lacerated cervix, disease of both tubes and ovaries, and retroversion of the uterus. The vermiform appendix was also suspected of being diseased; although it was difficult to differentiate the pain in it from that in the right tube, before the operation.

The six following operations were then performed, at the one sitting: (1) Dilatation; (2) curetting; (3) amputation of a badly lacerated cervix; (4) removal of both tubes and ovaries, which were bound down with a mass of adhesions behind the retroverted uterus; (5) the vermiform appendix was found to be attached to the right tube by a lymph-like adhesion, and was cut off even with cecum, the hole in the intestine being closed by two rows of Lembert sutures; (6) then the uterus was scarified and fastened to the abdominal wall with two chromic cat-gut stitches. She made a good recovery, the highest temperature being the night after the operation, when it went up to 100 4-5 degrees, but it came down the next day, and has remained practically normal ever since. She went home on October 11th.

About 9.15 on the morning of the 17th, I operated on Mrs. C., aged 30, who was admitted to the Western Hospital on September 9th, complaining of pain in both iliac fossæ, and of leu-

orrhoea, and pain and smarting in the vagina. Menstruation began at 15, and was irregular before marriage. She was married at 20, and had three children, all born with instruments, and after the last child she had puerperal fever, which kept her in bed for three months. The pain began last March, and has continued ever since. She had pleurisy, chorea, and syphilis, at different stages of her career. At present she is constantly subject to headaches, and is very nervous. The cervix was found to be badly lacerated, very hard and everted; so that it would have been difficult or impossible to have done an Emmett operation. I therefore dilated, curetted, and amputated about three-quarters of an inch of the cervix, by my method, which consists in making an incision through the mucous membrane, just back of the scar tissue caused by the laceration, and pushing it back and drawing the lacerated cervix out. As in the first stage of vaginal hysterectomy, the broad ligament is tied and cut away from the uterus, and then the cervix is amputated, after which the mucous membrane, which formerly covered the cervix, is now made to cover the stump by a couple of stitches attaching it to the cervical canal, above and below, after which the slit in the vaginal roof on each side is brought together by a fine running cat-gut suture; and if nicely adjusted primary union is obtained, so that it is impossible to tell, a few months later, that the operation had ever been done. She made a good recovery, and was discharged on the thirteenth day.

Next morning at 7 o'clock, the following operations were performed at the Samaritan, in the presence of another group of visiting members.

Miss T., aged 63, came to me at the Montreal Dispensary, complaining of pain in her back, which prevented her from doing her work as a general servant. On examination, I found the uterus was completely retroverted. She had begun to menstruate at 12, and it had always been scanty and painful until it stopped at 51; so that she had suffered more or less for 39 years. Since two years she was much worse, having pain in her back on both sides of the abdomen, low down. She had great difficulty with her bowels, owing to the retroverted uterus pressing upon the rectum—and just here, I might say that in all chronic cases of constipation, whether in a married or single woman, the family physician would do well to make a vaginal examination, in order to ascertain whether the constipation is due to a retroversion, as I have known it to be in several hundred cases. The abdomen was opened, the uterus was scarified and attached by two iodoform

silk ligatures to the abdominal wall, the abdomen being closed with *through-and-through silk worm-gut stitches*. She made a good recovery, and is now hard at work.

Immediately afterwards I performed amputation of the cervix and Alexander's operation on a Mrs. B., aged 28, who was sent in by Dr. Smythe. She complained of pain on both sides of the abdomen and the back. She had been married four years, without ever becoming pregnant. On examination, the uterus was found to be completely retroverted, and had a long conical cervix projecting into the vagina. This conical cervix trying to get into the axis of the vagina was one of the causes of the retroversion; and I therefore amputated over an inch of it, and after putting the uterus up and putting in a pessary, to keep it so, I shortened the round ligaments. As the case was a suitable one, the operations were easily done, and the wounds healed by *primary union*. She made a good recovery, and went home in 21 days. I fully expect to hear before long that she has become pregnant, as I have seen at least 50 cases of sterility, due to retroversion, cured by putting the uterus up and keeping it there. The removal of the conical cervix and the dilatation of the canal, which preceded it would also no doubt help in permitting the ingress of the fertilizing fluid.

It will be a pleasure for those who were present at the operations to hear that none of the patients died, and that they have all made good recoveries.

248 Bishop Street, Montreal.

SECTION OF THE EYE—A SUBSTITUTE FOR ENUCLEATION.

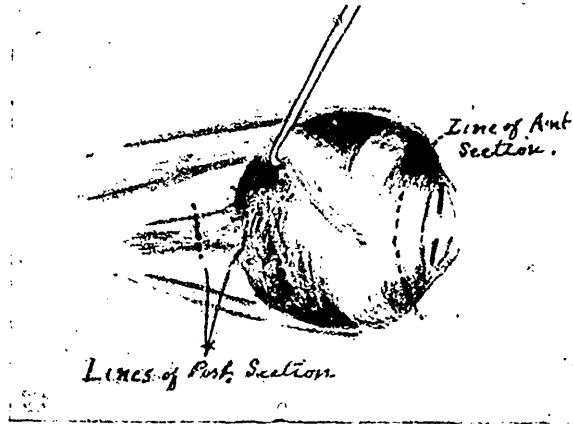
ERNEST A. HALL, VICTORIA, B.C.
Surgeon-in-Chief Burrard Sanitarium, Vancouver, B.C.

In the "Annals of Surgery" for May, 1898, I reported a method of removal of the ciliary region and the sclero-optic junction of the eye-ball, which can be substituted in the greater majority of cases for the old operation of enucleation. This operation has given such satisfaction in my hands that I wish to bring the method before the readers of this journal.

This partial re-section of the eye-ball is applicable in all cases,

except that of malignant disease, in which the purpose is to reduce deformity or to sever the connection with the other eye. The mobility of the stump is such as to give the artificial eye almost normal movement. The applicability of this method is greater than that of the Mule's glass globe method, since the latter should not be employed when there have been symptoms of sympathetic trouble present. I quote from the previous article:

"For two years I have been following a method which, in all but malignant cases, appears to fulfil all requirements, both surgical and cosmetic, and which has given such satisfaction that I consider it worthy of more extensive trial. The strategic parts of the eye-ball are the ciliary region in front and the sclero-optic junction behind. The principal traumatism and sepsis which leads



to loss of function is in the former location, and the conveyance of trouble, sympathetic or septic, to the other eye is through the latter. With these parts, the retina and vitreus, removed, the remaining parts of the eye-ball should be non-irritating and harmless. If so, surgery says preserve them, and if they can conserve a purpose, by all means let us retain them. The intervening sclerotic zone, with all its muscles attached and motor-nerves undisturbed can be made the movable pad upon which the artificial eye may be placed, and thus secure the greatest possible rotation.

The instruments required are speculum, sharp-pointed scissors, catch-forceps, and curette. The eye is thoroughly cleansed, if possible, for a few days previous to the operation, as it is always desirable, though not absolutely necessary, to have an aseptic field.

Complete Anesthesia.—With speculum in place, the scissors

are inserted about twenty-five millimetres behind the sclero-corneal junction, sufficient to include the ciliary body, and complete section made, thus removing the whole front of the eye-ball. The vitreous is then evacuated and retina and choroid removed by curette; the hemorrhage here is usually profuse, but easily controlled by hot water and pressure. The speculum is then inserted within the ball, and thus made to hold both eyelids and edges of sclerotic opening. The point of entrance of the optic nerve is then grasped with tooth-forceps, and the scissors inserted as close to the nerve as possible, to avoid wounding the ciliary arteries, and a circular incision made in the sclerotic, freeing the optic nerve, which is then drawn forward and severed about twenty-five millimetres from sclerotic junction, thus removing a section of the optic nerve. A laryngeal head-mirror is useful here to concentrate the light within the sclerotic cavity. A piece of gauze is inserted and the sclerotic and conjunctiva closed vertically in order to give normal tension to internal and external recti, as lateral motion is of greater importance than vertical. The after-treatment is simple. The gauze may be removed in twenty-four hours. The cavity fills with blood, which becomes partly organized, thus preventing complete collapse of the sclerotic. An artificial eye may be inserted within two weeks.

As to Results.—A fuller pad, giving greater prominence to the artificial eye. Since Tenon's capsule, the muscles and the nerves are not interfered with, the pad has a wide range of movement, giving the artificial eye perfect movement within thirty-five degrees lateral and twenty degrees vertical, but beyond that somewhat limited motion; diagonal motion is also retained. The lachrymal gland, ducts and nerves not being disturbed, the eye is bathed in the normal secretion, thus avoiding the dry, glazed appearance so frequently presented by the artificial eye.

I have deviated a little from the technique of the operation as above described, except in the use of adrenal solution to check the hemorrhage, if excessive after curetting the interior, and the use of a long, slender knife instead of scissors in the posterior sclerotic incision. In no case has there been any sloughing of the sclerotic, nor any sympathetic irritation following the operation.

After several years of trial, I can recommend this operation as widely applicable, easy of performance and giving most satisfactory cosmetic results in the excellent movement of the artificial eye.

Clinical Reports

BRIEF NOTES ON SOME INTERESTING CASES OF SKIN DISEASE.

BY GRAHAM CHAMBERS, B.A., M.B., TORONTO.

Professor of Dermatology and Associate Professor of Clinical Medicine Women's Medical College Toronto; Physician and Dermatologist, St. Michael's Hospital; Lecturer on Clinical Medicine Toronto University, etc.

CASE OF ERYSIPELOID.

C. H., female; cook; consulted me on December 12th, 1902, on account of an eruption on the thumb of her right hand. She stated that four days previously she had pricked her thumb with a pin concealed in a duster which she was using at the time. The eruption began at the site of the injury, and gradually advanced to the base of the thumb. When I examined the patient, the eruption had extended to the back of the hand. The affected part was red and slightly edematous, particularly near the advancing edge. The eruption continued to extend for four days, when the swelling and redness disappeared, and were not followed by desquamation.

CASE OF ERYTHEMA IN A PATIENT SUFFERING FROM EXOPHTHALMIC GOITRE.

