

## Technical and Bibliographic Notes / Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for scanning. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of scanning are checked below.

L'Institut a numérisé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de numérisation sont indiqués ci-dessous.

- |                                     |   |                                     |   |
|-------------------------------------|---|-------------------------------------|---|
| <input type="checkbox"/>            | Coloured covers /<br>Couverture de couleur  | <input type="checkbox"/>            | Coloured pages / Pages de couleur   |
| <input type="checkbox"/>            | Covers damaged /<br>Couverture endommagée   | <input type="checkbox"/>            | Pages damaged / Pages endommagées   |
| <input type="checkbox"/>            | Covers restored and/or laminated /<br>Couverture restaurée et/ou pelliculée   | <input type="checkbox"/>            | Pages restored and/or laminated /<br>Pages restaurées et/ou pelliculées   |
| <input type="checkbox"/>            | Cover title missing /<br>Le titre de couverture manque  | <input checked="" type="checkbox"/> | Pages discoloured, stained or foxed/<br>Pages décolorées, tachetées ou piquées  |
| <input type="checkbox"/>            | Coloured maps /<br>Cartes géographiques en couleur  | <input type="checkbox"/>            | Pages detached / Pages détachées  |
| <input type="checkbox"/>            | Coloured ink (i.e. other than blue or black) /<br>Encre de couleur (i.e. autre que bleue ou noire)  | <input checked="" type="checkbox"/> | Showthrough / Transparence  |
| <input type="checkbox"/>            | Coloured plates and/or illustrations /<br>Planches et/ou illustrations en couleur   | <input checked="" type="checkbox"/> | Quality of print varies /<br>Qualité inégale de l'impression  |
| <input type="checkbox"/>            | Bound with other material /<br>Relié avec d'autres documents  | <input type="checkbox"/>            | Includes supplementary materials /<br>Comprend du matériel supplémentaire   |
| <input type="checkbox"/>            | Only edition available /<br>Seule édition disponible  | <input type="checkbox"/>            | Blank leaves added during restorations may<br>appear within the text. Whenever possible, these<br>have been omitted from scanning / Il se peut que<br>certaines pages blanches ajoutées lors d'une<br>restauration apparaissent dans le texte, mais,<br>lorsque cela était possible, ces pages n'ont pas<br>été numérisées. |
| <input type="checkbox"/>            | Tight binding may cause shadows or distortion<br>along interior margin / La reliure serrée peut<br>causer de l'ombre ou de la distorsion le long de la<br>marge intérieure. |                                     |   |
| <input checked="" type="checkbox"/> | Additional comments /<br>Commentaires supplémentaires:  |                                     | Continuous pagination.  |

# THE MONTREAL MEDICAL JOURNAL.

VOL. XXVIII.

MAY, 1899.

No. 5.

## Original Communications.

### ABSTRACT OF AN ADDRESS ON A PROPOSED SCHEME FOR A DOMINION MEDICAL COUNCIL.\*

BY

T. G. RODDICK, M.D., LL.D., M.P.

Professor of Surgery, McGill University.

As you are all aware, by the British North America Act, the subject of education was placed within the exclusive jurisdiction of the Provincial Legislatures. Section 93 of that Act reads: "In and for each Province the Legislature may exclusively make laws in relation to Education, subject and according to the following Provisions." These provisions do not, however, interest us, as they have reference entirely to common schools. This fact would give one the impression that professional education was not meant to be included in the section, or that it was overlooked or forgotten by those who were responsible for the framing of the act.

The Confederation of the Provinces had scarcely been consummated when our profession realized that a mistake had been made and that the multiplicity of medical boards throughout the Dominion would lead to great abuses and untold complications. Therefore we find the Canadian Medical Association at one of its earliest meetings, in 1869, suggesting a Dominion Medical Bill, called "The Medical Act of the Dominion of Canada." This bill, most comprehensive, was presented before the Association at the third meeting, in the city of Ottawa; and after a long and somewhat acrimonious debate, was finally abandoned; and so far as I know, was never brought up for reconsideration. Doubtless the fact that the profession in Ontario had, in the meantime, put into operation their own medical act, militated against the greater scheme. I am inclined to think that other reasons for its early demise are to be found in the attempt made, practically to expunge the provincial boards, and also to give a preponderating influence to the universities.

\* Read before the Montreal Medico-Chirurgical Society, March 20, 1898.

Nothing further was done however in this direction until a very few years since, when at the meeting of the Canadian Medical Association in Kingston, a committee was formed to discuss and report upon the question of interprovincial registration or some scheme of reciprocity, all with a view to harmonizing the practice of the profession throughout the Dominion, but more especially on the frontier settlements of the various provinces.

Little of a practical character was accomplished until last year, when the committee reported very fully, making among other recommendations the following: "That so soon as the various councils of the Dominion shall establish an examining board of the Dominion conducted by examiners appointed by the medical councils of the several provinces, their candidates passing a successful examination before said board and obtaining a certificate to that effect, shall be entitled to registration in the several provinces of the Dominion on payment of the registration fee, providing they are not guilty of infamous or disgraceful conduct in a professional respect.

"Your committee desire to recommend that further efforts be made to ascertain the practicability of federal legislation leading to the establishment of a central qualification which will also place the profession in Canada upon an equal footing with that of Great Britain, and that Dr. Roddick be authorized to take the necessary steps in said matter.

"We further recommend that this association shall appoint a committee who shall consider and recommend the details as to the number of examiners to be appointed, the method of conducting examinations the fees to be charged, and other necessary details to bring the afore-said scheme into active operation, which details the officers of this association shall, with the foregoing, send to each of the respective councils for approval."

The following were named a committee to strengthen Dr. Roddick's hands before the Government:—Dr. McNeil, Prince Edward Island; Dr. Muir, Nova Scotia; Dr. Walker, New Brunswick; Hon. Dr. Marcell, Quebec; Dr. Williams, Ontario; Dr. Thornton, Manitoba; Dr. Bain, Northwest Territories, and Dr. McKechnie, British Columbia.

(The delegates from Quebec on the committee could promise nothing with regard to a central examining board for the Province of Quebec, the universities having already positively refused to surrender their charter rights).

Feeling the responsibility of this charge, I have been engaged more or less, ever since the meeting, collecting information from various sources (among others from the law officers of the Crown) and am now in a position to place before the profession of Canada a scheme which if acceptable to the various medical boards of the Dominion, may I trust with some modifications, become law at no distant date.

At first sight it would seem as if any plan were impossible that looked to united action. The Dominion Parliament cannot, on the one hand, infringe on the Provincial jurisdiction, while, on the other hand the Provincial Legislatures cannot unite in creating a central or federal medical board, because their powers are, in each instance, confined strictly to their own territory. If this opinion be correct, any scheme looking to interprovincial registration, or in other words any bargain made between the Profession in the various Provinces, or between the Boards as representing the Profession, would be *ultra vires*.

Under Section 91 however, of the British North America Act, the Dominion Parliament has power "To make laws for the Peace, Order and good Government of Canada, in relation to all matters not coming within the Classes of Subjects by this Act assigned exclusively to the Legislatures of the Provinces." Under these general terms it is believed that the Dominion Parliament may create a corporation for such objects relating to medical education and practice as are of general Dominion interest and importance, and as are beyond the Provincial powers.

Uniformity of medical education and the promotion of interprovincial registration are just such objects. The plan by which it is now proposed (for our purpose) to effect them is as follows:—

By an Act of the Dominion Parliament, a corporation may be created called, let us say *The Dominion Medical Council* which would be composed of medical practitioners from each province and from the Northwest territories. The principal function of this council would be to register all persons who have complied with certain requirements, as to education and training for the practice of medicine and surgery, and all applicants who shall have complied, would receive what might be termed Dominion registration by the council.

This registration would, however, *per se* confer no right to practise in any province of the Dominion. The Dominion Parliament has, of course, no power to make such an enactment; but it is within its power to enact that such registration shall alone confer the right to practise in any of the territories over which it has direct legislative control; and it may provide that such registration shall be a condition of employment in any medical capacity in the active service of the Dominion, as for example, the quarantine service, penitentiary surgeons, mounted police surgeons, the surgeons of the militia force generally, etc. Besides another important result of the establishment of such a system would be that Medical practitioners registered under it could claim registration under the Imperial Medical Act of 1886, without undergoing further examination. By this Act (as you are aware) where parts of a British possession are under both a central and a local legislature, the authority of the central legislature is requisite to entitle a

colonial practitioner to British registry. Under the existing systems of provincial registration, Canadian practitioners are debarred from entering the extensive field of medical employment in the various departments of the Imperial service, such as for example, the army and navy, the Indian medical service, the colonial medical services, medical service under the Board of trade, including ships' surgeons, etc., also from employment as sanitary officers in the United Kingdom.

At this point, however, the powers of this council would cease. *In order to bring about what we most desire*, viz. interprovincial registration, all the medical boards in the Dominion would have to be consulted, and their consent obtained to the passage of a short Act in their own Legislature, giving the right to any person registered under the Dominion Act to practise in any province, subject, of course, to the payment of any fee that the Province may impose. It will have to be shown further that the person obtaining Dominion registration has given evidence of possessing qualifications at least equal to those required for registration under the existing law of any Province. In other words, the educational standard as to preliminary examination for study, the professional curriculum followed and the final examination must be fixed by the Dominion council at a level as high as or higher than that of any Province, with power in the council to keep it always so; and in case of failure at any time to maintain the standard, the Governor-General in Council might have power to intervene.

In the case of some of the Provinces, where the medical councils already possess the power of determining such equivalents, this matter could, perhaps, be arranged directly by these Councils. The medical councils of Ontario, Nova Scotia and the Northwest Territories have by recent enactments obtained such powers.

It will be observed that the proposed plan avoids in every possible way any encroachment upon the exclusive right of the Provinces as to maintaining their own system of medical education and registration. *I fully realize that any scheme, to have a sound constitutional basis and prove acceptable in working, must not encroach upon the provincial autonomy.* The various provincial medical boards or councils, (as they may be termed) shall continue their work of examination and registration as before, and to them shall be left all questions of taxation, discipline, etc. In a word, the establishment of a Dominion Medical Council would simply provide a direct and efficient way of interprovincial registration, while promoting a high level of professional education.

One of the most difficult problems in connection with this subject is the composition of the proposed council. It is evident that it must be thoroughly representative of the Provinces; and as it will have to deal with professional questions, it should be kept above the plane of politi-

cal interference. The matter, however, being one of great public importance, and the assistance of the Dominion Parliament being invoked, some provision would doubtless have to be made for the representation of that interest.

Let me suggest, then, that a Provisional Council consist of three classes of members, all of whom would be registered medical practitioners:

(a). One from each Province, including the Northwest Territories, to be appointed by the Governor-General in Council.

(b). One from each Province, including the Northwest Territories to be appointed by the Medical Council of the Province.

(c). The President of each Provincial Medical Council to be an *ex officio* member.

This would give a council of 24 members.

It is a question whether all the Provinces should have an equal number of members, in the council as permanently constituted, or whether the representation should be in some measure graded according to the relative number of practitioners in each province. In any case it would be desirable to keep the council of moderate number, for ease and efficiency of working, and to secure a representative majority at all times.

Now, so far, the outline of the proposed scheme deals only with students of medicine wishing to qualify themselves for practice in all or any of the provinces which accept Dominion registration as sufficient evidence of professional capacity.

With regard, however, to medical practitioners actually practising at the time of the passing of such an act, should the right be given them to avail themselves of the privileges under the act admitting them to practise in other provinces than that in which they had originally qualified? Should it be retroactive?

Many objections would doubtless be raised to such a clause, especially by the profession in the younger provinces who might dread a stampede in their direction. This could readily be overcome, however, by making some time limit, say five or seven years of actual practice, coupled with evidence of good professional standing. Medical men in practice for that length of time would not be so likely to migrate as the more recent graduates.