A. M., aged 24; female; telephone operator; consulted me in May, 1901, on account of an eruption that appeared coincident with any active exercise. The lesions were generally situated on the arms and neck, but when active exercise, such as dancing, was taken, it extended to nearly every part of the surface of the body. Burning and itchiness were prominent symptoms. Patient was in poor health. Pulse 90; fine tremor in hands and twitching in the muscles of the face; no goitre or exophthalmos. About a month later goitre and exophthalmos appeared. During the fall of 1901 patient improved and gained greatly in weight, although she suffered from diarrhea. Patient stated that as long as the diarrhea continued she did not suffer from burning and itchiness of the skin. She continued to improve in health, and all the cardinal symptoms of Grave's disease disappeared during the summer of 1902; but patient was not relieved of the burning and itching in her skin. Gastric and intestinal antiseptics give temporary relief, but the eruption tends to recur.

CASE OF HERPES ZOSTER OPHTHALMICUS.

Trenton; aged —; male; was admitted to St. Michael's Hospital on January 8th, 1903. He complained of itchiness on right side of nose and defective vision in right eye. Patient states that he had erysipelas last March. The disease began with severe pain in right side of forehead and in right eye. Two or three days later blisters appeared on his forehead and right side of nose. The right eye was so swollen that he could not see out of it. After a couple of weeks the blisters disappeared, but the right side of forehead was badly scarred, and although painful he could not feel a pin when stuck into the scars. After a short time the pain disappeared, and itchiness appeared to take its place, at least round the right ala nasi. At the date of his admission to St. Michael's Hospital he presented the following symptoms: Right forehead badly scarred, the cicatrices extending to, but not beyond, the middle line. The scars are partially anesthetic. Pruritus on right side of nose. Three small opacities on cornea of right eye.

Desiring to make a practical, useful journal for the General Practitioner,
the Editors respectfully solicit Clinical Reports from subscribers and others.

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And Ontario Medical Journal

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No. 2.

ELECTRICITY IN MEDICINE.

During the last few years the field of usefulness of electricity in the practice of medicine has been greatly extended. Electrolysis has been found an important method of treatment in certain forms of skin disease. Electro-diagnosis is a necessary adjunct in the differentiating of diseases of the nervous system. The suggestive influence of electric currents has proved of value in the management of neuroses. None of these, however, have appealed to the medical profession with the same force as the application of X-rays to medicine. The X-rays is a physical remedy which every physician feels that he would like to utilize in his practice. It is absolutely necessary in the diagnosis of many conditions, and its therapeutic value is beyond dispute.

We are satisfied that the medical profession of Canada are anxious for electricity applied to medicine to be placed upon a better footing. It should be taught in the medical colleges and the provincial examining boards should add it to their curricula. Electricity, in the hands of one unlearned in the subject, is a

dangerous remedy, and we think the universities and examining boards should take measures to place it, in so far as it is applied to medicine, in the hands of physicians. Moreover, the physician who uses it should be perfectly familiar with its dangers, as well as its therapeutical uses.

THE TEACHING OF MEDICAL ETHICS.

The appearance in our "Book Review" pages this month of announcements regarding "Medical Ethics and Cognate Subjects" and the "Book on the Physician Himself," is the incentive to call attention to the neglect of teaching the student-body something in regard to medical ethics. No doubt the proposition will be met by the rejoinder: The medical curriculum is already crowded, and professors and lecturers cannot get enough time to deliver their regular courses. All will admit the importance of the subject; the students should receive some instruction, but where can we find the time? Nearly every student-body has its medical society, which holds meetings bi-weekly or monthly, at which students read papers on medical subjects and discuss these amongst themselves. Here seems to lie the opportunity. If, instead of a medical society, the student-body could be brought to understand the importance of their having an "Ethical" society, a pronounced step in this respect would be taken in the right direction. If meetings were held only monthly, during an eight months' term, eight addresses on medical ethics, covering separate and distinct ground, could be given by members selected from the faculty or elsewhere. Thus the whole subject of medical ethics could be practically covered. The medical society would become the ethical society—nothing would be lost to the students; much, very much, would be gained. The medical society, verged into the ethical society, would in all colleges become a power for good; and the meetings of it would be sure to command the attendance of almost all if not all of the student-body.

Editorial Notes

DOCTOR! THIS IS FOR YOU.

The Canadian Medical Protective Association should merit the united and earnest support of every medical practitioner in Canada. The following is the report of the first year's work, as submitted by the president, Dr. R. W. Powell, Ottawa, during the meeting of the Canadian Medical Association at Montreal, in September last:

THE CANADIAN MEDICAL PROTECTIVE ASSOCIATION— SECOND YEAR.

Circular Letter No. 3.

Dear Doctor,—The first year of our association ends on December 31st, 1902, and we beg to remind you that your annual dues are payable on January 1st, 1903, for the second year. The result of our efforts to organize this association has been encouraging, though the membership is not as large as we hoped.

At the meeting of the Canadian Medical in Montreal in September last, our annual report was read at a special meeting of our association. In brief, the report showed that our total membership for the first year reached 243, made up as follows:

From Ontario	125
“ Quebec	52
“ Nova Scotia	19
“ New Brunswick	14
“ Prince Edward Island	2
“ Manitoba	13
“ North-West Territories	4
“ British Columbia	14
	243

The report also disclosed the expenditure to have been \$261.93, as follows: Postage, \$117.00; printing and stationery, \$98.53; services of clerk preparing envelopes and circulars for the mail, \$40.10, and bank charges, \$6.30. The cash balance reported to the meeting was \$352.67.

If our association is to be a success it is very essential that the membership increase much beyond these figures, otherwise

the executive will fail to carry out the objects of the association, viz. : to defend a member who is unjustly assailed for malpractice, because the funds will not be sufficient to enable us to carry on a suit. We may say that, fortunately, during our first year we have only been called upon twice to assist members. The first case has ended in our favor, and we successfully defended Dr. Norton, of Shelburne, Ont. This one case emptied out our exchequer of its balance left over from this year's membership fees, after expenses of printing and postage were paid.

(It is well to remind members that it costs \$100 to circularize the whole profession.)

A second case for defence has been on our books, viz. : Dr. Telford, of Chemainus, B.C. Instructions were given to defend, and Dr. Telford was notified that the association would stand behind him. This case is not yet tried, and we are in hopes that our notification of defence may have deterred the plaintiff.

There can be no question that this feature of our banding together from the Atlantic to the Pacific to assist one another in difficulties will have the effect of arresting many a case at the threshold of a suit because it is well known that a vast majority of cases of malpractice suits are begun with the idea of frightening men into a settlement.

While I am writing this circular we are notified of a third case that has just been begun in Hamilton against one of our members. A cursory examination of the facts discloses the old story—a compound fracture of leg with its usual difficulties, and a disobedient, ignorant patient—refusal to allow thorough control during treatment, displacing bandages, and splints, etc., etc., and a year afterwards a suit for malpractice. This member will have to be defended, and there can be little doubt of our success, but we want *money to defend*. When one thinks that it only costs each of us \$2.50 annually to join, and what untold benefit we can be to each other by so doing, we are justified in looking for support for our association.

COLLECTION OF ACCOUNTS.

We have again much pleasure in calling attention to the card of Mr. Richard Tew, in our advertising columns. We can recommend Mr. Tew as prompt, effective, business-like in his methods, and without doubt the best collector of doctor's accounts in Toronto. Try him. Watch the good results. You will be more than satisfied.

News Items

DR. W. H. B. AIKINS, Toronto, has returned from a trip to New York.

DR. W. A. YOUNG, Toronto, has returned from an extensive trip to Chicago, St. Paul, and St. Louis.

THE Canadian Pacific Railway will contribute \$200 annually to the Maintenance Fund of the Vancouver General Hospital.

DR. W. S. MCKAY, physician in charge of the hospital at the Superior Lumber Company's camp, Port Arthur, was found dead in bed on the morning of the 7th of January.

DR. W. W. ANDREWS, of Mount Allison University, Sackville, N.B., has invented a microscope for dissecting purposes, which is said to be a very practical apparatus for delicate work.

DR. L. W. COOK, Truro, N.S., has gone to Newfoundland, to take charge of the practice of Dr. Herbert Smith, of Buren, while the latter is studying abroad.

DR. WILLIAM OLDRIGHT, Professor of Hygiene, in the Medical Department of the University of Toronto, along with his son, Dr. H. H. Oldright, St. Catharines, Ont., has returned from a trip to the West Indies.

DR. GEORGE HETHERINGTON, superintendent of the Provincial Lunatic Asylum, New Brunswick, recently entertained the Medical Society of St. John, at the institution, and delivered an address on the occasion on insanity in general.

LAVAL MEDICAL STUDENTS DINE.—The medical students of Laval University, Montreal, held their annual banquet in that city on Saturday evening, the 17th of January. Sir William Hingston replied to the toast of "Our Professors."

DR. GERALD D. FITZGERALD, Amherst, N.S., died on the night of January 10th, from apoplexy, aged thirty two years. He was a graduate of Queen's University of the class of '93, and had only been practising in Amherst since May last.

ABOUT eighty patients were treated at the St. John General Hospital in 1902.

SMALLPOX is rampant among the Indians on the Tyenendaga Reserve near Belleville, Ont.

DURING the year 1902 there were 219 cases of contagious diseases reported to the St. John, N.B., Board of Health.

OTTAWA'S VITAL STATISTICS FOR 1902.—There were 1,638 births in Ottawa in 1902; 571 marriages, and 1,190 deaths.

THE Endowment Fund of the Montreal General Hospital has recently been enriched by a lady friend of the institution to the extent of \$5,000.

DR. THOMAS WALKER, St. John, N.B., has retired from the position of vice-president of the General Hospital of that city, and also from the office of treasurer.

DR. HENRY W. DAY, registrar of the county of Hastings, died on the 10th of January. He formerly practised at Trenton, and was appointed registrar about twelve years ago.

DR. P. H. BRYCE, Secretary of the Ontario Board of Health, has returned to Toronto from Albany, N.Y., where he read a paper on vaccination before the annual meeting of the Medical Society of the State of New York.

THE Vancouver General Hospital admitted fifty-one patients during the month of December. The total subscriptions received by this hospital during 1902 amounted to \$18,000. Dr. McGuigan acted as a visiting director for January.

TORONTO'S health report for January states that there were 57 cases of diptheria, 105 cases of scarlet fever, and 12 of typhoid fever. The Medical Health Officer recommends an addition to the Isolation Hospital, to cost \$30,000.

FRENCH-CANADIAN MEDICAL PROFESSION.—On the evening of January the 27th, the Societe Medicale de Montreal held its annual banquet in the Place Viger Hotel. There was a very large attendance, and the event proved in every way an enjoyable one.

THE Montreal Diet Dispensary during the past nine and one-half months issued 10,842 orders. The three nurses connected with the institution paid in that time 4,073 visits.

DR. McALPINE, the Medical Health Officer of Vancouver, has received word from the Board of Health of San Francisco that the bubonic plague is well under control in that city, and that since Dec. 15th no new cases have been reported.

SMALLPOX IN ONTARIO.—On the first of February there had been reported ten cases of smallpox on Manitoulin Island, with two deaths. Amongst other places in which the disease has appeared are Galt, Toronto, St. Thomas, Sault Ste. Marie, Amherstburg, and several townships in Eastern Ontario.

LORD STRATHCONA will give \$20,000 for a new gymnasium for McGill University. The students have already raised \$1,000 amongst themselves, and the graduates of the institution will be approached for contributions. The gymnasium may be made a memorial of the 75th anniversary of McGill, which is to take place next year.

DR. C. J. FAGAN, Secretary of the British Columbia Board of Health, has returned from San Francisco, where he was investigating the reports with regard to the presence of the plague in that city. In his report to the Government of British Columbia he recommends that a strict quarantine be maintained against vessels arriving from San Francisco.

ST. FRANCIS DISTRICT MEDICAL ASSOCIATION.—The regular meeting of this association was held about the middle of January, at Sherbrooke, Que. The subject of the curtailing of the public school curriculum was discussed, Dr. Stevenson, inspector of public buildings, considering that the children in the Protestant schools of Quebec study too many subjects.

MCGILL STUDENTS PLACE WREATH ON QUEEN VICTORIA'S MONUMENT.—Over eleven hundred students in the various faculties of McGill University placed wreaths on the monument of the late Queen Victoria, on the second anniversary of her death, January 22nd. The idea of thus perpetuating the memory of Queen Victoria originated amongst the students of the medical faculty. There was a large assemblage of citizens to view the decoration ceremonies.

ACCORDING to the vaccination law of New Brunswick no child will be admitted to the schools of the province unless vaccination has been performed successfully within three years. Where the certificate of such vaccination is not signed by a physician, the parent must make a solemn declaration that the operation has been performed.

CANADIAN QUARANTINE LAWS.—Representatives of Montreal steamship companies have recently waited on the Minister of Agriculture at Ottawa, to ask for changes in the quarantine laws of the St. Lawrence, complaining of undue detention of passengers and vessels, citing New York, where there are greater facilities in the quarantine service. Mr. Fisher has promised to make improvements if they can be done without endangering the public health.

DR. W. H. DRUMMOND, Montreal, recently filled the following engagements in New York and vicinity: On the 12th of January he appeared in the Montauk Theatre, Brooklyn; on the 14th, before the Booksellers' League, New York; on the 15th at the Franklin Literary Society, Brooklyn; on the 16th at the Canadian Society, New York; on the 17th at Goodhue Memorial Hall, Tarrytown, N.Y. Subsequently he dined with President Roosevelt, Washington, D.C.

THE HEALTH OF VICTORIA, B.C.—According to the annual report of the Health Officer of Victoria, B.C., for 1902, there were 83 cases of diphtheria, with three deaths, and 48 cases of scarlet-fever, with no deaths. On Darcy Island there are still four lepers. Every effort will be brought to bear upon the Dominion Government to have these transferred to the Lazaretto at Tracadie, N.B. The death rate for 1902, as compared with that for 1901, was 10.9 per 1,000, as against 12.33 per 1,000.

DR. WILFRID T. GRENFELL, the medical missionary to Labrador, has recently lectured in Montreal and Toronto, and will shortly proceed to Chicago, where he is to deliver an address on his work amongst the fisher-folk of Labrador and Newfoundland. The work prosecuted by Dr. Grenfell is distinctly medical in its character, and its object is to reach those isolated cases of sickness among the fishermen on the Newfoundland and Labrador coasts that otherwise would receive no medical or surgical assistance.

HAROLD BORDEN MEMORIAL.—On the afternoon of January 21st, there was unveiled a memorial tablet to Lieut. Harold Borden, in the Mount Allison University Chapel, at Sackville, N.B. This tablet will commemorate the patriotism and courage of Lieut. Borden, who while leading his troops to victory at Withpoort, South Africa, fell, July 6th, 1900. Lieut. Borden was a medical student of McGill, and the only son of Sir Frederick Borden, the Canadian Minister of Militia.

VITAL STATISTICS OF ST. JOHN, N.B., FOR 1902.—The deaths in St. John, N.B., by months, in 1902, were as follows: January, 58; February, 51; March, 61; April, 58; May, 57; June, 53; July, 61; August, 48; September, 71; October, 63; November, 53; December, 72. Infectious diseases for the year were as follows: Diphtheria, 75 cases, 12 deaths; scarlet-fever, 108 cases, 1 death; typhoid fever, 21 cases, 7 deaths; measles, 9 cases, no deaths; smallpox, 6 cases, no deaths. Of the total number of deaths, 555 belonged to Canada, 149 foreign, and two not stated. There were 72 deaths from tuberculosis of the lungs.

THE ANNUAL LECTURE AT MCGILL UNIVERSITY.—Dr. T. A. Starkey, the newly-appointed professor of hygiene at McGill, in succession to the late Dr. Wyatt Johnston, delivered the annual university lecture one afternoon the latter part of January. He took for his subject "Hygiene," and in opening his lecture dealt at considerable length with the large amount of work which was performed by the late professor, and the good he did for the community. Referring to Bacteriology: In this particular branch Dr. Johnston had instituted research as to the bacteria in both milk and water. In medico-legal work he had also done a great deal of good. Mention was also made of his invaluable work on "Accident Assurance." Dr. Starkey then proceeded to handle his subject from three standpoints—and it was through these three that hygiene has made any progress at all, viz., social progress, general enlightenment, and constitutional freedom, especially to the great mass, the working classes. These three things produced two results: (1) A condition of mind and thought capable of appreciating the ever-increasing need for better administration, to ensure a more wholesome condition of things in the daily surroundings and lives of the masses; and (2) a more charitable desire in the minds of most individuals to promote the happiness and welfare of their fellow-creatures.

The Physician's Library

A Treatise on Diseases of the Skin. For the use of Advanced Students and Practitioners. By HENRY W. STELWAGON, M.D., Ph.D., Clinical Professor of Dermatology, Jefferson Medical College and Women's Medical College, Philadelphia; Dermatologist to the Howard and Philadelphia Hospitals. Handsome octavo of 1,125 pages, with 220 text-illustrations, and 26 full-page lithographic and half-tone plates. Philadelphia and London: W. B. Saunders & Co. Canadian Agents, J. A. Carveth & Co., Toronto. 1902. Cloth, \$6.00 net; sheep or half morocco, \$7.00 net.

The author has had a long experience in the study and practice of dermatology, and is therefore in a position to give much practical information, drawn from his experience alone. The book before us may be said to present the practical part of the science of dermatology in a sufficiently full and complete manner to make the work one that will give the general practitioner a clear comprehension of the symptomatology, diagnosis, and treatment of the various affections with which he is most likely to come in contact. Diagnosis being the most difficult and confusing part of cutaneous medicine, has been wisely accorded considerable attention. The elaborate remarks under general diagnosis will be found of substantial aid in narrowing the diagnostic possibilities. The value of this division of the text has been enhanced by the insertion of a large number of colored plates, from the well-known Mrazek Hand-Atlases of Diseases of the Skin and Syphilis. The other practical part of dermatology—treatment—has been in many diseases detailed at considerable length. In most cases the author describes his own method of treatment as well as that employed and advised by others. Both the constitutional and local treatment are considered. Wherever possible the author gives reasons for any form of treatment, and in every way endeavors to make his therapeutics as rational as possible. His local treatment is particularly excellent. But in stating that the book deals with the practical parts of dermatology, it is not to be understood that etiology and pathology have been neglected. These have been given entirely satisfactory consideration, and their treatment will be found a complete, but concise, reflex on our present knowledge. The clinical and pathologic aspects are further elucidated by a large number of very beautiful illustrations, mainly from the author's own collection. Indeed, the

work, though originally planned for the student and general physician, will be found of material assistance to the dermatologist, as presenting the most recent advancements in the subject.

Book on the Physician Himself and Things That Concern His Reputation and Success. By D. W. CATHELL, M.D. The Twentieth Century Edition, being the Eleventh Edition, Revised and Enlarged by the Author and his Son, WILLIAM T. CATHELL, M.A., M.D. Pages, 411; royal octavo. Extra cloth, \$2.50 net, delivered. Philadelphia: F. A. Davis Company, Publishers, 1914-16 Cherry Street.

The eleventh edition of this popular and widely-read book comes to hand in new form and style. The old, or last edition, has been much improved upon to the extent of over sixty pages. Every young man upon, or even before, commencing the practice of medicine, should possess himself of a copy of this book, as it is as essentially necessary as almost any other office equipment. The fund of information it contains and conveys guides and assists very materially the building of a successful practice,—and where is the young man who does not wish to be successful from the very start? It teaches him the ethics of the profession, and points the way to become an honorable unit therein, what is of far more worth than success in practice at the cost of esteem in the ranks. This book should be found listed in the calendar of every medical college in the land.

Twentieth Century Practice. An International Encyclopedia of Modern Medical Science. By Leading Authorities of Europe and America. Edited by THOMAS L. STEDMAN, M.D. In Twenty-one Volumes. Vol. XXI. Supplement. New York: William Word & Co. 1903.

Those who possess the "Twentieth Century Practice" will welcome the issuing of this supplement of 845 pages. Within the last two years the advances in certain lines have been so marked that the publishers are quite justified in thus supplementing their great masterpiece. The initial seventy-one pages are devoted to the X-ray in its application to medicine and surgery. Following comes an admirable treatise on Surgical Kidney, the Uterus and the Bladder, by Reginald Harrison.