There are many matters of detail that might be introduced, but my chief purpose to-night is to excite a discussion on the general practicability of such a scheme as that which I have endeavored to outline.

The present state of affairs in connection with the practice of our profession in this country is anomalous, and exists perhaps, nowhere else. Where we have, simply imaginary lines or narrow rivers separating our provinces the present arrangements must continue to lead to hardships, both to the public and to medical men themselves, and sometimes to

grave abuse. Besides, the provinces are all congested, the number of medical men being far too numerous in proportion to the population. This scheme would not only lead to a more equable distribution, but it would throw open the entire British Empire to our Canadian youth who have adopted medicine as a profession.

*Discussion.*

SIR WILLIAM HINGSTON referred to some of the earlier efforts made by the profession, from time to time, in somewhat parallel lines. Years ago a discussion had taken place on this subject at a meeting of the Montreal members of the Canadian Medical Association when a project was submitted which seemed to ignore provincial rights and the result was very nearly the smashing up of the association. It was felt by the majority at that meeting that the proposed changes would be interfering with the rights and privileges of the provinces which alone, by the British North America Act, belonged to them. Nothing further had been done until McGill University moved to obtain Imperial registration for the Dominion. The application, however, had gone through the wrong channels and had resulted in nothing. Two or three years afterwards, Sir William, as President of the College of Physicians and Surgeons of the Province of Quebec, after having canvassed by letter every governor of the college, had made an effort and the more influential members of the British Medical Council were in favour of acceding to the desire of the college. On referring to their legal advisors, however, they were told that registration could not be given to one province without giving it to all: that, in fine, the British authorities could not deal with the separate provinces in detail, but with Canada as a whole.

With regard to the scheme submitted by Dr. Roddick, the speaker thought that it was of a practical nature and likely to be successful; but he would suggest the advisability of the avoidance of details. All efforts should be confined to general principles and details could be left to be arranged in the by-laws of the Council itself when appointed. It would be unwise to have all the details form too much the subject of discussion. If the several principles were accepted, the details would follow as a matter of necessity. The scheme would have his heartiest support as he had long recognised the advantage of British registration to our qualified colonial practitioners.

DR. E. P. LACHAPPELLE had been much interested in the scheme proposed by Dr. Roddick. It was well known that several futile efforts had already been made and we must congratulate Dr. Roddick on bringing forth a new scheme which showed that he (Dr. Roddick) had been very carefully looking into all the details and had foreseen all the difficulties.

He sincerely hoped that it would be possible with good will and good work to make it successful. There was no doubt that it would be a great improvement to have such an understanding between the provinces and

be able to enjoy Imperial registration. There was no question but that the British North America act was framed in such a way as to make interference of the Federal Government on this matter difficult without all the provinces joining in the effort. The speaker was in full sympathy with the general lines of the scheme, both as a member of this society and as President of the College of Physicians and Surgeons of the Province of Quebec, and would do all in his power to make it a success.

Dr. ROBERT CRAIK had not prepared himself to take part in the discussion of this scheme of Dr. Roddick's, as he had not heard the direction in which the proposed act was to develop. His experience of the efforts directed towards securing Dominion registration probably dated farther back than that of any one else present. He had been a member of the Canadian Medical Association at the time when the matter, as referred to by Sir William Hingston, had been brought up, and he had been hopeful up to the very last minute that the scheme then proposed would carry. After having been fully and mostly favourably discussed by representatives from every province it was voted down by an immense majority. He did not wish to throw cold water on the scheme, no one deprecated such a spirit more than he, but he would have them remember that sometimes projects such as this failed from the promoters being a little oversanguine. In this case any difficulty which might tend to bring disaster about should be avoided now. The scheme as proposed was, in his opinion, workable if it could carry various interests with it. If the antagonism could be overcome or put to sleep all would be well. It was all very well to ignore details, but it must not be forgotten that they were apt to come up at an inconvenient time and wreck the whole scheme. His advice was to try and find out the interests of each province by obtaining the views of influential members of the profession and harmonise them as far as possible. Let each concede small matters and so reach a common ground on which all can act.

Dr. Craik stated that the difficulty with regard to the obtaining of Imperial registration was that the British act of 1868 dealt only with the federal centres of the provinces and in that way the individual provinces were shut out. He was not clear as to how it was proposed to overcome this.

In concluding, the speaker earnestly wished the scheme success, and that eventually it would reach a workable basis and so be sure of that success.

Dr. R. F. RUTTAN congratulated Dr. Roddick on his success in overcoming the obstacles which had so long presented themselves to a uniform enregistration in Canada. The whole profession was dissatisfied with the present condition of affairs. The various medical councils themselves are continually engaged in altering by-laws, if they are not

actually in the Legislature itself, asking for new amendments to their Acts. The medical teaching bodies find the greatest possible difficulty in conforming with the requirements of all of the provinces of the Dominion and do so only under protest. Students entering the profession complain bitterly in many provinces of the technical and arbitrary obstructions placed in the way of enregistration. The profession as a whole, while enjoying a certain degree of protection through their medical boards, chafe under the restrictions imposed on them and feel strongly their very limited field of work. The profession as a whole, as represented by the Dominion Medical Association, has annually for some years discussed the question of reducing to harmony the present inharmonious relations existing in the various Provinces. Eight separate medical boards exist in Canada, each with its own regulations regarding matriculation, courses of study, and requirements for degree, etc. The incorporated profession of each province is justified in obtaining such legislation with a view of maintaining the dignity and usefulness of the profession and for the protection of a large section of the public against the effects of its own ignorance and credulity. All medical boards unfortunately are not satisfied with measures which require a sound medical education and good moral character as a qualification for entering the profession, but under the thin guise of raising the standard of the profession, have become purely protective organizations requiring either an excessively high standard of matriculation, an excessively long period of study, or an exacting, stringent legislation of a prohibitive character regarding enregistration of matriculation. There is little uniformity in the requirements of the different provinces at present, neither students nor practitioners are enabled to transfer their registration from one province to another, except in a few cases. The two oldest and most prosperous provinces, Ontario and Quebec, although adjoining, have no arrangements by which a practitioner near the border can leave his own province to attend a patient. There is a wide spread feeling in the profession that this condition of affairs should disappear and that the Dominion of Canada should not stand alone among the larger British Dependencies without the right of having her licensed practitioners enregistered by the general council of medical education of Great Britain without examination.

Two remedies have been suggested:—One the establishment of reciprocal relations among the provinces, and the other, the plan which has been so well elaborated by Dr. Roddick, namely Federal or Dominion enregistration. Owing to the fact that the Province of Quebec has no central examining board and has thus no fixed standard for professional examinations, it was found impossible to make even a beginning towards reciprocal enregistration between the different provinces, but

apart from this another objection of a more fundamental character exists, inasmuch as the tendency of any system of reciprocity would be to reduce the average standard of medical education; because the lowest requirements, and the weakest colleges in the Dominion would be most popular. It would thus tend to retard rather than advance medical education and should be opposed by all of those who have the interests of medical education at heart. It is true that reciprocal relations wov' : appease the practitioner and would relieve the profession of many of the grievances it suffers at present, but it would not relieve the teaching bodies nor aid them in keeping abreast of the advance of modern medical education, nor would it give our graduates the benefit of British enregistration.

A central examining licensing board, with qualifications as high, if not higher than those required by any province, under the control of the best medical teachers of the Dominion, would satisfy the demands of the student, the practitioner and the medical schools, and would bring about recognition of our licence through the British Empire. Difficulties certainly exist in carrying this idea into effect, some of which have been suggested by previous speakers and among which should not be forgotten the necessity of a double set of examiners for the requirements of French as well as English applicants and with a consequent doubling of the cost of the examining body. This can scarcely be done with the fees obtained from candidates alone, and even if the federal government were required to pay a portion of the expenses they would only be doing what is done among many of the European countries where the cost of a medical education is largely borne by the state.

The speaker concluded by stating that he felt sure that the principle of the establishment of a central licensing body of the whole Dominion would meet with the unanimous approval of the profession and would receive little or no opposition in its passage through the legislature.

Dr. F. J. SHEPHERD joined with the other speakers in wishing the scheme success and said that if Dr. Roddick succeeded in obtaining Dominion Registration for the medical men we would all forgive him for having gone into politics. Until he had heard Dr. Roddick's address he was to a great extent unaware of the difficulties in the way, which seemed to him almost insuperable. He should like to ask why the provinces controlled professional education. The act evidently only referred to general education. If he was not mistaken, we already have a Dominion Act by which surveyors can be registered for the whole country, the provincial boards still remaining in force. If for surveyors, why not for the medical profession? The weak point about Dr. Roddick's scheme seemed to be the doubt of getting it accepted in Great Britain, for if a man with a Dominion Registration could not practice in his own country it was not likely Great Britain would allow him to

be registered there. However, certain provinces might accept it, such as Manitoba, the Lower Provinces, and Quebec, and the others in time would be forced to fall into line. He thought one difficulty would be the Homoeopaths and others of that ilk who would also demand Dominion registration. At any rate they would through their influence with members block the bill unless they were included. The first thing was to have one preliminary standard for all the provinces and the plan suggested by Dr. Ruttan he thought a good one.

In conclusion, Dr. Shepherd said that the plan suggested by Dr. Roddick was the only feasible one in view at present and ought to have the hearty support of the profession throughout the Dominion.

Dr. LAPHORN SMITH thought that the present time was a most favorable one for the movement which was being so ably furthered by Dr. Roddick, our popular and influential representative in the House of Commons. Not only have we Sir William Hingston to support him in the Senate, but at the present time the Provincial Legislatures are all in accord with the Federal Parliament, and will do almost anything which the latter may ask of them. The colonial secretary Mr. Jos. Chamberlain is most favorably disposed towards Canada, and with his immense influence could obtain for us any legislation we might require. With the whole profession in Canada in favor of it, and the Provincial Medical Boards and Legislatures raising no objection to it, he thought that there would be no insurmountable difficulty in getting a short act passed by the Parliament of Canada, and even if necessary, by that of Britain.

He would, however, like to point out a much simpler method of obtaining what they desired; namely, by changing the name from Dominion Board to University of Canada. There was nothing in the British America Act to prevent the Parliament of Canada from granting a charter to a university of Canada with power to grant degrees in medicine, the holders of which would be entitled to practise in all parts of Canada. The act granting this charter could if necessary be ratified by the British House.

As the University of Canada would be an examining body and not a teaching one it would in no way interfere with the rights of the provincial boards or medical schools, which would continue to carry on their work precisely as they are doing at present, for those who were satisfied to practise in their own province only. Those who wished however to practise all over the Dominion must pass through a uniform portal the barriers of which should be at least as high as those of any provincial board. And that portal would be the matriculation and final examinations of the University of Canada. Even when armed with this degree its holder must obey the same regulations and pay the same fees annually.

as the other practitioners of the province in which they desire to practise. By calling it the University of Canada it would become a national institution and an object of national pride, so that the Government of Canada would come to its aid financially during the first few years, after which it would be self supporting. Dr. Laphorn Smith did not see any difficulty either in the matriculation or final examination. Some man of high standing would be appointed in each provincial capital or chief city to hold the entrance examination simultaneously. Sealed examination papers would be sent to him some days before but would only be opened by him after all the candidates had entered and the doors were locked. This would be taking place at the same hour and minute in the seven distant cities. When the allotted time was up the papers would be signed and sealed by the examiner and forwarded to the central committee, who, without knowing the writer's name, would apportion the merited marks, and forward certificates. On presentation of these certificates and proof of five years study of medicine the candidates could come on a fixed date every year before the examiners of the university who would be chosen from the present provincial examiners or other eminent teachers. As to the clinical examination, the committee on clinics together with all the candidates could take a two hour and a-half ride down to Montreal and hold the examinations at the big hospitals, and return to Ottawa the same or the following day. As soon as the results of these examinations had been added to the others the convocation could be held and the degrees be signed and given by the Governor General. The examination might be more severe in practical subjects for those who had been over ten years in practice, and more severe in theoretical subjects for those who had just left the medical school. The fees should not exceed fifty dollars which with a government grant of ten thousand dollars a year for ten years would be ample to defray all expenses as examinations would be held only once a year in the month of June.