Rheumatism, Gout, Arthritis Deformans, Disorders of Menstruation, Diseases of the Spinal Cord, Diseases of the Peripheral Nervous System, Yellow Fever, Bacillary Dysentery, Cancer, the Treatment of Cancer, Tuberculosis and Malaria, are valuable chapters, representing all that is new and up-to-date in these subjects which have been prominently in the medical mind, if not as well in the lay mind, for the past two or three years. Not that these comprise all the book; for there are other parts equally worthy of importance. Hematology is one subject in particular which has made pronounced advances, and that, too, with rapid strides. Forty-eight pages are devoted to this alone, an able contribution from the pen of Dr. H. A. Figley, New York. The Supplement embraces so much of the good work done in medical science during the last two years that it should prove a most valuable adjunct to the library of those even who are not fortunate enough to be in possession of the complete system.

Atlas and Epitome of Diseases of the Mouth, Pharynx, and Nose. Saunders' Medical Hand-Atlases. By DR. L. GRUNWALD, of Munich. From the Second Revised and Enlarged German Edition. Edited, with additions, by JAMES E. NEWCOMB, M.D., Instructor in Laryngology, Cornell University Medical School; Attending Laryngologist to the Roosevelt Hospital, Out-Patient Department. With 102 illustrations on 42 colored lithographic plates, 41 text-cuts, and 219 pages of text. Philadelphia and London: W. B. Saunders & Co. Canadian Agents, J. A. Carveth & Co., Toronto. 1903. Cloth, \$3.00 net.

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

and nose, serves also as a text-book on the anatomy and physiology of these organs. Indeed, we wonder how the author has encompassed so much within such a limited space. We heartily commend the work as the best we have seen.

Atlas and Epitome of Human Histology and Microscopic Anatomy. Saunders' Medical Hand-Atlases. By PRIVATDOCENT DR. J. SOBOTTA, of Wurzburg. Edited, with additions, by G. CARL HUBER, M.D., Junior Professor of Anatomy and Histology, and Director of the Histological Laboratory, University of Michigan and Ann Arbor. With 214 colored figures on 80 plates, 68 text illustrations, and 248 pages of text. Philadelphia and London: W. B. Saunders & Co. Canadian Agents, J. A. Carveth & Co., Toronto. 1903. Cloth, \$4.50 net.

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

Medical Ethics and Cognate Subjects. By JAMES S. SPRAGUE, M.D. Toronto: Charles P. Sparling & Co., 13 Isabella Street.

To quote from the hustling phraseology of one of our contemporaries, "The profession should recognize in this book a 'good thing,' and push it along." We are, indeed, as a professional

body, much indebted to the versatile author for his having undertaken and for having successfully completed a work so very much needed in our Dominion. After a busy day's work one can sit down any time and spend a profitable and enjoyable hour or two in reading Dr. Sprague's book. He can take it up again and again, and will find therein much upon which to spend calm and sober reflection. Works of this kind point to higher ideals; they reveal to us the heroes in medicine; they keep before us that which ennobles professional life. All this, of course, is grand, but to come down to sober thought, it does not fill the coal bin. A little more business ability engrafted on to professional life, a little more business insight to detect the gay deceiver and the profession would not suffer; and there would be less suffering in the profession. As "Medical Ethics and Cognate Subjects" has been endorsed by many eminent in the profession, we can only add that this is not a book one can loan to a friend. All must possess a copy for themselves. You will want to pick it up any hour of the day, any week in the month, or any month in the year. The teachers in the colleges should impress upon students that a book of this character is as worthy of possession as an Osler, a Galibin or a Treves.

The Practitioner's Guide. By J. WALTER CARR, M.D., London, F.R.C.P., Physician Royal Free Hospital, Physician Victoria Hospital for Children, etc.; T. PICKERING PICK, F.R.C.S., Consulting Surgeon St. George's Hospital and Victoria Hospital for Children; ALLAN H. G. DORAN, F.R.C.S., Surgeon to the Samaritan Free Hospital; ANDREW DUNCAN, M.D., B.S. (Lond.), F.R.C.S., M.R.C.P., Physician Branch Hospital Seaman's Hospital, Hospital Society, Joint Lecturer on Tropical Medicine at London School of Tropical Medicine, etc. London (39 Paternoster Row), New York, and Bombay: Longmans Green & Co. 1902.

Every busy practitioner requires a book of reference to which he can resort at any time to assist him in any difficulty in which he may be placed whilst engaged in the duties of his profession. The endeavor of the authors has been to compile such a work, and with that object in view have made the text as practical as possible. In the consideration of the various diseases special attention has been given to symptoms, differential diagnosis, and to treatment, while little has been said on the pathology and etiology of the morbid conditions. The subject of gynecology

logy is an important one in the practice of a general practitioner, and on this account it has received especial attention. In the surgical portion of the work only those operations which a general practitioner may be called upon to perform at a moment's notice, have been described in detail. The book, taken as a whole, is a good one, and would be a great aid to every busy physician.

Anatomy. Lea's Series of Books. A Manual for Students and Practitioners. By WILLIAM H. ROCKWELL, JR., M.D., formerly Assistant Demonstrator of Anatomy in the College of Physicians and Surgeons, Columbia University, New York. Series Edited by BERN. B. GALLAUDET, M.D., Demonstrator of Anatomy and Instructor in Surgery, College of Physicians and Surgeons, Columbia University, New York; Visiting Surgeon, Bellevue Hospital, New York. Illustrated with seventy engravings. Philadelphia and New York: Lea Brothers & Co.

The first thought which strikes us in looking at this neat, bright-looking volume (red covers), and knowing it as one of Lea's Series of Pocket Text Books, is—which pocket is it intended for? Anatomy is a vast subject, and one cannot very readily put it into his vest or his hip pocket. We believe, however, jokes aside, anatomy is generally considered to be too dry to joke about—that the author has worked out a happy idea. When the student comes to the time when he must “cram” for examination, Morris and Gray demanded too much time; Rockwell's volume will certainly fill a want. It is thorough enough for just such purposes. A part which commends it further is that it has been prepared along the lines of one another—Gray.

The A B C of Photo-Micrography. A Practical Handbook for Beginners. By W. H. WALMSLEY. 155 pages, 5x7, with 29 Photo-Micrographs by the Author. Cloth, \$1.25 net. New York: Tennant & Ward.

The lack of any American book dealing with this fascinating branch of photographic work, and the great need of an elementary introduction to photo-micrography, has led Mr. W. H. Walmsley to prepare this excellent manual. Mr. Walmsley is a recognized authority in the photo-micrographic world, and has had a more varied and longer experience in the field than most of his co-

workers. He deals with his subject in a plain but comprehensive way, and the beginner who will study the A B C should find his difficulties vanish. The illustrations add largely to the practical value of the book and are, in themselves, most interesting.

Progressive Medicine. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by HOBART AMORY HARE, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia, etc., assisted by H. R. M. LANDIS, M.D., Assistant Physician Jefferson Medical College Hospital. Volume IV. December, 1902. Philadelphia and New York: Lea Brothers & Co.

This is a commendable work, and deserves the support it is receiving from the medical profession. A general physician must read a work of this kind, if he wishes to keep abreast of the time. The present volume is up to the previous high standard. Dr. Max Einhorn writes on Diseases of the Digestive Tract and Allied Organs, the Liver, Pancreas, and Peritoneum; Dr. Joseph C. Bloodgood on Anesthetics, Fractures, Dislocations, Amputations, Orthopedics, etc.; Dr. William T. Belfield on Genito-Urinary Diseases; Dr. John Rose Bradford, on Diseases of the Kidneys; Dr. Albert P. Brubaker, on Physiology; Dr. Charles Harrington, on Hygiene; Dr. E. R. Thornton, on Practical Therapeutic Referendum.

Obstetrical Nursing for Nurses and Students. By HENRY ENOS TULEY, M.D., Louisville, Ky., Professor of Obstetrics, Kentucky University, Medical Department; Visiting Obstetrician to the John N. Norton Memorial Infirmary, Louisville City Hospital, and the Home for Friendless Women, etc. Pages 202. Price, cloth, \$1.00 net. Chicago: G. P. Engellhard & Co. 1902.

The text of this little book contains an elaboration of the lectures in obstetrics, delivered by the author, to the pupils of the Training School for Nurses of the John N. Norton Memorial Infirmary, and the City Hospital of Louisville. Dr. Tuley has the faculty of presenting his subject in a concise and clear style, and always has in mind the fact that he is writing a book for nurses. A large number of illustrations assist in making the text clear.

The Mattison Method in Morphineism. A Modern and Humane Treatment of the Morphine Disease. By J. B. MATTISON, M.D., Medical Director Brooklyn Home for Narcotic Inebriates. New York: E. B. Treat & Co. 1902. Price, \$1.00.

Dr. Mattison has thirty years' experience in the treatment of the morphine disease, and is, therefore, in a position to give valuable advice on the subject. During the last few years morphineism has been increasing in frequency, and practical suggestions as to its treatment, such as given in this little monograph will be welcomed by the profession.

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

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

The Fuller Building, erected on the triangular plot bounded by Broadway, Fifth Avenue, Twenty-second and Twenty-third Streets, is one of the oddest structures in the world, and because of its peculiar shape is known as the "Flatiron Building." From the offices, purposely located on the seventeenth floor, can be obtained an unobstructed panoramic view of the city.

Physicians visiting New York are cordially invited to make these conveniently appointed offices their headquarters, where they can receive and answer their correspondence, obtain an interesting panoramic view of the city from a most favorable point, and where they will always be courteously welcomed.

Special Selections

ON COLON CATARRH.*

BY T. STACEY WILSON, M.D., M.R.C.P.
Physician to the Birmingham General Hospital.

Under the heading of colon catarrh I propose to include certain morbid conditions of the colon which in their extreme developments present somewhat differing clinical pictures, but which nevertheless have as their common factor a catarrhal irritability of the colon and which are connected together by so many intermediate types of disease that their inclusion under one common heading seems justifiable. The conditions I refer to are: (1) Simple acute catarrhal colitis; (2) subacute and chronic simple catarrh of the colon intermediate between No. 1 and No. 3; (3) the so-called "muco-membranous colitis," also called "membranous colitis"; (4) mucous colic; (5) true catarrhal typhlitis.