THE CHAIRMAN (Dr. LAFLEUR) asked if there would not be some difficulty in regard to holding the final examinations which would require to be largely clinical.

Dr. RODDICK, in reply, stated that he was much pleased at the way in which the matter had been discussed, and he was encouraged to go on and if possible bring it to a satisfactory conclusion. Some months ago he had presented the scheme before a representative meeting of medical men in Toronto, including some members of the Ontario Council, and it had met with their approval. With regard to the question of detail, while he felt it was well not to go too far, one had to go a certain distance. There were two or three points of importance, for instance, which had come up at the Toronto meeting; one was with regard to ma-

triculation, and another as to how the finals were to be held. It was necessary to have the details of the scheme worked out sufficiently to be able to give satisfactory replies to all questions that might be asked. Dr. Roddick expressed satisfaction at having the endorsation of the President of the College of Physicians and Surgeons of Quebec, Dr. Lachapelle. He looked upon the scheme as well nigh impracticable unless every province was willing to come into it. The main feature of the measure was that candidates who had passed the Dominion examinations would be allowed to practice in any province by paying the ordinary registration fees of that province. The question of finances was a very serious problem. There would be a Dominion registration fee, and the man who was going to have all the privileges accorded would not object to paying a reasonable fee. Fifty dollars a head would probably cover all expenses, and the expense of examining would not be very great. The final examinations would, of course, have to be held where there were hospitals. It was not intended to have the bill brought up at the present session of Parliament, but to wait until the various medical boards had proclaimed their opinions. Besides, Dr. Roddick was bound first to report to the Canadian Medical Association at the meeting in Toronto in August next.

NOTES ON THE ETIOLOGY AND PATHOLOGY OF  
"CATHETER FEVER."\* WITH THE RESULTS  
OF AN INVESTIGATION AS TO THE  
PROPHYLACTIC TREATMENT.

BY

A. MACKENZIE FORBES, M. D.,

Physician to the Metropolitan Dispensary, Montreal.

Not infrequently, the medical profession is startled by hearing of the sudden death of an apparently healthy individual following, merely, the passage into the bladder of a catheter or sound, but they do not hear of conditions, which, though alarming enough, are saved from publicity through their more favourable termination. I speak of what is commonly called "urethral chills," a condition far more common than would be at first supposed, but which is readily demonstrated by simply making it a routine practice to question every patient, say, forty-eight hours after passing a sound, as to their sensations since the operation. I feel sure that any person, after having made such a practice, will not feel that time is wasted in studying how to avoid producing such a chill, while for those who may not investigate the matter on their own account, it will be only necessary to quote the words of Professor Rovsing, of Copenhagen, at the British Medical Association's last meeting, to excuse bringing the subject before your notice.

His words were:—"The very greatest number of urinary infections originating from the urethra are caused by surgical interference,—examination by cystoscope, introduction of bougies, catheterization, and litholopaxy. It seems, therefore, to me to be the urgent duty of us surgeons to consider carefully by what means we can avoid the infection of our patients as the consequences of this are incalculable. At first, the general opinion was that infection was only caused by the introduction of unclean instruments, and that infection of the urinary tract might be prevented by using sterile instruments and by washing the external orifice of the urethra. The desired result was, however, not forthcoming and in the majority of hospital catheterizations, cystitis, etc., appeared and appears still with almost the same frequency as before, although instruments are disinfected most carefully."

That we may properly consider the treatment of this condition it is necessary to review the most modern views on the etiology and pathology

---

\*Collected from the papers read at the British Medical Association Meeting in 1898.

of this disease; and these are set forth in the discussion which took place at the meeting of the British Medical Association, already referred to, on "The Origin, Effects, and Treatment of Septic Affections of the Urinary Tract."

One of the peculiarities of the human body is that certain parts or organs may be grouped together into systems, and the component parts of such systems have more or less relationship to each other, perhaps by continuity or perhaps simply by function. In these cases of relationship it is curious to notice how often the components of these systems are further related by having a similar nervous, blood, or lymphatic supply; and these relationships are also made more apparent by the liability of one member of a system to become diseased if another member is already affected, even though this disease can be proven not to have been communicated to the second organ or part by direct continuity. Let us first shortly consider the connection by continuity of the component parts of the genito-urinary system. The urethra, whose mucosa is covered with follicles, is connected with Cowper's glands, the seminal vesicles, and the prostate, and is continuous with the bladder. The bladder is connected by the ureters with the kidneys; and here it is at once apparent that if one part is infected it should be physically the easiest thing imaginable for that disease to be communicated to any other part of the genito-urinary system. This is shown by the manner in which, when the ureters are dilated and the fluid columns between the bladder and the renal pelves are thereby rendered continuous, bacterial invasion of the kidneys takes place through these columns of urine from a septic disease of the lower urinary region. But, unfortunately, this extension by direct continuity is only one of two well-known paths. As Newman has pointed out, the course which the lymphatics pursue from the bladder is one of direct distribution along the submucous connective tissue surrounding the ureters to the capsule of the kidney. They then penetrate the renal substance, and thus, in those acute cases following urethral instrumentation in which the kidney is affected without suppuration, the virus is conveyed to the cortex of the kidney by the lymphatic channels. This connection accounts for those cases of very acute septic absorption resulting from injuries of the lower urinary tract, but especially of the upper portion of the urethra and the neck of the bladder, in which a violent septic poisoning is induced without the mucosa of the ureters or renal pelves being affected, or, if so, only implicated in the inflammatory process to a slight degree. These cases may terminate fatally in forty-eight hours and on microscopic examination the whole of the kidney is found to be completely permeated, and the walls of the bladder and the ureters are likewise infiltrated with septic micro-organisms.

In the foregoing remarks on infection we have implicated ourselves in the etiology and pathology of the disease under discussion. These two elements of this disease have in the past been much disputed, but roughly we may state that the two great theories of the disease were:—

(1) The septic theory: (2) the nervous theory.

Recently it has been clearly demonstrated, I think, that neither sepsis alone nor the nervous system alone is responsible in any given case, but, in all probability, the two factors acting together have produced the disease,—sometimes the septic symptoms predominating and at other times the nervous.

Guyon showed that microbes may even enter the bladder without bad effect, if the bladder resistance is normal. If, however, it be diminished as, for instance, by a foreign body, injury, or residual urine, trouble may be anticipated. When we remember how each instrumentation is known to cause a modification of the urethral circulation,—any instrument introduced really being a foreign body,—and when we consider the influence of the nervous system upon inflammatory processes as well as upon resistance (either by impairing the nutritive activity of the part or by diminishing phagocytosis), it is difficult to say to what extent instrumentation of the urethra or bladder acts by reflex irritation through the nervous system, and to what extent by the introduction of sepsis. The influence of the nervous system is demonstrated in those cases where the passage of a sterilized bougie may be followed by the complete suppression of urine, which suppression is probably due to a reflex spasm of the renal arterioles. In such cases the circulation in the bladder is also interfered with and, should any contamination have been introduced, the danger of acute sepsis of the whole tract is very great. It seems very doubtful, however, whether the nervous system alone can be at fault in any case of urethral chill. But, as Newman pointed out, in any case, if the bladder fails to empty itself completely, as from urethral stricture, local or general paralysis, enlargement of the prostate or other cause, the danger of sepsis by the most minute particles of infection cannot be exaggerated. In such cases the mucous membrane loses its resisting power and the retained contents of the bladder become contaminated by even the smallest inoculation of infective material introduced from without. The discovery that the normal urethra swarms with microbes, often pathogenic, explains the cause of the disappointment of those who, when antiseptic treatment was first introduced, supposed that infection was due to the non-disinfected instrument; and great was their surprise on finding that the number of cases of catheterization infection was but slightly reduced in spite of the most careful sterilization of instruments. The number of microbes is greatly increased in those cases in which instrumentation is called for, e. g., examination

by cystoscope, introduction of bougies, catheterization, and litholopaxy; and coincidentally with such increase in the bacterial habitant of the urethra is the danger of infection increased.

Now that we have seen that not only is sepsis a most important factor in the origin of urinary fever, but that disturbance of the nervous system will facilitate absorption, that although the instruments may be perfectly sterile, chill may be caused by displacing pathogenic bacteria and especially if this displacement be combined with injury by careless instrumentation, or with an already existing lesion, we must consider what can be done in the way of prophylaxis against this disease.

Two measures may be discussed; first, that which will lessen deleterious nervous influence, and secondly, that which will prevent sepsis. To combat the first, our only resource is to perform the operation with the utmost gentleness, and to carry this out we should never use more than one instrument at the first *séance*. A steel sound of smaller calibre than 20 French, should never be used. In the case of extremely nervous patients, it is better to use only soft bougies until they are accustomed to instrumentation. Sounds should never be passed more than twice or at most, three times a week, and it is found safer not to increase the calibre of the sounds by more than one or two sizes at a *séance*, the surgeon taking great care not to hurt his patient by the introduction of the instrument. If one cannot be passed through a stricture without hurting the patient it is best to employ a smaller sound, or even a bougie for a time, and only return to the large one when it is felt that it can be used without giving pain to the patient. In introducing a sound, when its progress is obstructed by the triangular ligament, it is preferable not to lift the sound's point to get it through, but to relax the subpubic ligament by pressure from above.

We must now consider how it is possible to guard against septic absorption, when it is known that the urethra is generally considered to be irretrievably septic, and thus we come face to face with certain dictums almost as unchangeable as the laws of the Medes and Persians. (1) Never use an instrument until the urine has been rendered apparently sterile by the use of such agents as salol, boracic acid, or, perhaps best, urotropine. (2) Always be sure that instruments are absolutely sterile for, although we know of many instrumentations with sounds simply washed in hot water and perhaps rubbed down with a sterile cloth, often without the slightest ill effects, we must confess that it is preferable to use none but boiled instruments. (3) Never pass a sound into the bladder if the stricture is in the anterior urethra alone; as the passage into the bladder certainly increases the danger of septic absorption.

In some hospitals another prophylactic measure is used. The bladder is injected through a catheter with Tiersch's solution which is thus

passed out by the patient. This has proven to be a most valuable addition to former treatments, but the objections to this scheme of treatment are that even a soft catheter is more or less an irritant to the mucosa, already disturbed by the passage of a sound; and again the soft catheter may force into the bladder some of the lubricant used on the instrument and which has adhered to the urethral mucosa. The disadvantage of this consists, not only in the possibility of introducing micro-organisms from the urethra in the lubricant, but also, in the case of an insoluble lubricant, by the theoretical possibility of the matter introduced forming a nucleus for stone. It may here be interesting to note that Rovsing found in a post-mortem examination of a patient dead from typhoid fever, the urinary bladder half-filled with vaseline collected there by daily catheterization for two months. Another objection is that the urethra is but imperfectly and perhaps superficially washed out by the extrusion of the injection from the bladder.

We have now stated the prophylactic measures most usually employed and have seen that, although the injection of an antiseptic solution through a soft catheter into the bladder is far better than doing nothing in the way of washing out the bladder, still this method has certain objections. And here, perhaps, it will be well to consider other matters which may be of the utmost importance.

Swinburne has demonstrated that an instrument should never be passed into the bladder while a discharge containing micro-organisms is present, thus showing the necessity of the constant use of the microscope by all genito-urinary surgeons. This rule is made practical through the knowledge that with irrigations by the method about to be explained, all micro-organisms seen in a discharge can be removed for a period long enough to permit the safe use of the sound, and which, if used properly, will have the mucosa in a normal condition before their return.

Another important point is that a sound or other instrument should not be used without first thoroughly irrigating the urethra, and if possible the bladder also, with a hot antiseptic solution, and repeating this immediately after instrumentation. This second irrigation, however, may be supplemented or its place taken by an instillation of 2 per cent. protargol into the bladder. Here I may mention an improvement suggested and adopted by Swinburne. A set of sounds which resemble an Ultzmann's syringe are used by him. The sound is tunnelled and so made that it may be screwed to a syringe barrel. Thus, before withdrawing the sound, the surgeon may instill into the bladder about an ounce of a 2 per cent. solution of protargol. Rovsing, also, is a firm believer in the instillation of a germicide into the bladder after instrumentation, he having used for nearly ten years past a 2 per cent. solution

of silver nitrate, which he leaves in the bladder for three to four minutes and then has evacuated *per vias naturales*, following such evacuation by lavage with sterilised water. He claims that in the hundreds of cases in which he has used this method he has had no failures. But, according to some observers on this continent, he hardly goes far enough, for, to use his own words, he only employs it "in all cases of single introduction of an instrument under circumstances where infection is to be feared." The only other objection to the method is that it consumes more time than irrigation from the meatus and does not go so far as irrigation or instillation with protargol. It has the additional danger of causing some pain to the patient.

The irrigation of the urethra and bladder with hot permanganate solution from the meatus which has been referred to is done in the following way :—

The irrigator is slung five feet above the patient's penis. The patient sits or stands holding a pus basin under his penis with his left hand. The surgeon places himself on the right side of the patient and, grasping the penis with his left hand, irrigates with his right, alternately ballooning the urethra with the fluid and allowing it to escape. The urethra must be washed in this way inch by inch, first washing the meatus and guarding against the driving back of septic material from the first inch into the parts behind by tightly compressing the urethra at intervals of one to two inches until the pubic bone is reached. When the urethra has thus been carefully washed the bladder must next be washed out. This is done by gently filling the urethra and asking the patient to urinate, and in all probability his efforts will be rewarded and the surgeon will feel the purring sensation characteristic of the unobstructed flow of the solution into the bladder. Here it is necessary to be extremely careful not to hurt the patient. If he cannot voluntarily take it into his bladder by trying to urinate, not to let him persist, as the risk is run of causing an epididymitis, which will certainly not be appreciated by the patient. In the event of being unsuccessful with this it is better to risk the irritation caused by a soft catheter (after the danger of introducing septic material has been abolished by the previous copious irrigation of the urethra), and instill into the bladder one ounce of a 2 per cent. solution of protargol. The only objection that can be raised to this method is the time consumed; but results will repay this. I have passed several hundred sounds after using this method without producing a chill, and Valentine claims that he has passed thousands without a chill; even going further and stating that a chill does not follow instrumentation and copious irrigation with potassium permanganate. Not only is Swinburne, who perhaps of all men has had the greatest experience in the use of irrigation in urethral disease, strongly in favour of this method, but I understand that MacEuan of Dundee also approves of it.

## Case Reports.

### TWO CASES OF MYOMECTOMY : ONE DURING PREGNANCY.\*

BY

A. LAPHORN SMITH, B. A., M. D., M. R. C. S. ENGLAND.

Fellow of the British and American Gynecological Societies; Surgeon in Chief of the Samaritan Hospital for Women; Gynecologist to the Montreal Dispensary; Surgeon to the Western General Hospital; Professor of Clinical Gynecology in Bishop's University, Montreal, Canada.

#### *Case 1. Removal of a Fibroid Tumour from the Pregnant Uterus.— Recovery.—Normal Delivery.*

Some ten months ago I showed to the Society a fibroid tumour, rather larger than a large orange and weighing over a pound, which I had removed from a Mrs. B., who at the time was two and a-half months pregnant. Her physician, Dr. MacNamara, gave me the following history:—She began to menstruate at the age of twelve, her periods being always painful and scanty. She was married at the age of twenty-four and became pregnant fifteen days later, but miscarried at seven weeks, in December 1897. After this miscarriage she felt a lump in her right side which at that time did not trouble her very much. She became pregnant again on 12th January 1898, and almost immediately afterwards the lump in her side began to pain her and by the time she was two months pregnant she could hardly bear it. The tumour could now be seen and felt projecting under the thin abdominal wall. She sent for Dr. MacNamara, who diagnosed a fibroid tumour with pregnancy, and during two months he tried to relieve her pain by medicine but at the end of that time he felt convinced that something more radical would have to be done and for this purpose he called me in. Myomectomy was determined on, she then being two and a-half months pregnant. I operated at her own home, (on my portable table which only weighs eighteen pounds.) The abdomen was opened by a long incision, the tumour was grasped and drawn out and as it was evident that a good deal of sewing would be needed, the pregnant uterus was also brought out of the abdomen and laid on a sterilized towel. The uterus appeared exceedingly vascular so two pairs of clamps were placed on the uterine wall at the base of the tumour. The latter was then excised so as to form a sort of V-shaped stump, the large vessels of which were temporarily controlled by the clamps, while I was sewing the flaps firmly together with interrupted sutures. So far, hardly a drachm of blood had

\*Read before the Montreal Medico-Chirurgical Society, April 10th, 1899.

been lost, but when I cautiously loosened one of the clamps for a moment, the bleeding was furious. I tightened it again and put in a second row of medium silk sutures turning in the peritoneal surfaces. Again the clamps were loosened and again the bleeding began, but much less in quantity, so that with a third row of very fine stitches passed with a fine needle the wound was made quite dry. The uterus was then dropped back into the abdomen and the incision was closed with through and through silk-worm gut stitches. She required only one small hypodermic of morphia and next day she felt, as she said, well enough to get up and go about. The pain which had troubled her for more than two months previously disappeared completely but she said she could feel the place on the front of the womb on the right side from which the tumour had been cut out. She was walking a month later.

When I showed the tumour ten months ago, it was the opinion of several members that a miscarriage would almost surely take place. On the contrary, she went on to full time, the 19th October, when she was delivered by Dr. MacNamara of a fine healthy boy, the labour being perfectly natural but a little difficult owing to its being a face presentation. I have recently seen her and the baby and can testify that they are both in perfect health.

Judging from this case and from several others in which I have removed tumours of various kinds and performed ventrofixation of the retroverted pregnant uterus without causing a miscarriage, I would have no hesitation about removing pustules, ovarian tumours, or fibroids, — provided that the latter were interstitial or subserous, — whenever they are dangerous or painful, even if the patient were in the midst of her pregnancy. In this case the tumour extended very nearly, but not quite, down to the uterine mucous membrane, but even if its removal had necessitated opening into the cavity, I do not think, provided the asepsis was perfect, that the result would have been any different.

*Case II. Removal of Fibroid from Uterus followed by Ventrofixation and Removal of Hæmatoma of Ovary.*

The great improvement in the technique of abdominal hysterectomy and the more successful results have led, during the past few years, to a rather too frequent resort to the total removal of the uterus and appendages in cases in which the gravity of the symptoms and the youth of the patients hardly justified such a radical measure. It is fortunate, therefore, that a healthy reaction has set in during the last year or two among the leading gynæcologists, who are now doing their utmost to save the whole or at least a part of these organs, whenever it is possible to do so. The principal objects of this conservatism are:—(1) The desire to leave the woman in possession of her procreative powers: (2) To ren-

der the operation less dangerous: (3) To avoid the premature menopause. A few words on each of these points. (1st) It is now generally admitted that it is our duty to leave the woman the possibility of becoming a mother. Many women who have had no child, and others who have had one child and lost it, live in the hope of becoming pregnant sooner or later; but when we remove the whole of the uterus or both of the ovaries they know that the hope which they have cherished is no longer possible of fulfilment and they become utterly discouraged and lose all object in life. (2d) It is less dangerous in most cases to remove the fibroid alone sewing up carefully the cavity from which it has been removed. There are, however, exceptional cases in which it would be safer to remove the uterus but in these, by tying and cutting close to the tumour, the ovary on one side at least may be left, while, by amputating the uterus at the level of the internal os, the length of the vagina will remain unaltered. But the third reason is by all odds the most important, namely, the prevention of the premature menopause. For this reason I have during the last two years been leaving both ovaries or at least a part of one in every woman under forty in whom I have had reason to remove the tubes, one ovary, or the uterus, always excepting however the cases of cancer. I have at present under observation several women in whom the premature menopause was induced three years ago and who are still troubled with hot flushes and chills. In two of them I have tried extract of cow's ovaries without effect, although Jacobs of Brussels told me that he had employed it with marked success.

The following case is of interest because the tumour was interstitial and in removing it I could not avoid opening into the cavity of the uterus, and because this was not followed by any bad results. As she was past the menopause and unmarried my reason for not removing the uterus was solely because it was safer to leave it and there was no necessity for removing it.

Miss P., fifty years of age was sent to the Samaritan Hospital by Dr. Sylvester, on the 26th March. She had ceased to menstruate since three years ago but for the last year or two has been complaining of pain in the lower abdomen and back, which, in spite of persistent local treatment, grew worse and worse until she became unable to earn her living. On examination, a mass could be felt in front and one also behind the cervix, the latter swelling being very tender to touch. Both masses were firmly attached to the uterus so that it was difficult to say positively where the fundus was without using the sound. On opening the abdomen on the 28th March, the uterus was found to be retracted and bound down, and on freeing it, a tumour the size of a lemon was extracted from Douglas' pouch which proved to be a hæmatoma of the left ovary, the left tube being attached to it and closed with adhesions.

Occupying the whole of the front of the fundus was a hard fibrous tumour about the size of a lemon. Its capsule was split vertically and peeled off the anterior half of the tumour with the handle of a scalpel, but the posterior half of it was homogenous with the wall of the uterus, from which it had to be separated with the knife. In doing this a hole as big as a bean was made into the uterine cavity. By grasping the uterus firmly with my left hand at about the level of the internal os the bleeding was easily controlled, while half a dozen stitches of iron-dyed silk (made for me by Belding Paul & Co., silk manufacturers, of Montreal) were passed deeply through the sides of the incision without, however, going into the cavity of the uterus. When these were tied there was not a drop of oozing. The uterus when let go would fall into retroversion, so it was stitched up to the anterior abdominal wall with buried silk-worm gut. This patient has made a very quick recovery, requiring no morphine and being up on the tenth day. She is quite free from pain and expects to go to work in a few weeks.

## CARCINOMA OF LARYNX.\*

BY

H. S. BIRKETT, M.D.,

Professor of Laryngology, McGill University; Laryngologist to the Royal Victoria Hospital, Montreal,

AND

A. G. NICHOLLS, M.D.,

Demonstrator of Pathology, McGill University.

The patient whom this specimen concerns was a man of 55 years of age who consulted me at the throat clinic of the Montreal General Hospital six months ago on account of a huskiness which he said he had had for six weeks previous to his first visit to the hospital, due, the patient thought, to his having "taken cold."

Upon examination of the larynx at that time, six months ago, I found the huskiness was due to ulceration of the left true vocal cord on its under surface involving that portion of the cord attached to the vocal process. The extent of the ulceration as far as it could be judged by the laryngeal mirror, showed it to be an ulcer with irregular outlines and about 6 mm. long and 3 mm. broad. The surface was uneven and clean. The surrounding mucous membrane only moderately hyperæmic. The movements of this cord, namely abduction and adduction, were impaired only to a slight degree. There was no swelling of the crico-arytenoid joint of that side. The movements of the right cord were also slightly impaired and the right cord assumed a position nearer the middle line of the glottis, but not sufficiently near to interfere with respiration; therefore no stridor was present.