I do not include under the heading colon catarrh, the various types of ulcerative inflammation of the colon of more or less specific origin.

VARIETIES OF COLON CATARRH.

1. By simple acute catarrhal colitis I mean what is recognized as the ordinary acute inflammatory condition of the colon due to errors of diet, chill, etc., and is characterized by colicky pain, colon tenderness, diarrhea, and the passage of much mucus, and sometimes blood in the stools—a morbid condition ably described under the above heading in Allbutt's "System of Medicine."

2. The heading "subacute and chronic catarrh" really includes all the three remaining types to be spoken of, but the term is used here to include those cases which cannot be classified as true membranous colitis, mucous colic, or typhlitis. These less characteristic cases constitute, in the writer's experience, a considerable portion of the cases of colon catarrh met with, and to them the description of the disease here given very largely applies.

3. By "muco-membranous" or "membranous" colitis I mean the condition usually described under these names, characterized by pain, constipation, passage of so-called membranes in

* Read before the Birmingham and Midland Counties Branch of the British Medical Association.

the stools, and with neurasthenic or other nervous manifestations.

4. Mucous colic, as described by Nothnagel and others, differs from the foregoing in that only two main symptoms are present, namely, colic and the passage of mucus, and the condition is described as a pure secretory neurosis of the colon.

5. Under the heading "true catarrhal typhlitis" I include cases of catarrhal inflammation of the cecum associated with the passage of mucus in the stools, in which there is no evidence of the appendix playing a primary part in the causation of the disease. I shall deal with this condition later on, and will only add here that the most characteristic feature in these cases is a tumor in the right iliac fossa like that associated with appendicitis; which is not due to inflammatory deposit, but to a little-known form of muscular activity, which may be described as spasmodic dilatation of the gut. This is shown by the fact that during examination the tumor may be felt to subside entirely, owing to the subsidence of the spasm, only to reappear again in a few minutes on the recurrence of the spasmodic dilatation. This is simply a catarrhal over-action of the cecum, and the name typhlitis may properly be applied to it.

UNITY UNDERLYING THESE DIFFERENCES.

When the attempt is made to classify a series of cases under one or other of these headings, it will be found that the number of intermediate and atypical cases met with forms so large a proportion of the whole as to cast doubt upon the desirability of considering the above-named conditions distinct diseases. Moreover, the various types are found to pass into one another. For example, when the acuteness of an acute attack of colitis subsides, the symptoms which remain are not infrequently those of muco-membranous colitis. In other cases the remaining subacute catarrh is limited to the cecum, a condition of true catarrhal typhlitis. Also as the severity of a well-marked case of "membranous colitis" subsides, the symptoms become those of an ordinary slight catarrh of the bowel. Then, again, we may meet with patients who are passing typical "membranes" in the stools, who have few or none of the symptoms of muco-membranous colitis. Again, it does not seem possible to draw any true distinction between the typical mucous colic of Nothnagel and the more frequent membranous colitis as described by the same writer.

The attacks of colic in the latter condition closely resemble those of the former, and the symptoms of mucous colic seem to

be easily explicable on the assumption that in certain patients the catarrh of the colon does not manifest itself continuously by the secretion of mucus but intermittently; the colon being unduly sensitive to special kinds of irritation, and therefore the elimination of mucus and its attendant colic is an occasional and not a constant phenomenon. I have as yet seen no case which fully coincides with the descriptions given of mucous colic, but I am inclined to accept the view of those writers who consider it simply a variety of "membranous colitis," and not a separate disease of nervous origin.

In all these four diseases an irritative condition of the colon, which is rightly called catarrhal, exists as a common factor, and the presence of this catarrhal irritability ought, in my opinion, to form the foundation of our clinical nomenclature—a name which embraces all the intermediate and atypical cases, as well as the others to which names have in the past been given.

ABNORMAL SECRETORY AND MOTOR ACTIVITY.

This catarrhal condition of the colon manifests itself by altered function of two kinds: (1) Abnormal secretory activity; (2) by abnormal motor activity. The secretory abnormality is of an ordinary catarrhal character, namely, an excessive production of mucus, and also probably a deficiency in the amount of the normal secretions leading to increased dryness of the feces and constipation in all except the very acute cases.

The mucus which characterizes these cases of colon catarrh is of a peculiarly firm and membranous character, and appears in the stools as cohesive membranes or masses, sometimes forming complete casts of portions of the bowels.

The abnormal motor activity shows itself either as irregular contractions leading to abdominal pain (sometime of an extremely severe and colicky character), and also very commonly of a peculiar form of tonic rigidity of the muscular coat, which leads to what I have spoken of as spasmodic dilatation of the bowel, and of which I have as yet been able to find no good description either in physiological textbooks or in ordinary medical literature. Of this symptom I shall speak more fully when discussing the symptomatology.

PATHOLOGY.

With regard to the pathology of colon catarrh. As the disease in any of its forms is not usually a fatal malady there have been very few opportunities of making necropsies. As I have

not had such an opportunity myself, I have nothing to add to the published accounts of post-mortem appearances,¹ in acute simple colitis, or in what is called muco-membranous colitis.

The correctness of the name "catarrh" is suggested by the absence of the more pronounced types of inflammation, such as ulceration or suppuration in such necropsies as have been recorded, and only in very chronic cases does it lead to chronic inflammatory thickening or distinct damage to the wall of the bowel.

As typhlitis, apart from appendicitis, is not usually fatal, I know of no report of a necropsy on such a case, and I doubt if it would give any more tangible results than those made in cases of muco-membranous colitis.

Character of the Mucus.—With regard to the mucus passed by the bowel this shows very great variety. In cases of acute catarrh it has its usual characters and appears as clear or slightly opalescent viscous masses and occasionally is in abundant jelly-like masses, sometimes of a slightly yellowish tinge, or yellow "like the yoke of an egg." In the less acute stages of the disease, and in the numerous cases where the disease commences subacutely, the mucus assumes a more solid and opaque form, and is passed in coherent more or less membranous and semi-solid masses, which retain their form and not infrequently consist of more or less complete casts of portions of the interior of the bowel. This solid form of mucus, as has been pointed out by Dr. Boas, of Berlin,² can be imitated artificially by the treatment of ordinary intestinal mucus with certain astringents such as tannin, and he gives this as the explanation of the well-known fact that mucus of the same membranous type is apt to follow the use of certain astringent enemata in patients in whom such a symptom otherwise did not occur. This observation seems to show that the appearance of membranes with the feces in cases of colon catarrh may be due to the presence of some abnormal substance in the secretion which leads to the coagulation and accretion of the intestinal mucus, and so forms the membrane-like masses characteristic of this disease. With regard to the form the masses take, the mucus may appear as small membranous shreds less than an inch across. This occurs in the slighter cases or where the symptoms are passing away. When more copious it appears in the form of rolls or twists of membrane from a few inches to several feet in length, and in thickness varying from that of a piece of thick string up to that of a lead pencil or more. These twisted pieces come presumably from some distance up the bowel, and show the effect of the peristaltic action on the intestinal contents. It is possible that some

of them may come from the small intestine, showing that it too is involved in the same catarrhal process. Less commonly the mucus is not twisted and rolled, but is in irregular sheets and bits, sometimes as much as a couple of inches square, or even more. At other times the mucus may come away in the form of a complete cast in the intestine. The largest one I have seen was some five inches long by some one and one-half inches wide, and the patient who passed it informed me that she had passed even larger ones. Larger ones than this have been described by writers on this subject.

As to the color of the mucus, it is either white or yellowish, or else of a brown color, partaking of the tint of the feces. The larger tubular pieces are stated to have this darker color as a rule, and this was so in my case, but I have also seen tubular pieces of white mucus. Some writers have classified cases of muco-membranous colitis, according to the type of the mucus which appeared in the feces, but my own experience does not admit of my making such a classification, for I have seen all types of mucus, both white and brown, tubular, rolled, or flat, large or small pieces, passed by the same patient, and without any recognizable change in her symptoms.

ETIOLOGY.

I must preface my remarks upon the etiology of colon catarrh by reaffirming my opinion that the more chronic form of colitis, commonly called muco-membranous or simply membranous colitis, or simply a pronounced form of colon catarrh, and that I do not accept the view, not infrequently held, that this condition is a secretory neurosis and not a catarrh. The reasons for this opinion may be gathered from the context without being restated here.³

Catarrh of the colon, in common with catarrh of other mucous surfaces, is due to irritation. The irritant may be mechanical, chemical, or of a more complex and less determinable character. Under the heading of mechanical and chemical irritants must be included those cases due to the abuse of drugs, especially purgatives, and also those cases due to the use of irritating enemata. I have already referred to the effect of tannin enemata in producing membranous masses of mucus from patients who were previously and subsequently free from this symptom.⁴

The most obstinate case of colitis I have seen was due to the persistent use of an irritating abortifacient by the woman some years previously. Here the colon catarrh was a part of the general

catarrh of the intestinal tract. Errors of diet are another cause. They can certainly cause acute colitis, and, since a subacute or chronic catarrh may be kept up or increased by an injudicious dietary, we have reason to believe that irritation by food may play some considerable part in the causation also of the less acute forms of the complaint. Among the more subtle forms of irritation may be mentioned the effects of chill, as is the case with catarrhs in general, and also certain specific febrile conditions, such as influenza. The latter may certainly be the cause of acute colitis, and I have seen cases which seemed to be undoubtedly due to this cause.

With regard to the etiology of the subacute and chronic forms (including the condition usually known as muco-membranous or membranous colitis) I believe that a most important part is played by gout and the arthritic diathesis. With regard to catarrh of the cecum, this fact cannot, I think, be called in question, in view of Dr. Haig's personal experience, and also in view of the value of salicylates in many cases of acute and subacute typhlitis (as distinct from appendicitis). From my own experience I feel sure that we must recognize gout and the uric acid diathesis as prime factors in the causation of colon catarrh. I am convinced that there is good reason for accepting Dr. Haig's theory that, under the influence of certain states of the system or certain drugs, such as calomel, there is an accumulation of "uric acid" in (or excretion of "uric acid" by) the cecum to such an extent as to lead to the catarrhal inflammation of its mucus membrane.

The observations of several Continental writers show the close relation which what they call "arthritism" bears to the occurrence of membranous colitis. They find it present in the majority of cases, and M. Langenhagen, of Plombieres, states that out of five hundred and sixty cases of this complaint which he carefully examined, he found distinct arthritic signs in five hundred and thirty-five instances.⁵

Much stress is laid by most writers upon the neurotic element in the causation of the chronic form known as muco-membranous colitis. This nervous element is so marked a feature in these cases, that not a few writers consider it a prime factor, and that the disease is simply a secretory neurosis, and that the catarrhal symptoms which exist are secondary.

But, as we shall see when we discuss the symptoms, irritation of the colon exercises such a depressing effect upon the nervous system that I believe it probable that the neurotic element is only an early symptom of the complaint, and not its cause.

This is rendered the more likely because the catarrh is very apt to escape recognition in its earlier stages.

Certainly the statistics given by M. Langenhagen upon this point are in accordance with my own observations. He states that although a distinct neurotic element existed in all but eleven out of his five hundred and sixty cases, in only eight cases was there true neurasthenia prior to onset of the intestinal trouble. He adds his opinion that while neurasthenia cannot be regarded as a cause, in the great majority of the cases membranous colitis occurs in persons with a "nervous and arthritic predisposition."

Further, it is noticeable that the nervous symptoms seem to follow rather than precede exacerbations of the disease, and similarly that as recovery takes place they seem to disappear because the bowel symptoms improve, and not vice versa. Also in the slighter cases decided catarrhal signs can exist unaccompanied by any nervous manifestations.

The association in these cases of an excessive amount of intestinal mucus with gastric hypersecretion is interesting as suggesting the possibility of the nervous system taking a prominent part in the causation of the disease, but in the two cases where I have seen this condition well marked, the hypersecretion yielded at once to "antiarthritic" treatment and to diet. In none of my cases have I found it necessary to adopt treatment mainly directed to the nervous system, as would have been the case were the condition a pure neurosis.

Another possibility as to the causation of this disease is that micro-organisms play an important part in the intestinal irritation. The fact that the remedies which are most effective for the cure of this disease are intestinal antiseptics, in addition to being antirheumatic ones, is not out of harmony with this theory, but more work needs to be done in this direction before this theory can be accepted or disproved.

Constipation is another etiological factor upon which stress is sometimes laid, but here again, we have a symptom and not a cause. A strong argument against constipation as a prime factor is the frequency of this condition and the comparative infrequency of colon catarrh. We occasionally see a little mucus coating scybalous masses in constipation, and the mucous is not improbably due to irritation of the colon by the retained fecal masses, but this does not seem to form the starting-point of catarrh. Another point is that the dietetic treatment adapted to the curing of ordinary constipation aggravates colon catarrh and tends to increase the constipation.

Other etiological factors may be found in exposure to cold

or chill; but this is not so easy of demonstration for the sub-acute and chronic forms as it is for acute catarrh of the colon. It is also stated that muco-membranous catarrh may result from certain organic diseases of the colon, such as cancer, obstruction, etc., but such cases have not come within my own cognizance.

SYMPTOMS.

The primary symptoms of colon catarrh I consider to be: (1) Excessive secretion of mucus; (2) excessive irritability of the muscular coat of the colon, causing it to harden and become palpable; (3) constipation, due probably to both altered secretion and altered motility of the colon; (4) pain—often colicky—and tenderness of colon; (5) nervous phenomena, especially well-marked mental depression, often hypochondriasis, sometimes true neurasthenia.

In acute cases cardiac depression is often well marked. In addition to these, vomiting of food, often without pain or discomfort, not infrequently occurs; also dyspeptic symptoms. Coldness and blueness of extremities and poor circulation, leading to chilliness, etc., is not infrequently seen.

For the discussion of the symptoms in detail colon catarrh must be subdivided into (1) acute general catarrh and (2) sub-acute and chronic catarrh; and for clinical purposes a further subdivision of this latter must be made, according as the catarrh is, first, practically limited to the cecum and ascending colon, or, secondly, is fairly general in the colon or mainly involves the transverse or descending colon. The first of these two latter subdivisions is of importance clinically, because primary cecal catarrh (that is, typhlitis) is very apt to be mistaken for the secondary cecal catarrh, which almost invariably accompanies appendicitis.

SYMPTOMS OF ACUTE COLITIS.

First, then, acute general catarrh, also called acute simple colitis, or acute catarrhal colitis: This condition is so well described by Dr. Hale White in Dr. Clifford Allbutt's "System of Medicine" that I need not detail the symptoms here. I would, however, add that from the cases I have seen I should say that a marked symptom of these cases is the extreme cardiac depression which accompanies the attack when acute. In three well-marked cases this has been most striking. In one, which was apparently due to influenza, a strong young man was rendered prostrate in a few hours, and his pulse-rate fell to under forty per minute. The doctor who saw him before I did states

that it was only thirty per minute. He was so faint and low for days that the least attempt at movement induced faintness and a sense of impending death. In two out of these three cases the acute attack was followed by a subacute stage, in which mucus characteristic of the muco-membranous colitis was passed for a time, and the over-action of the muscular coat of the bowel was noticeable, as well as the tenderness and pains.

SUBACUTE AND CHRONIC CATARRH OF THE COLON.

It is to the symptoms of simple subacute and chronic catarrh of the colon to which I desire especially to draw attention in this paper.

1. With regard to the first of the four primary symptoms already mentioned (namely, the presence of mucus in the stools), I have already spoken at some length. I am inclined to lay rather more stress on the slight amounts of mucus occurring in constipation than some writers do. For the occasional presence of hardened masses of mucus in cases of constipation ought to suggest the presence of colon catarrh, and lead to its early recognition, while it is yet in an easily curable stage. Also, as we shall see when we speak of treatment, the presence of mucus in constipation ought to make us very careful as regards the use of the foods with indigestible residue, which are usually the most effective means of curing habitual constipation.

MUSCULAR IRRITABILITY OF COLON.

2. As regards the evidences of muscular irritability which are seen in colon catarrh; in cases of acute and subacute catarrh where the bowel is not too tender to admit of gentle palpation a peculiar condition is noticeable which I am at a loss to explain, except at some hitherto almost undescribed form of muscular activity. I believe that under certain kinds of inflammatory irritation the fibres of the muscular coat of the large intestine become hard in the extended position, instead of in the contracted position as usual. A sort of active extension of the muscular fibres takes place, thus holding the bowel open and keeping its walls rigid—a sort of spasmodic dilatation of the gut. I believe the same kind of tonic extension of the muscular fibres takes place in the case of the muscles of the abdominal wall in peritonitis, for I do not see how any true contraction of the muscles could produce the hardness with convexity which we see in that condition.

The first case which brought this condition strikingly under my notice was one which I saw eleven years ago. It was sup-

posed to be a case of relapsing appendicitis in a man of about fifty. I saw him early in a relapse. He had the symptoms usually associated with appendicitis, but on palpating the right iliac fossa I found that instead of feeling the usual oval tumor in the right iliac fossa there was a hard, tender, cylindrical tumor from one and a half to two inches in diameter, running up from the right iliac fossa to under the right costal arch. This could be nothing else than the ascending colon turned into a tube with rigid walls. It was resonant on percussion. It was so hard that it was impossible to believe that the hardness was simply due to distension by gas forced into it by contracted bowel on either side of it. This explanation was further negated by the way in which the "tumor" subsided. On a subsequent examination the cylindrical tumor was found to reach only half way up to the costal arch—that is, only the lower half of the ascending colon was spasmodically dilated. Above the hard dilated part of the colon the gut was found to be relaxed, not contracted, which could not have been the case if the distension were due to air forced in under pressure. I made this observation repeatedly on this case, as the tumor due to the dilated gut got less and less; and after convalescence was established, and the patient was walking about I was able on one or two occasions to feel the lowest part of the cecum suddenly become hard and distended under my hand, while the rest of the cecum remained soft and undistended. This observation I have very frequently made since in cases where there is catarrh of the cecum, and I have no doubt at all that catarrh of the colon leads to a tonic extension of its muscular fibres, and in consequence an active dilatation of its cavity.

In the International Medical Congress, held at Paris in August, 1900, this same spasmodic dilatation of the colon was referred to by more than one of those who contributed to the discussion on muco-membranous colitis. Thus Dr. Mannaberg, of Vienna, referred to a patient of his who had a "fearfully tender tumor running right across the epigastrium," which consisted of the "unusually strongly tetanically stretched (*gespannte*) transverse colon." It is not quite easy to understand the meaning of this sentence, but it seems to imply that the colon was dilated and not simply stretched by the contraction of its longitudinal fibres, for in this case it would not have bulged forwards and formed a prominent tumor in the epigastrium noticeable by the patient herself.

There is no doubt however, as to the meaning of Dr. Jules Geoffroy. He describes this unusual irritability of the intestinal muscles with great detail, and regards it as the

most trustworthy sign of the presence of muco-membranous colitis.

In his paper, read before the Congress, after describing how the bowel can be felt to harden under the hand so that it can be grasped between the fingers, and "just as a floating kidney can," he goes on to say that "when the calibre of the bowel is increased, it may be to a considerable extent, we have before us an "active distension," which simulates a solid tumor by its hardness and its resistance." If this hardening of the colon be carefully and patiently felt for, it will be found to be a most reliable sign of the presence of colon catarrh. Sometimes it is most marked in the cecum or ascending colon, and sometimes in the transverse colon, sometimes in the sigmoid flexure or descending colon.

Out of the thirty or more cases which I have seen in the last four years, I have found this muscular hardening more frequently in the cecum than elsewhere in the colon, but it is also common in the region of the sigmoid flexure. It is this type of hardening of the portion of the cecum nearest to the appendix which gives rise to the tumor which is so characteristic of appendicitis, and it is often not easy to distinguish the primary hardening of the cecum due to colon catarrh from the secondary hardening which results from appendicitis (see diagnosis).

Another way in which the abnormal irritability of the muscular coat shows itself, is by spasmodic contractions, which may occur in any part of the colon. While undergoing such contraction, the bowel can be felt as a hard and often tender cord, some one-half to three-quarters of an inch in diameter. This is simply an exaggeration of the normal state of tonic contraction, which renders the healthy colon palpable in the right or left iliac fossæ.