An investigation into the general health of the patient proved the absence of any tuberculous or syphilitic manifestations. There were no subjective symptoms, other than the alteration in the character of the voice. The patient himself in general appearance seemed to be enjoying good health; being a stout robust looking man. Careful examination of the glands in the neighborhood of the larynx failed to find any of them enlarged. The patient was placed on iodine of potassium in increasing doses, but without any beneficial results as regards the local condition after a period of four or five weeks. The patient was told of the probable nature of his case and advised to keep under strict supervision because of a grave possibility of a sudden attack of œdema of the glottis which might supervene at any time. In fact, preliminary tracheotomy was advised at that time, so as to place the patient beyond the occurrence of any such trouble.

\* Read before the Montreal Médico-Chirurgical Society, April 10, 1898.

I saw nothing of this patient until hastily summoned by Dr. Semple, who told me that the patient whom I had seen at the Hospital was suffering from an attack he thought of œdema of the glottis which would necessitate immediate tracheotomy.

Upon seeing this patient I found him sitting up and breathing with considerable difficulty. Inspiratory stridor was marked; with retraction of the supra and infra-clavicular spaces and also the abdominal wall. His face expressed a great deal of anxiety and he had since my last visit become slightly emaciated. Immediate tracheotomy was advised and the patient removed to the Royal Victoria Hospital as speedily as possible and on his way to the hospital on one occasion his condition became positively alarming, being seized with a spasm of the glottis, but which fortunately passed off in the course of a few seconds. His condition when on the operating table was that of increased dyspnoea and the operation of tracheotomy had to be hurriedly undertaken.

The difficulty encountered in opening the trachea less rapidly than could have been wished for, was due to the unusual depth which the trachea had, even with the head well extended and a pillow supporting his shoulders, for it was found to be at a depth of about  $3\frac{1}{2}$  inches from the surface; also another difficulty was the enlargement of the middle lobe of the thyroid. I may say here that the "low operation" was selected, not knowing how much more extensive the disease in the larynx had become since the last time I had seen the patient, five months previously.

On opening the trachea another difficulty was here met with, for it was found that the œdematous condition of the mucous membrane of the trachea had extended even below the site of the tracheal wound and thus it was found that the usual tracheotomy tubes introduced did not reach beyond this œdema, but the introduction of a catheter enabled the respiratory function to be carried on with relief to the urgent dyspnoea. Subsequently an extra long tracheotomy tube was introduced and seemed for the time being to satisfy the necessary requirements.

The patient unfortunately died three days subsequently, the death being due apparently to collapse of the lungs. The post-mortem examination was carried out by Dr. Nicholls, a report of which follows, and shows the site of the disease to be just where seen when the patient was living, and the want of adduction and abduction, especially of the right vocal cord, is proved by the post-mortem examination to be due to pressure along the course of the recurrent laryngeal nerve by an inflammatory condition of the enlarged lymphatic glands.

The points of interest in this case lie: 1st. In the slight progress which the laryngeal condition had made during a period of six months. 2ndly. The explanation of the deficient movement of the right vocal cord.

through pressure upon the recurrent laryngeal nerve by inflammatory products.

The autopsy was performed by Dr. A. G. Nicholls, who makes the following report:—

The body was that of a large-framed man very much cyanosed. In the neck, in the median line, was the wound of a recent low tracheotomy operation. The left vocal cord was seen to be bulged inwards and upwards, the left fossa being obliterated. Any passage of air through the glottis was impossible. The epithelioma over the left true vocal cord was intact but at the left processus vocalis was a small round ulcer through which a piece of necrosed bone protruded. A probe could be passed through the opening forward along the cord for a distance of 1 c.m. There was no evidence that the growth had extended outside the laryngeal chamber. Five c.m. below the true cords was the tracheotomy opening which was 2.5 by 3 c.m. in extent with ragged edges. It was surrounded by considerable pseudo-membrane and the trachea was intensely inflamed. There was also well-marked bronchitis. Along the course of the left recurrent laryngeal nerve was a small chain of enlarged glands.

Microscopically the growth proved to be a soft carcinoma of glandular type; apparently starting from the deep mucous glands. The lungs were almost completely collapsed; in the liver were four or five secondary carcinoma nodules, and the heart showed moderate fatty degeneration.

# OEDEMA OF THE GLOTTIS DURING ANÆSTHESIA\*

BY

F. R. ENGLAND, M.D.,

Physician to the Western Hospital, Montreal.

A. B. male, aged 21 years was admitted into the Western Hospital, March 3rd, complaining of a greatly swollen and painful neck. Ten days before admission he consulted a dentist who extracted a tooth (left upper molar). On the following day a painful swelling appeared beneath the angle of the jaw on the left side, which continued to spread until he came to the Hospital. I saw him soon after he was admitted and found him very ill: temp. 103° F; pulse rapid and feeble; general appearance bad.

He had not been able to take nourishment in any quantity for over a week. I found that the swelling of the neck, which extended down to the sternum, was greatest beneath the angle of the jaw on the right side; the skin over this region was of a dusky reddish color, the tissues brawny, indurated, and somewhat cedematous, but no distinct fluctuation could be made out. The jaws could not be separated to any extent and there was great difficulty in swallowing; the voice was slightly altered suggesting some pressure upon the glottis. The case, in short, was one of severe cellulitis of the neck with profound toxæmia.

I decided to incise at once and, if possible, locate and evacuate any collection of pus which might be present. Realizing the danger of rupture of a deep seated abscess into the pharynx or larynx, the anæsthetist was instructed to be most careful and to avoid complete narcosis. While the neck was being cleansed my attention was called to the patient's condition. He had suddenly become cyanosed and a quantity of foetid pus was flowing out of his mouth. His head was immediately lowered, a mouth gag introduced and an attempt made to clear the pharynx. Artificial respiration was tried without effect. As the case was becoming desperate tracheotomy was rapidly performed, followed by further artificial respiration, but all to no purpose. It was remarkable that not the slightest effort to breathe was made by the patient, though the tracheotomy tube and the trachea were both quite clear. The profound toxic condition and consequent lowered vitality, may, I think, offer the best explanation for the rapid and complete failure of the respiration and circulation.

This unfortunate case draws our attention: Firstly, to the importance

---

\* Read before the Montreal Medico-Chirurgical Society, March 20, 1899.

of *early* operation in deep seated inflammation or abscess of the neck, on account of the liability of pus burrowing in the deep tissues and possibly rupturing internally. Secondly, to the danger involved in the administration of a general anæsthetic when operation has been too long delayed, for in a state of consciousness the patient would be able in case of rupture, to assist in emptying his pharynx and thus probably avoid suffocation.

## Digest.

By J. C. WEBSTER, M.D.

### Physiological and Pathological Relationships between the Female Sexual Apparatus and Other Organs of the Body.

H. W. FREUND. "Die Beziehungen der weiblichen Geschlechtsorgane in ihren physiologischen und pathologischen veränderungen zur anderen Organe." *Ergebnisse der Allgemeiner Pathologie, etc.*, Lubarsch and Ostertag, 1898.

#### C. THE BLOOD-VESSELS.

*Arteries.* (1) Physiological. The importance of a normal development of the arterial system, especially of the aorta, to the genital organs has been pointed out in dealing with the subject of chlorosis. The changes which take place in pregnancy in the arteries of the uterus and neighbouring structures need no special mention. The enlargement which occurs is associated with the well-known 'souffle' in the branches of the uterine and ovarian arteries, with the easy palpation of the *azygos vaginæ* artery, and with the increased hyperæmia of the genitals. A souffle is sometimes heard in connection with other enlarged arteries, e. g. the epigastric. The increased arterial tension of pregnancy disappears in the puerperium.

(2) Pathological. The aplasia sometimes met with in the large arteries, described by Virchow, has been referred to. Fatty degeneration of the intima of the imperfectly developed aorta occurs not infrequently. Virchow describes the change as leading to yellow patches and abrasions of the superficial layers without signs of sclerosis. The process develops often just after the onset of puberty but it is more apt to occur in pregnancy, probably in association with the general tendency to fatty metamorphosis in the body. The media more rarely undergoes fatty changes but these are usually only microscopically recognisable. This condition is more serious than the former, for rupture of the affected vessels especially of the aorta under increased vascular tension may occur. Rupture may lead to dissecting aneurism as described by Virchow. This serious fatality has been noted by P. Müller in pregnancy, labour, and the puerperium. Virchow regards these fatty changes as likely to be followed by other changes, e. g., sclerosis and calcareous deposition, which may be found at puberty, in pregnancy, and in connection with myoma uteri.

Leisse and Curbello have published interesting cases of the latter

disease with cardiac hypertrophy and atheromatous arteries. Virchow also noted the latter condition in his work on fat embolism and eclampsia and describes the case of a young puerperal woman in which the brain arteries were very atheromatous. These changes, fatty and otherwise, can also be found in cases in which there is no congenital aplasia.

The development of cirroid aneurism has also been observed in relation to genital conditions. The growth of telangiectatic tumours has been noted in pregnancy. Large and small aneurisms have been described, e. g., those in the ophthalmic arteries. Virchow was the first to draw attention to the special relationship between the changes in these vessels and the puerperal state; embolism occurring in the eye vessels next in frequency to those of the kidneys and spleen.

*Veins.* Venous enlargement is well recognized in pregnancy, the formation of varicose veins in the external genitals, pelvis, and lower extremities, being fairly common. This condition results from the increased difficulty which the pelvic circulation encounters in the pregnant state, owing to the growth of the uterus, the stretching of the abdominal walls, and the increase of intra-abdominal pressure. The pressure of the uterus on the pelvic veins has been often described as a factor, but it is not to be considered. In chlorotic women, both pregnant and non pregnant, the condition is common; as Morgagni has stated, in such cases where the arteries are narrowed, the veins would naturally be dilated.

The dilated and tortuous veins may form swellings of considerable size, which may project as tumours; extravasations of blood may take place, large and small, under the skin, in the vulva and vaginal walls, in the broad ligaments, etc. Extreme and dangerous loss of blood may take place in marked cases, especially under the influence of hard work, traumatism, or constipation.

Thrombosis may occur in varicose veins and is of special importance in relation to the puerperium. It may also be found in pregnancy. Cases have been described in which the process extended from the lower extremities through the large veins to the heart and pulmonary arteries, though not necessarily leading to complete obliteration of their lumen. The relation of thrombosis to pulmonary embolism has been already referred to.

Inflammation of vein walls may also be found and is due to septic infection. Whatever veins may be infected in the pelvis, the ovarian vein is the most important one by which distribution may occur in the body. Bearing this in mind, W. A. Freund has resected this vessel in cases of puerperal infection. Sometimes infective material gets into a vein by the bursting through its walls of a periphlebitic abscess. In puerperal ulcerative endocarditis, phlebitis and purulent thrombosis is fairly frequent.

Inflammation in the femoral veins is common in the puerperium and

usually is followed by healing. In the condition of phlegmasia alba dolens, besides phlebitis and interference with the venous circulation, there is also an infective process in the lymphatics.

Varicose veins are also found less marked than in pregnancy as a rule, in connection with tumours of the genitalia which affect the circulation; they are more frequent with myoma uteri than with ovarian tumours. They are less frequent with displacement of the uterus and in inflammatory conditions producing adhesions. Sometimes the veins are so dilated with fibroids as to render operative measures very dangerous. Embolism may be caused also by manipulations and surgical procedures. In various pelvic troubles hæmorrhoids are common. In the condition of parametritis atrophicans, W. A. Freund has pointed out the dilatation of veins which occurs sometimes with thrombosis as a result of the compression of parts of the vessels by sclerosing connective tissue.

Finally must be mentioned, the general venous congestion which occurs at the onset of puberty, at the menstrual period, and at the menopause: it generally leads to a feeling of pressure and fulness in the pelvis.