Thirdly, there may be irregular spasmodic contractions, giving rise to the colicky pains which are so frequent a feature of this complaint. These painful contractions are in all probability often due to the efforts of the bowel to get rid of the masses of hardened and altered mucus clinging to its interior. At all events, they often precede the expulsion of the so-called membranes.

CONSTIPATION.

3. The third primary symptom is constipation. This is a most characteristic symptom, and one which gives much trouble to both patient and doctor. But, although extremely common, it is not invariable, and occasionally diarrhœa is said to be present

instead, thus proving that constipation is a symptom, and not, as some writers assert, the cause of the disease.

PAIN.

4. Pain is the last of what I call the four primary symptoms, and it is almost invariably associated with tenderness of the whole or portions of the colon. The pain may be general over the colon, but far more commonly it is confined to one part of it, and not infrequently it remains localized in the same part of the colon throughout the whole attack, and sometimes will have the same localization in succeeding attacks in the same patient. The most common localizations which I have seen amongst my cases are the transverse colon, the cecum, and the sigmoid flexure. It may also be localized to the hepatic flexure or the splenic flexure. This pain, which may be the only symptom of which the patient complains, except the constipation, is apt to be extremely misleading.

When in the transverse colon it is certain to be mistaken for gastric pain, unless careful inquiry and examination be made, especially as the tenderness of the transverse colon may very easily be mistaken for gastric tenderness. The pain is often of a dull aching character, and very closely resembles the pain of gastric flatulence, and, like it, is liable to sudden increase in intensity.

There are certain characteristic points about this pain which ought to lead to a correct diagnosis of its origin. I am speaking now of a slight case of colon catarrh before the occurrence of mucus in the stools has become a prominent symptom. First, the pain often comes on an hour or more after a meal; it does not do so regularly. It is very apt to be brought on by exertion, and patients suffering from this mild form of catarrh will complain that after walking for a mile or so they have to sit down and rest, or after playing a single game of lawn tennis they have to stop because of the pain. The relationship to exertion is much more evident if the exercise be taken shortly after a meal. The pain may occur any time in the day, and when the stomach is empty the pain is often relieved by taking food.

Another characteristic of the pain is its occurrence at night. The patient will get up at night, thinking that the pain is due to gastric flatulence, but will find that sodium bicarbonate, carminatives, charcoal, etc., all produce no effect. Pressure with the hand and gentle massage give them some relief. The pain is not sufficiently severe to be incapacitating, and when it comes on during exercise, does not necessarily get worse, but may pass off as the exercise is continued. In such cases as this the patient will

notice that there is an unusual amount of intestinal flatulence, and if he examines the stools he will find that they are apt to be made up of an agglomeration of small rounded masses—once described to me as being “in shape more like sheep’s droppings than an ordinary motion.” On careful examination a few shreds of mucus may be seen connecting the masses or lying on the outside of the stool. If in such a case the abdomen be carefully and patiently examined, some over-tonicity of the colon will be felt, and during one of the attacks of pain the cecum or sigmoid may be felt to rise up under the hand as a soft but distinct tumor, or the transverse colon may be distinguishable as a hard and tender cord some three-quarters of an inch or so in diameter, running across the abdomen just above the umbilicus.

I have little doubt that many cases of gastralgia, so-called are really cases of pain from catarrh of the transverse colon, and I have read of cases described as obstinate gastralgia where the character of the pain seemed to point unmistakably to its colon origin. When the pain is localized to the cecum, the natural diagnosis nowadays would be of appendicitis, and I have seen several cases where this mistake might very easily be made, and some where it has been made.

When the pain is localized in the hepatic flexure, the diagnosis from biliary or renal colic may be difficult, and I have notes of a case of renal pain from displaced kidney where the symptoms very closely resembled colon pain.

Fortunately the recognition of the cause of the pain is usually rendered easier by its occurrence in more than one part of the colon. Another deceptive feature about the pain is that it not infrequently has some relation to food, as previously stated, occurring from half an hour to an hour and a half after meals. Also not infrequently in these cases there is true gastric pain, as well owing to the dyspepsia which is apt to accompany catarrh of the colon. A very characteristic feature of the pain in the severer cases is that it is apt to accompany or precede the act of defecation, a fact which distinctly suggests its colon origin.

The occurrence of the pain at night has been already referred to. When the pain is so severe as to amount to a true colic, there is not much difficulty in recognizing its true nature. These severe pains are, moreover, often followed by the expulsion of mucus as above described.

NERVOUS SYMPTOMS.

We now come to an important group of symptoms, namely, those referable to the nervous system. In well-marked cases

these play a prominent part in making up the characteristic picture of the disease. In the slighter cases, however, they are of less importance than the four already described. By far the most prominent nervous symptom is the depression which accompanies well-marked subacute or chronic cases of colon catarrh, and which is a well-known and often-described symptom of "membranous colitis." This depression sometimes amounts to attacks of causeless and unreasoning misery. For instance, a strong and healthy-looking man, with no reason for depression of spirits, will tell you that for a whole afternoon "he felt more like crying than anything else"; or a lady, who is the picture of health, and on whom all outward affairs are acknowledged to be smiling, will confess to a large amount of weeping on the quiet. This mental depression may in part be due to the effects of the constipation, but is doubtless largely a reflex nervous effect due to irritation of the colon, and allied to the extreme cardiac depression which we sometimes see in cases of acute colitis.

Allied to this depression is the hypochondriasis which is apt to accompany this disease, and also the neurasthenia to which advanced cases are apt to become subject. On this I need not dwell; it is too well known. An important and very frequent reflex nervous symptom in these cases is vomiting. This is apt to take the form of a simple intolerance of the stomach for food. For instance, a man whom I have now under treatment described himself to me as being "like a cow," because the food he had swallowed kept on coming back into his mouth, and he had to keep on swallowing it again till it finally stayed down. In another case vomiting of all food without pain or discomfort immediately after taking it was almost the only symptom of a well-marked colon catarrh in a young woman. In this case there was very little pain or muscular overaction, and the passage of mucus by the bowel was for long not suspected. In this patient the vomiting ceased for the first time for some years as soon as the colon catarrh was treated and checked, and after an intermission of the treatment the return of the catarrh was followed by a return of the vomiting. This case also showed another not infrequent reflex symptom, namely, gastric hypersecretion.

To complete the picture of a well-marked case of this so-called muco-membranous colitis we must mention what is more a result than a symptom, namely, the malnutrition which results from it. This is, in my experience, seen more in the severer cases, where pain is a prominent symptom, and is due mainly to depression and want of sleep and fear of eating, probably combined with a certain amount of auto-intoxication from constipation. Vomiting apart from pain does not seem necessarily to in-

duce emaciation, and the few cases I have seen where this was a prominent symptom were fairly well nourished, as is the case in hysterical vomiting.

DIAGNOSIS.

As to the diagnosis: I have covered the ground fairly well in speaking of the symptoms, except in so far as the diagnosis of typhlitis from appendicitis is concerned. This opens a very large question, and one which I cannot enter fully into here. A primary acute or subacute catarrh localized in the cecum cannot always, so far as I know, be distinguished from catarrh secondary to appendicitis during its acute stage:

As the acuteness of the symptoms pass off, it will, however, be noticed in appendicitis that tenderness and resistance remain localized in the neighborhood of the appendix after the inflammatory distention of the cecum has subsided. In typhlitis, on the other hand, a prolonged examination, perhaps, assisted by steady, gentle pressure, may reveal the fact that when the inflammatory distention of the cecum has subsided for a few seconds the iliac fossa is left quite free from tenderness, showing the absence of any inflammation around the appendix.

With regard to the condition of hardness of the cecum, of which I have spoken, there are several conditions with which it may be mistaken. When the irritation is not very great the distension of the cecum will be soft and elastic, such as might be caused by chronic obstruction in the ascending or transverse colon. In practice, however, no real difficulty is likely to arise, because in colon catarrh in such a case the distended area of the cecum is a localized one, occupying some two or three inches, more or less, and often varies in extent during examination, whereas in obstruction the ascending colon will be evenly and equally distended, and careful palpation will show that the gut remains full during the intervals between the intestinal contractions. When the irritation is greater and the gut hardens more during its periods of tonicity, the diagnosis is also easy, because of the limited area which hardens in cecal catarrh, and also because it is much harder than is the case in chronic obstruction. In catarrh the hardening of the gut coincides with its dilatation. In obstruction the periods of hardening are associated with a diminution in the diameter of the gut.

The distinction between the evenly-hardened gut of colon irritation and the regular distension due to hardened feces is not one which will cause any difficulty. In a severe case of cecal irritation from colon catarrh, however, very great difficulty may be experienced in deciding whether the "perityphlitic

tumor," so called, is simply the hardened and distended cecum, or whether it is due to localized peritonitis surrounding an inflamed appendix. If the abdominal wall partakes in the hardening, and iliac border of the cecum cannot, therefore, be defined, the presence of true inflammation must be suspected. If, however, the perityphlitic tumor can be distinguished as a cylinder, and both its inner and outer outlines can be detected by palpation in the iliac fossa, the probability is in favor of there being no appendicitis. But this is a question which must be decided upon other grounds than those of physical examination alone, and the accepted evidences of appendicular suppuration must be looked for, and the progress of the case watched, as already stated.

PROGNOSIS.

As to prognosis: If the case be recognized early enough, and appropriate treatment by diet and medicine adopted the prognosis as to complete recovery is very satisfactory. In the more chronic cases, where the patient has been for years passing membranes, much can be done to relieve and keep the symptoms in check, but the patient is very liable to relapses. In cases with well-marked neurasthenic symptoms the treatment is much more troublesome. In some very chronic cases the disease seems most inveterate and difficult to deal with. In view of the difficulty of dealing with chronic cases, the recognition of the disease in its early and eminently curable stage is of the greatest importance.

TREATMENT

Of acute colitis: This must proceed along the lines usually adopted for this complaint, but the rheumatic element in many of these cases must not be neglected. With regard to the treatment of the less acute forms of catarrh as here described, the amount that has been written upon the treatment of membranous colitis, and the number of remedies suggested in the textbooks is a sure proof that it is apt to be extremely intractable, and this is certainly so as far as the severe chronic cases are concerned. In the majority of cases, however, the disease is eminently curable if suitable means be adopted before the disease has advanced too far. The key to the treatment of this disease is, in my opinion, the recognition of its relation to gout and the "uric acid" diathesis, and also the recognition of the fact that it is a catarrh of the colon.