*Lymphatics.* The uterine lymphatics and those in its ligaments undergo enlargement during pregnancy; in some cases they may reach the size of a quill or even larger. It is doubtful if these vessels play the important rôle in the distribution of infection to the rest of the body in puerperal sepsis which has by many been attributed to them. For, as Virchow has shown, infective processes tend to cause thrombosis in the lymphatics affected, thus interfering with the circulation of the lymph stream. Yet, in some cases undoubtedly, the lymphatics may act as the rapid distributors of infective matter. When the lymphatics are infected along with femoral venous thrombosis, only in a small percentage of cases are those of the leg affected. More commonly only those of the upper part of the thigh and the external genitals of the affected side are involved. On puncturing the skin, in these conditions of phlegmasia alba, lymph exudes.

In some cases of fibroids of the uterus, especially when involving the broad ligaments, there is marked lymphatic enlargement in the uterus, tumour, and surrounding structures. Sometimes this may be so marked in the tumour as to form cystic conditions. Also along the sides of the uterus, masses of distended lymphatics may form swellings of considerable size: these are formed, probably, from some obstruction to the lymphatic circulation.

Matlakowski has described a very rare case of *lymphangioma cavernosum uteri*. It was in the posterior cervical wall and reached to the os externum; from time to time it decreased in size owing to the escape of fluid from it into the vagina but its removal was only accomplished by

amputation of the cervix. In connection with ovarian tumours lymphatic enlargement is rarely noticed.

As to the changes in the lymphatic glands during menstruation, pregnancy, and the puerperium, little is known. The alterations in syphilis, gonorrhœa and other diseases are well recognized. Their relation to carcinoma requires to be worked out. Müller found among 77 cases of primary carcinoma (65 uterine, 12 ovarian), that in 38 only were there secondary changes in glands; in 16 of these the pelvic glands were widely affected. Wagner states that in cervical carcinoma about 50 per cent. of cases show malignant growths in the lymphatics. Dembo in 16 cases of ovarian malignant disease found the mesenteric glands affected only once, (these malignant disease found the mesenteric glands affected only once, (these observations were not, however, based on post mortem examination). Olshausen has pointed out that many malignant ovarian tumours especially sarcoma remain localized for a long time without there being any secondary growths. Petit and Froisier have described the rare case of carcinomatous infection of supraclavicular glands in connection with primary disease of the uterus no other glands being affected; the disease was probably conveyed by means of the thoracic duct.

#### **The Relationships Between Changes in the Female Genital Organs and Body Metabolism.**

(1) *Physiological*. All phenomena in the sexual life of woman are to be related to the specific causal influence of the germinative glands (*Keimdruse*). On the supposition that the ovaries secrete some peculiar material which is poured into the blood, it is thought that its influence tells first on the blood, then on tissue formation and metabolism, changes being indicated by alterations in nutrition and in nerve activity. Very marked are the processes induced in the genital organs themselves the great feature being periodicity compared by Goodman and others to wave-movements.

The woman's life may be divided into two great periods, the former of which, marked by menstrual phenomena, is associated with activity in metabolism, the latter, marked by the absence of menstruation, associated with diminished metabolism. In the former period there are a long series of changes due to succeeding menstruations and pregnancies. Many studies have been made for the purpose of registering the bodily changes. Thus, Mrs. Jacobi has found that the rise in temperature in the week preceding menstruation amounts to .10 to .80°F, and that the fall during the period is from .07° to .41°F. Reinl has studied a number of healthy women as well as those with diseased pelvic conditions and finds similar alterations in temperature the lowest degree being registered on the last two days of the period. The apex of the wave is, it is evident, the premenstrual time, not the menstrual period. Yet, in various disturbances

of menstruation the period itself may form the apex, showing elevation of temperature. The act of normal labour influences temperature but little and this notwithstanding the marked nervous influences which are present. Only Winckel states that the temperature is elevated. Bonnal found that the rise was unimportant but varied according to the age of the woman and the duration and painfulness of the labour. In first labours and in twin labours it is no higher than in others. Winckel found the temperature higher in pregnancy by .2 to .3°C. than in the non-pregnant state. Gruher noted it in 96 cases and found the average 37.46°C. in the morning, and 37.31° to 37.32°C. in the evening. In 57 of these cases there were normal deliveries and no rise of temperature occurred but rather a slight fall in the puerperium though immediately after labour there was usually a slight elevation. He noted that well marked labour pains caused a rise, as did difficult births. He also observed abnormal elevation in pregnancy, labour, and the puerperium, with no apparent explanation; (most likely these were due to some infective process).

It is then evident that the phenomena associated with pregnancy and labour may be compared with those of menstruation. The active formative metabolic processes are most marked during pregnancy, the temperature being elevated. It is the 'wave-crest'. Following labour the temperature falls, reaching its lowest in the early puerperium. The only important difference is the rise which occurs at the end of labour. Baumfelder states that the post partum rise may last for twelve hours, that in the next twenty-four hours it falls, then again rises reaching its maximum on the fourth day, remains fairly constant until the sixth day, falls in the evening of this day and rises again during the seventh and eighth days. On the ninth day there is either a rise or a return to normal.

As regards the pulse, various studies have been made. Baumfelder found its rate highest on the first day of the puerperium, more rarely on the third day; there was usually a return to normal on the fifth, an increase on the sixth and a marked fall on the seventh, afterwards the normal state being reached. The pulse is, of course, affected by many conditions (as is the temperature), e. g., changes in the breasts, febrile states, indigestion, clots in the uterus, nervous conditions, etc. Winckel describes an increased pulse-rate during labour, but no doubt pain, fear, and nervousness, account largely for this.

Changes in the blood pressure have also been studied. Von Ott had shown that it rises before and sinks during menstruation. In the puerperium also there is a marked fall.

Respiration has also been studied but no satisfactory conclusions have been arrived at. In determining the frequency of respirations in preg-

nancy, labour, and other periods, various factors must be considered, e. g., age, position, etc. As far as is well-known it appears that before labour respiration is accelerated and afterwards diminished. During birth a very evident increase takes place associated with nervousness and the straining process. The breathing of advanced pregnancy is mainly thoracic, rarely abdomino-thoracic. In the puerperium the diaphragm again comes into play. The changes in the capacity and movements of the chest in pregnancy have been the subject of much work, Gerhard's observation having long been known, viz., that there is really no diminution in the size of the thoracic cavity during pregnancy, the base being somewhat widened and the diaphragm but little elevated. Dohrn has shown that the basal increase is more marked in breadth than in depth. Kehrer states that in the first pregnancy the basal thoracic measurement increases by 12.2 per cent.; transverse diameter by 9.7 per cent. He also finds that the circumference from the highest point reached in pregnancy to the third day of the puerperium diminishes in primiparæ by 9.5 per cent., in multiparæ, by 8.8 per cent.; the transverse diameter in primiparæ by 9.6 per cent., in multiparæ by 6.7 per cent. In the puerperium the transverse diameter narrows and the antero-posterior widens. Dohrn has also done most satisfactory work in estimating the lung-capacity. In 100 cases he found that on the twelfth and fourteenth days of the puerperium it was greater in 60 per cent., than in pregnancy; in 14 per cent. it was unchanged, and in 26 per cent. diminished. The explanation of these differences is not very evident, age or the number of labours seeming to have no influence.

The result of metabolic changes in pregnancy is most evident from the change in body weight. Gassner has made a special study of this subject in 320 women. He states that during the last three months of pregnancy a marked increase occurs which cannot be entirely attributed to the growth of the ovum. It may be as much as a thirteenth of the whole weight of the body. Winckel in estimating the increase in weight during these months as 1777 grams, states that 1000 grams belongs to the ovum, 150 grams to the growing sexual organs, and 620 grams to the rest of the body. The loss in weight following labour is almost one-ninth the weight of the pregnant woman; this includes not only fœtus and placenta and membranes, but blood, sweat, lochia, etc. Considerable variations are found in different cases due to different factors, e. g., primiparity or multiparity suckling or non-suckling; etc. Kleinwächter states that by an abundant and nutritious dietary the loss of weight in the puerperium is rendered less marked. Klemmer denies this.

There seems indeed to be a diminution in the metabolic process in the early puerperium. According to Grammatikati the excretion of nitrogenous elements bears a marked relation to milk secretion; in the

first day or two of the puerperium its excretion is less than on the third or fourth day, when the milk secretion begins. When the child is removed from the breast he finds that the urea excretion diminishes. In 40 analyses to determine the excretion of phosphates in the urine, he found that there was a marked increase on the first day, a diminution on the second, then increase on the third and fourth days as the milk secretion became marked, then a diminution until the sixth day. He got similar results with the sulphur compounds. The quantity of urine passed is also an indication of the variations in metabolism. The common text-book statement that it is increased in pregnancy must only be applied to the conditions of advanced gestation. In the puerperium there are many factors which can cause other variations, e. g., perspiration, lochial conditions, quantities of fluids drunk, etc.; yet it seems established that immediately after labour there is a diminution in the quantity until the fourth day when the minimum is reached. Kehrer estimated that the average quantity during the first days is 21 per cent below that passed during advanced pregnancy. The specific gravity of the urine in pregnancy is lessened. In the puerperium, Kleinwächter states that it is 1015-1016.

Jacobi, in studying metabolism in connection with menstruation, found that the urea excreted in the premenstrual period is increased. It has also been shown that it diminishes during the menstrual period.

A few words remain to be said in regard to the urine. It is very often stated now-a-days that the appearance of albumin in the urine in small or even in considerable quantities during the course of pregnancy may be regarded as physiological. Freund protests against this view for this condition is believed by him to be due to disturbance in the cortical portion of the kidney. It is found in at least 2 per cent. of all pregnancy cases.

It is otherwise with the appearance of sugar in the urine in pregnancy. Blot, Bernard, and Kerstein regard this as physiological and due to a change in a portion of the milk reabsorbed as it is formed in the breasts. This explanation is opposed by several writers. It is not a very constant or frequent phenomenon. In the puerperium, on the other hand, glucosuria is very common. It is not grape-sugar as Hoffmeister and Kaltenbach have described but milk-sugar and it generally appears from the third day. The quantity is greater the more imperfectly the breasts are emptied.

Acetone in small quantities has been found by Winckel in the normal puerperium. Butyric acid was found by Lehmann in a case where there was no nursing.

Peptonuria occurs after the second or third day of the puerperium but is never found before. Truzzi stated that it is most frequent from

the fourth to the fifth day. It is rarely found after the tenth day. Fischel believes that the peptones are derived from the uterine musculature altered by the contractions of labour. In a case of Porro's operation he found that there was no peptonuria in the puerperium.

Küstner has reported a case of ruptured ovarian cyst in which peptones were in the urine. They disappeared after removal of the tumour.

(2) *Pathological.* Women show a tendency to put on fat at two special periods viz., after childbirth and at the climacteric. Pregnancy is evidently favourable to fat development, the chief cause being the deficiency of red-blood corpuscles leading to imperfect oxidation. Fat-development is often noted in chlorotics. Bunsen records a case in which such enormous development of fat occurred in pregnancy as to interfere markedly with the woman's movements. The obesity of the menopause is related to the alteration in sexual functions and in the body metabolism therewith associated. Landois makes special reference to the tendency to increase of fat in eunuchs.

Fat-development exercises an undoubted influence on menstruation. Kisch found disturbances in 82 out of 87 cases; in 15 cessation of menses, in 47 scanty menstruation, and in 20 menorrhagia. Reduction of the fat is usually followed by improvement. The explanation of the change is not so much that the ovarian function is interfered with by deposition of fat in the organ but that there is a fatty infiltration of the uterine musculature and mucosa. Kisch states that the circulation is thereby altered, catarrhal processes being set up. Thorn has also described an atrophic condition of the uterus. Sterility is probably often explained by this condition. There is another class of cases in which a general plethoric state exists marked by great fulness of vessels (especially noted in gouty people), by menorrhagia and by bleedings from many parts of the body, e. g., nose, bladder, bowels, etc.

Pregnancy may be interrupted as a result of the changes in the uterus and circulation in connection with fat increase. Abortion and especially habitual abortion are not uncommon. Labour is apt to be delayed as a result of weakened contractions of the uterus, due to fatty changes and in some cases to over distension of the vessels between the separate muscle bundles. Deficient milk secretion is often noticed in corpulent nursing women.

As regards the relationship of gout to the female sexual organs very little is known apart from what has been already mentioned. Eisenhart has made a study of this subject and finds that mention has been made only of gout causing menorrhagia and metorrhagia, pruritus vulvæ and inflammation in the internal genitals.

Not much is known of the influence of diabetes. This disease is most apt to occur in women after the menopause. Lecorché states that in

114 cases it occurred 70 times after the change of life, 37 times during menstrual life and twice in non-menstruating girls. Different authors are inclined to regard the various diseased conditions found in the uterus and its appendages as in some way favouring the development of diabetes. Imlach notes a case in which marked diabetes was cured after a double sided pyosalpinx was extirpated. Puerperal glycosuria must be distinguished from true diabetes mellitus, the first being merely due to the resorption of milk-sugar from the breasts. Diabetes rarely follows directly upon pregnancy. They may, however, be associated. Abortion and premature labour are apt to be caused. Sterility is common in diabetes. In some cases atrophy of the genitals is brought about. This has been noted by Israël, Prietsch, Hoffmeier and others. Labour and the puerperal period may be quite normal yet sometimes fatal coma may follow delivery. Gaudard states that in more than half the cases the disease becomes aggravated within a few months of labour, ending usually fatally. Lecorché points out that the intensity and the rapidity of the disease are inversely proportional to age, i. e., most active in those who have not menstruated, less marked in menstruating women, more chronic in women who have passed the climacteric.

The most frequent changes in the sexual organs in diabetes are those found in the external genitals. The following are described, viz., pruritus of the labia or surrounding parts, eczema, erythema, prurigo, furunculosis, phlegmonous vulvitis, and condylomata. It is probable that these develop as the result of infection from scratching of the irritated areas. Various organisms have been found, e. g., oïdium albicans, leptomitosis, micrococcus ureæ, bacterium coli commune, etc. Diabetes is to be regarded as somewhat unfavourable to the carrying out of operative procedures.

Very little is known regarding the relation of diabetes insipidus to changes in the genital apparatus.

(To be continued).

RETROSPECT  
OF  
CURRENT LITERATURE.

Medicine.

UNDER THE CHARGE OF JAMES STEWART.

Exophthalmic Goitre.

M. ALLEN STARR. "On the Nature and Treatment of Exophthalmic Goitre." *Med. News*, April 18th, 1896.

BOINET. "Recherches sur le Goitre Exophthalmique." *Revue de Méd.* July, 1898.

ASKANAZY. "Pathologisch-Anatomische Beiträge zur Kenntniss des Morbus Basedowii." *Deut. Arch. Klin. Med.*, L. Bd. LXI,

J. ARTHUR BOOTH. "Results of Partial Thyroidectomy in Eight Cases of Graves' Disease." *Med. Record*, Aug. 13th, 1898.

Möbius in 1896 advanced the view that Graves' disease was due to an increased or morbid secretion in the thyroid gland. Although meeting with much opposition, this theory has steadily gained ground and is now accepted by many of the best investigators. Starr marshalls the arguments in favour of this view in a very clear manner. Starting with the fact that myxœdema is due to atrophy or absence of the thyroid gland, the symptoms of this disease are contrasted with those of exophthalmic goitre. It will be only necessary here to quote a few of the leading symptoms of each disease to show the remarkable antithesis which exists between them.

(1) The eyes, prominent in Graves' disease, are retracted in myxœdema.

(2) In myxœdema the pulse is slow, often in the neighbourhood of 60, and it is small and of high tension. In Graves' disease the pulse is large, rapid, and of low tension.

(3) The skin is dry and thickened in myxœdema and the growth of hair is impaired. The hair becomes dry and brittle and falls out, and the nails are ridged and thickened. In exophthalmic goitre the skin

is soft and moist. The growth of the hair is stimulated, the nails grow rapidly and have a glossly appearance.

(4) In myxœdema the body temperature is low and the patients suffer with a feeling of cold. In Graves' disease there is often fever and the sufferers frequently complain of a sensation of heat and burning.

(5) The mental condition in myœdema is dull and apathetic, the patients are indifferent to their ordinary interests, and are content to sit by the hour idle, listless, and somnolent. In Graves' disease there is a condition of psychical excitement, the mental processes are unduly active, and insomnia is often a troublesome feature.

Another suggestive line of argument is in the effects of overdoses of thyroid extract, which produces symptoms somewhat similar to Graves' disease. Under such circumstances there is a rise of temperature, increased pulse rate, mental excitement, and rapid emaciation.

Askanazy has recently called attention to a wide-spread fatty change in the muscles in Graves disease, a fact hitherto barely noticed by other observers, but one for which toxic origin would be a satisfactory explanation. In four cases this remarkable change was well marked. To the naked eye the muscles are diminished in volume and pale in colour, the yellow, parallel, fatty streaks being readily discerned. Microscopically there is an interstitial lipomatosis and also fatty changes in the muscle fibres and cells. The latter change does not seem to depend on the former, as it may be well marked at certain parts where the interstitial changes are slight. The muscles striæ are indistinct and there is a proliferation of the nuclei. These changes are seen in the muscles in the thorax, abdomen, pelvis, back, eyes, and tongue, and occurred in one case in the pharynx and upper part of the œsophagus. The diaphragm in all four cases was more affected than the other muscles.

The heart muscle does not show the changes referred to although there is always some departure from the normal, consisting in brown pigmentation or in dilatation and hypertrophy leading to fatty degeneration and interstitial myocarditis.

The origin of the wide-spread muscular affection is regarded by the author as a toxic manifestation, the source of which is presumably the diseased thyroid gland. The presence of the muscular changes should prove of considerable value in the pathological diagnosis of the disease. Hitherto, the absence of any constant post mortem changes has rendered such a task difficult or impossible, as the exophthalmos often disappeared after death, and the other well-known signs of the disease can only be utilised during life.

The changes in the muscles explain in a very satisfactory way many of the clinical features of the disease. The muscular weakness, always present and frequently very pronounced, amounting to paraparesis or

even to paraplegia, the emaciation and tremor, may all be attributed to the anatomical changes in the muscles. That most striking symptom of the disease, exophthalmos, may be attributed to a weakness of the orbital muscles, and also the sign known as that of Möbius and consisting in difficulty in converging the eyes receives a satisfactory explanation. So-called "bulbar symptoms" such as difficulty in swallowing and nasal intonation from weakness of the palate, may again be attributed to a muscular defect. The deficiency of expansion of the chest known as Bryson's sign may likewise be the result of weakness in the respiratory muscles, particularly in the diaphragm, in which lipomatosis was well marked in all Askanazy's cases.

If we admit that the symptoms of exophthalmic goitre result from disease of the thyroid, we are still in the dark as to the origin of the primary thyroid change. Characteristic microscopic changes are present in the diseased gland, which are described by Greenhow (*British Medical Journal* 1893, ii) as consisting in proliferation of the epithelium and the replacement of the colloid of the gland by a more mucinous material. The whole appearance is suggestive of a gland "undergoing evolution for increased function."

Whilst the thyroid theory is the popular one at the present time, there are numerous facts suggesting a relation to the nervous system. No constant anatomical lesions have been found in either the medulla or the sympathetic, and the relationship is suggested rather by clinical facts. It seems well established that the disease has many of the characters of a neurosis. It frequently, but to this there are many exceptions, occurs in members of neurotic families and may occur in more than one member of such a family. The onset of the symptoms can be occasionally traced to a violent emotion, such as grief or fright. Boinet records a series of cases illustrating these features and lays stress on the neuropathic origin of the disease. He also relates cases following specific infectious disorders, such as typhoid and influenza. He regards the disease as primarily one of the nervous system and the thyroid enlargement as secondary. He believes, however, that the rôle played by the thyroid, although secondary, is an important one and is responsible for certain features of the disease. J. Arthur Booth expresses similar views more clearly when he states his belief that Graves' disease is a primary neurosis often aggravated by secondary thyroid intoxication.

The treatment of Graves' disease still remains in a rather unsatisfactory condition. Benefit has been reported from such different surgical procedures that it seems doubtful whether the good effects result from the special operation or from other causes.

Jaboulay divided the cervical sympathetic and obtained satisfactory results in nine cases. This operation is based on an obsolete pathology and it seems most improbable that it can be of any real benefit.

More rational are the operations of partial thyroidectomy or of exothyropexy. The latter procedure consists in drawing a lobe of the thyroid through the skin wound and suturing it there. By this means it is sought to avoid the dangers of thyroid intoxication, the secretion of the gland draining away on the dressings. The operation of thyroidectomy is one not to be lightly undertaken as not a few fatal issues after operation are recorded. In such cases death is attributed to excessive absorption of the thyroid secretion due to the manipulation of the gland during operation. The symptoms of this condition are high fever, a rapid weak pulse, great restlessness and excitement, profuse sweating, and, finally collapse or coma. Patients with Graves' disease stand anaesthetics badly and some cases have proved fatal from ether.

Of the cases of thyroidectomy collected by Starr, a large proportion were benefited by the operation. There were in 190 operations, 23 deaths, 74 complete cures, 45 improved, 3 not improved, and in the remainder the ultimate result is not reported. In Booth's series of 8 cases, all operated on by the same surgeon, one died, 5 were cured, one improved, and in one no change was noticed. The order of improvement was that usually observed, first the goitre diminishes, then the nervous symptoms disappear, later the pulse rate falls, and last of all exophthalmos passes away. This last series of cases are of great value as they were all under observation for a considerable period and all were personal observations of the writer.

*F. G. Finley.*

### **On the Cause of So-Called Phosphorous Necrosis in Match-Workers.**

RALPH STOCKMAN, M. D. "On the Cause of So-Called Phosphorous Necrosis in Match-Workers." *The British Medical Journal*, Jan. 9th, 1899.

According to his recent investigations upon necrosis of the jaw in those who work in phosphorous fumes, Dr. Stockman has added another diseased condition to those already recognised as due to the bacillus of tuberculosis. In the pus obtained from six cases of jaw necrosis in match-makers, tubercle bacilli were found in each specimen. The staining was done by the Ziehl-Neelsen method. Inoculation of guinea-pigs failed to infect them, but Dr. Stockman regards the failure as due to death of the bacilli or loss of infective virulence through the use of local antiseptics in the treatment of the cases.

Further proof of the tuberculous nature of the jaw disease may be found in the fact that tuberculosis of the lungs is the cause of the majority of the fatal cases occurring in the necrosis cases, while other forms of tuberculosis are not uncommon. It seems essential that some injury to

the jaw or some disease of a tooth exist before the fumes have any effect. The fumes but predispose to the infection of the jaw by tuberculosis.

### **Is Petroleum Emulsion of Any Nutritive Value?**

ROBERT HUTCHISON, M. D. "Is Petroleum Emulsion of any Nutritive Value?" *The British Medical Journal*, March 25th, 1899.

By a practical test, Dr. Hutchison believes he has answered this question in the negative, thus confirming the suspicions entertained on chemical grounds that this substance is not capable of assimilation in the body.