The first indication is met by the exhibition of the salicylates, in the form of sodium salicylate or salicine in the acuter cases. These sometimes have a remarkable effect upon those cases of

cecal catarrh or typhlitis which so closely resembles appendicitis, and the rapid disappearance of symptoms under this treatment often confirms the diagnosis of cecal catarrh in a doubtful case.

In more chronic cases one of the combinations of salicylates with carbolic acid of the salol type seems to be the most effective, and this last-named drug has in my hands proved of extreme value in the treatment of colon catarrh, even when it has reached the stage described as chronic membranous colitis. Another very effective treatment is by means of the combination of the perchlorides of mercury and iron which is so useful in enteric fever.

The second point of prime importance to be remembered in the treatment of these cases is the fact of the undue irritability of the colon, both secretory and motor. Therefore the second main indication for treatment is the elimination from the dietary of all articles of food liable to leave an indigestible solid residue which might irritate the colon. The treatment must, therefore, take a line the exact opposite of that usually adopted for simple constipation.

Brown bread, porridge, figs, etc., which relieve ordinary constipation, are most potent in producing pains and excess of mucus in cases of colon catarrh, and in aggravating the irregular muscular action, which is one of the causes of constipation in this disease. In fact, any vegetable food containing much woody fibre, must not be admitted to the dietary; even bananas often disagree; also the skins and seeds of fruits, and all fruits such as pears, with a gritty pulp. In taking meat, care must be taken to remove the skin, gristle, and more fibrous parts. All indigestible solids should be removed from the dietary. These dietetic precautions, combined with the use of salol (twenty to thirty grains per diem) will be found to produce great amelioration in the majority of the milder cases, and in some of the severer ones. Where nervous symptoms have become prominent the treatment of these also constitutes an important part of the work of the physician, and the cure will be hastened by attention to hygienic, climatic and social treatment, as well as to the medicinal and dietetic.

In cases of long standing, where considerable damage has been occasioned to the mucous membrane, treatment by enemata of simple saline solution, or with boracic acid, sometimes proves of value. In extreme cases it may be necessary to give the colon complete rest for some months by performing the operation of right inguinal colotomy, allowing no feces to pass along it. Several successful cases of this have been put on record in recent years.

The intractable nature of these chronic cases and the ease with which an early case can be cured emphasizes the importance of early recognition of catarrh of the colon. Not only is early diagnosis necessary on these grounds, but also because, when not recognized and properly treated, catarrh of the colon, even in the less severe cases, is apt to cause very considerable suffering, both physical and mental, to those afflicted by it; and no small part of their suffering may sometimes be due to the fact that they have constant and annoying pain, while retaining every appearance of health, and consequently are considered to be hysterical and making much of a little. The deceptive character of the early symptoms renders the early recognition of this condition far from easy, because they suggest to both patient and doctor the presence of a gastric rather than of intestinal ailment.—*British Medical Journal*.

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THE MATURATION OF OVA IN RELATION TO PUBERTY AND THE MENOPAUSE.

BY JENNIE G. DRENNAN, M.D., ST. THOMAS, ONT.

The theory is set forth by Beatson that on the removal of the ovaries a fatty degeneration, similar to the formation of milk in the mammary glands, occurs, and that this degeneration has an inhibitory effect on mammary cancerous growths, the fatty degenerated cells not offering a suitable soil for their development. In Australia the practice of removing the ovaries of cows is done in the interests of the calves. Here is recognized the fact that, after a certain length of time—the normal period of lactation—alotted by Nature for the nourishing of the calf by the cow, the secretion diminishes. May we not deduce from this the fact that her ovarian function is being again restored, whereby she may again discharge ova and be capable of another impregnation? Actively functioning ovaries must, then, have the effect of inhibiting fatty degeneration in the cells of the mammary glands. During the later months of pregnancy milk is formed in the mammary glands. This process is in all probability active during the whole nine months, but just reaches perfection at the termination of this period. Then, supposing that there is a diminution, if not a cessation, of the ovarian function (for now there is no need of the ovaries discharging

ova, as there is no possible chance of their being impregnated, the os uteri being sealed against the invasion of the sperm cells), on this assumption and the fact that spayed cows yield a more abundant secretion of milk may be based the theory of the cure of "inoperable" cases of cancer by the removal of the ovaries. That the menopause has no effect in diminishing the growth of mammary cancer is clinically well proved by the fact that such growths are common after its advent, and, if they have existed prior to it, they do not show any signs of a less rapid growth, but rather grow more rapidly.

What is the change in ovarian function, which occurs at the menopause? Ova are no longer required for reproduction. Is there maturation of ova prior to puberty, and does this also occur after the menopause, and are these ova absorbed, and do they exert an inhibitory action on the cells of the mammary glands, preventing their fatty degeneration? Previous to puberty the mammary glands are small and undeveloped; at puberty they enlarge somewhat. At each menstrual period in some women distinct enlargement and tenderness are noticed. If each menstruation is a disappointed pregnancy, as I see no reason to doubt, the increased size of the mammæ is doubtless a sign of the preparation of the woman for lactation; pregnancy not occurring and the ovarian function not being arrested, ovulation continues and the fatty degeneration of the cells of the mammary glands is checked. At the menopause, if maturation of ova still continues, these must be absorbed, and hence again we may have the inhibitory action on the mammary glands preventing fatty degeneration, and therefore the need of removing these glands if this change is to occur.

On the ground that the maturation of ova is not the sole function of the ovaries, but that they also elaborate an internal secretion, which has a widespread influence on the system, exception may be taken to the foregoing. But that this internal secretion has no effect on this particular phase of the question, is without doubt; for we should expect this secretion to continue during pregnancy and lactation, and the fatty degenerative changes would not be due to it, but rather to the suppression of the discharge of matured ova, and it is this cessation of maturation of ova which is desired in these cases of cancer.

Is there any relation between mammary cancer and excessive coition? May not the latter, by repeated states of congestion, produce fibrosis of the ovaries with a resulting discontinuance of their function? We see similar results in other organs. According to the foregoing theory, fatty degeneration would then be permitted in the mammæ from the inactivity of the

ovarian function, but although the ovaries are not discharging or absorbing ova, there is an irritation present; they are not in state of the quiet non-functionating glands of pregnancy and lactation. May it not be, then, on account of this, that the fatty change of the cells in the mammæ is interfered with, and a fibrosis occurs here also? Why is scirrhus cancer the predominating form in the mammary gland?—*New York Medical Journal.*

Correspondence

MEDICAL REFLECTIONS.

1. "Opportunities are fleeting," says Hippocrates, "the father of medicine"—he who wrote, says Gomperz, "the most memorable of human documents, the 'Oath.'"

2. The M.D. who is constantly looking for and writing for "sure cures" is not the one who is studying his materia medica. Such work is not becoming the respectable M.D., and is a sad reflection on the instruction received at college, and of whose alumni he is no brilliant illustration.

3. When the State shall impose qualifications, mental and physical, for entrance to medical colleges, we then can hope for more honor in medicine—and such conditions, strengthened by the B.A., or M.S., or B.S. matriculation, the public will then be better served.

4. The revival of the "Family Doctor" is noted, even if he cannot, considering his surroundings, do special work, he can be relied on as a safe reference to those whose work is specialism.

5. The bestowal of graduation or the doctor's degree, by some universities for special work—and it alone—is an evidence that such universities are ignorant of the wants of the profession, and are after the money, forgetful of the disgrace that is being done our profession, and the grievous wrong being done to the public by letting loose such unfledged beings in our midst.

6. By tolerating such erratics as those who go wild over popular delusions, of which Vitopathy, Christian Science, Osteopathy, etc., are fair types, the State mad-houses and asylums are prevented from being overcrowded.

7. That various concerns—organized to teach one or several of the above-named delusions, should be allowed to exist and grant the doctorate is in evidence that State Medical Boards or the Legislatures are remiss in their vigilance, and that the legislators are not to be classed as educated men or safe curators of the State's interests.

8. Medical ethics, so well sustained by the distinguished N. S. Davis, Sr., M.D., LL.D., Chicago, well named "the father of the American Medical Association," is assailed by the iconoclasts, who now and then arise to tear down the work of master minds. Such men in other fields would break down "the Ten Commandments." What the last named is to all Christians, so is ethics and its code to every true medical man. The classical work, "Medical Ethics and Cognate Subjects," published by Sparling & Co., 13 Isabella Street, Toronto, Ontario, Canada, is a timely publication. Its price is \$1.50, and it should be in the hands of every true M.D., who loves his profession for its own sake.

9. The affiliation of colleges with State or other well-established universities is being demanded, to give tone to the M.D. degree, and the medical college or school which designates itself a university should be given a dictionary with the word university marked with blue pencil.

10. "The Temple of Fame" of University of New York, had not the name of one M.D. admitted as worthy of a place in it. Are the names of McDowall, Marion Sims, Loomis, Rush, Jenner, Harvey, Lister, Morton, etc., and Walter Reed, Carroll, Agramonte, of recent fame, forgotten?

It may be advisable to let alone, to enjoy to their mad-cap delusions, those who "would give preceptorial medicine to rage, charm ache with air, and agony with words." Stagnant pools in time, it is said, become clear, but superstition will keep forever society—the dear people—from a universal clarification. Malingerers and sociolistic teachers are appearing periodically, each in an existence viewing itself as through a single medium—either in a state of eplexis or to peculiar forms of epilepsy.

How long will it be before some pharmaceutical company will endow a chair in some or all medical colleges, or give lectures under its own roof, to teach the value of its own truly ethical (?) preparations. Not long, we think. Are not our medical journals pretty well muzzled in the interests of too many concerns styled pharmaceutical? Do not such concerns furnish materia medica to countless M.D.'s, who although, having passed the examinations in such subject (materia medica), yet in practice practically forget it, to follow the instruction laid down in the price list of the friend (?) and embezzler of the misguided M.D.? Doctor, are you a victim? If so, take an hour or two for reflection, and ask yourself is it not time for a Martin Luther to arise and show us whither we are drifting—and to give us a materia medica?

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