Two experiments were made. "A widely advertised emulsion of exceedingly pure petroleum" was used. Known quantities were given in both trials. In the first experiment a constant diet was given, while in the second no attempt was made to regulate the diet. The fæces were collected, dried, extracted with ether, and the extract weighed. In Dr. Hutchison's words the results of his observations are here given. "It may reasonably be concluded that petroleum is not absorbed in the human intestine, and I consider therefore that it can in no wise be regarded as a substitute for cod-liver oil."

### **Acute Hæmorrhagic Ascites.**

J. MAGEE FINNY, M. D. "Acute Hæmorrhagic Ascites." *The Dublin Journal of Medical Science*, Jan. 2nd, 1899.

A very rare case is described under this title. The patient was a man aged 42 years whose complaints, on first examination, were of gastric symptoms,—a sense of fulness and hardness in the epigastrium and a feeling of soreness. His abdomen was enlarged and showed signs of ascitic fluid. Posturing of the patient gave a clear note over the right flank while he lay on the left side, but while lying on the right side, dulness was present over the left flank and toward the spleen. Relief could be obtained only by tapping the peritoneal sac, and this needed to be done repeatedly as the fluid collected rapidly. The fluid was of the colour of blood with a slight maroon shade; a specific gravity of 1025, and gave on standing a copious soft blood-stained sediment. The hæmorrhagic character of the fluid, present at the beginning, persisted to the termination of the case. In less than four weeks 51½ pints of fluid were withdrawn.

Dr. Finny was at first inclined to make a diagnosis of cirrhosis of the liver, yet the presence of such a condition was doubtful, as many positive points in such cases were wanting, while such an hypothesis was not sufficient to explain the observations made in physical examination, etc.

Dr. Finny, and those who observed the patient with him, were inclined to the idea of malignant disease involving the peritoneum, either the transverse mesocolon or the omentum.

The patient died, and a post-mortem examination was made under great difficulties. The omentum, lying to the front and left side, formed a thick mass, solid and firm and very vascular, bleeding readily on handling. The liver was regarded as normal in size with smooth surface and edges of natural consistence. The growth in the omentum involved the inferior mesenteric and other veins. It was regarded as sarcomatous in its nature. Dr. Purser stated that the tumour seemed to grow chiefly from the vessel wall.

Dr. Finny's remarks upon this case are very interesting indeed, and by a record of his researches he shows how rare such a condition is.

*W. F. Hamilton.*

## Surgery.

UNDER THE CHARGE OF GEORGE E. ARMSTRONG.

### **Intracerebral Injection of Antitoxin in Tetanus.**

RAMBAUD. "The treatment of Tetanus by means of Intracerebral Injections of Antitoxin." *New York Medical Journal*, Dec. 17th, 1898.

CHURCH. "Treatment by Trephining and the Intracerebral Injection of Antitetanic Serum." *New York Medical Journal*, Dec. 17th, 1898.

SEMPLE. "The Treatment of Tetanus by the Intracerebral Injection of Antitoxin." *British Medical Journal*, Jan. 7th, 1899.

Roux and Borrel seem to have established as a fact, from their experiments at the Pasteur Institute at Paris, that the toxin of tetanus forms a compound with nerve cells which destroys the nerves involved and which antitetanic serum is powerless to dissolve; the serum only neutralizing the toxin which is free and before it has formed the union with the nerve cells.

According to Marie, the poison reaches the nervous centres by two routes. A portion follows the course of the nerves and is fixed by the cells of the spinal cord, and it is for this reason that in animals the contraction always begins in the region in which the injection has been made, and in man generally in the wounded part. Another portion of the poison enters the blood whence it is extracted by the nervous cells. Thus the cells of the cerebrum can be affected by the poison brought to them through the circulation.

Furthermore, Roux and Borrel found that when the toxin was injected directly into the brain of guinea-pigs the dose required to cause tetanus was much smaller than when a subcutaneous injection was made. *Cerebral tetanus* results from the former owing to the nearly immediate fixation of the tetanus poison; and the symptoms are excitement, intermittent convulsive attacks, motor disturbances, and polyuria. The reason why in man as well as in animals the subcutaneous and intravenous injections so often fail is because the antitoxin remains in the blood while the toxin has already been taken up by the nervous cells. Accordingly, Roux and Borrel treated with intracerebral injections of antitoxin forty-five tetanized guinea-pigs and thirty-seven of them recovered. Seventeen others were treated with subcutaneous injections and only

two of these survived. Seventeen check guinea-pigs not treated with the serum all died. Theory and experimentation agreed. Antitoxin introduced into the brain protects the upper part of the cord when the lower part of the cord is already affected by the poison, but it does not cure the lesions that have already taken place; the contractions existing at the time of intervention persist for some time and Roux and Borrel state that if the medulla is already poisoned, (shown by impaired deglutition and respiratory disturbances), death cannot be prevented.

If the intracerebral injection is made in a neutral area such as the fore part of the frontal lobes, the results of the trauma are minimised. The injury caused by the fine hypodermic needle is trifling, the quantity of serum injected is small, and being introduced slowly, no undue compression is caused. Hæmorrhage from the dura and pia is easily avoided, the button of bone removed being preferably small; healing of bone takes place rapidly and no subsequent adhesions, leading to compression, are likely to occur.

It is considered necessary, notwithstanding the intracerebral injection, to continue to give antitoxin subcutaneously or intravenously for a few days; the toxin in circulation within the blood together with that which continues to be secreted at the site of the injury is thereby neutralized and cannot affect the nervous centres.

Rimbaud has collected from French periodicals the reports of nine cases treated by intracerebral injections, of which four recovered and five died. The course of the disease in the fatal cases was very rapid, in three of them death occurred within fifteen hours following the operation.

Dr. E. Forgue, of Montpellier, also reports a successful case. In America three cases have been treated by intracerebral injections, one of which reported by Dr. Church, of Passaic, N. J., recovered perfectly, and Dr. Semple, of Netley, England, also reports a successful case.

*Technique of the Operation as practiced by Dr. Semple.*

The patient is given an anæsthetic and the hair shaved off over the fore part of the scalp and the skin made antiseptic. An imaginary line is taken over the head from one auditory meatus to the other. Another line is taken from the base of the nose to cross the first line at right angles on the top of the head, and a third line from the outer angle of the orbit to where the first two lines cross each other. The centre of the last line is the seat of operation, and is in front of the motor areas of the brain. Having selected this site, an incision of about  $\frac{1}{2}$  or  $\frac{3}{4}$  of an inch in length is made down to the bone. A small hole is now drilled through the bone with a Archimedean drill having a movable collar, so as to regulate the depth to which it penetrates. The hole in the bone need only be a little larger than the needle of the syringe which is to be

inserted through it. The syringe has a screw piston and the needle is attached by about three inches of rubber tubing. The needle is about two inches in length and has a rounded point. It is inserted through the hole drilled in the bone straight into the brain substance as deep as it will go, and an assistant holds it perfectly steady while the operator very slowly screws down the piston, so as to allow the antitoxin to soak into the substance of the brain drop by drop and avoid breaking up any brain tissue. It should take at least ten minutes to inject  $2\frac{1}{2}$  c. cm. When this amount has been injected the needle is withdrawn, the edges of the scalp wound brought together by two or three stitches, and the wound sealed up with collodion and cotton wool. The same operation is now repeated on the other side.

The object of using a round-pointed needle is to avoid puncturing a vessel. A sharp-pointed needle might possibly transfix an artery and produce hæmorrhage, whereas a round-pointed one would glide off a vessel and go past it.

The antitoxin used is double the strength of ordinary antitoxin, and although only 5 c.cm. are given ( $2\frac{1}{2}$  c.cm. in each side), it represents the amount of antitoxin present in 10 c.cm. of the original serum. The dried antitoxin from 10 c.cm. of the ordinary antitoxin is put up aseptically in glass tubes and sent out from the Pasteur Institute in Paris, ready to be dissolved. The tube containing the dried antitoxin should be opened without contamination, and then 5 c.cm. of sterile water added to dissolve it. When the antitoxin is in complete solution it is drawn into a sterile syringe of the pattern described (Roux's pattern, 5 c.cm. syringe), and is now ready for use.

In addition to the antitoxin given intracerebrally, the patient receives 29 c.cm. daily for two, three, or four days according to the circumstances. The antitoxin given intracerebrally immunises the higher nerve centres before the toxin has been fixed there. The antitoxin given hypodermically renders the blood antitoxic and the toxin as it becomes absorbed from the source of supply,—wound, bruise, or abrasion or any other source, whatever it may be,—is neutralised as soon as it enters the blood-stream. The advantage of giving the antitoxin hypodermically in addition to intracerebrally is evident when one reflects that the tetanus bacilli may still be cultivating themselves and the toxin still being absorbed.

#### **Empyema of the Thorax in Children.**

BOGART. "Contribution to the Surgery of Empyema of the Thorax in Children." *Annals of Surgery*, April, 1899.

After discussing in detail the twenty three cases of empyema in children treated in the Methodist-Episcopal Hospital in Brooklyn during the

ten years ending January 1, 1898., Dr. Bogart arrives at the following conclusions:—

(1) Empyema is more often met with in children who are subject to bronchitis.

(2) Males are more frequently affected than females, and the left side more commonly than the right.

(3) Empyema in children generally follows pneumonia, the interval varying from a few days to a few weeks.

(4) In all cases of delayed or interrupted convalescence from pneumonia in children, empyema should be suspected.

(5) If not previously relieved by operation spontaneous evacuation may, in the majority of cases, be anticipated in from two to three months after the onset of pulmonary symptoms.

(6) Spontaneous evacuation whether external or internal (through a bronchus) rarely results in cure of the disease.

(7) The usual symptoms of empyema in children are fever, cough, dyspnoea, anæmia, emaciation and night-sweats; the usual physical signs, diminished expansion or bulging, or both, of the affected side, displacement of the cardiac impulse, when the empyema is left sided, and flatness with absent, distant, diminished, or bronchial voice and respiratory murmur below the level of the fluid.

(8) Because of its insidious development as well as the diversity of the symptoms and physical signs which characterize its occurrence as a complication or sequel of a great variety of other affections, it is not infrequently overlooked or its manifestations misinterpreted; errors which would generally be avoided by the earlier and more frequent use of the aspirating needle for diagnostic purposes.

(9) By its earlier recognition and the prompt institution of surgical treatment the duration of the disease may be materially curtailed and the death-rate considerably lowered.

(10) As in abscesses in other portions of the body, incision and drainage under appropriate antiseptic or aseptic precautions, in the majority of cases, yield the most satisfactory results.

(11) In ordinary cases resection of a portion of a single rib, preferably the ninth in the posterior axillary line, should precede incision of the pleura.

(12) When the collection of the fluid is large a preliminary aspiration should be done twenty-four or twenty-eight hours before rib resection.

(13) The condition of the patient frequently contraindicates the use of a general anæsthetic.

(14) The drainage tube should be large and not too long, and should not be removed until the cavity has been obliterated by the expansion of the lung and the discharge has ceased.

(15) Primary irrigation, curettage, and multiple rib resection are contraindicated in children, but either or all may contribute to the close or obliteration of a persistent sinus or cavity.

(16) Patients should not be considered cured so long as a sinus remains.

(17) In uncomplicated cases, the greatest danger to be apprehended after operation is the development of pneumonia in the opposite lung.

(18) The temperature in uncomplicated cases is not high before operation and generally falls and remains normal afterwards. A rise in temperature after operation usually indicates imperfect drainage or the onset of pneumonia.

(19) In average cases the drainage tube may generally be removed in from three to four weeks and a cure expected in from one to two months.

(20) In cases in which appropriate surgical treatment follows prompt recognition of the disease, speedy recovery without appreciable deformity, and with but slight modification of the physical signs over the affected area, may be confidently anticipated; while neglected cases not only present grave immediate dangers but frequently result in palpable physical defects.

### Old Dislocations of the Shoulder.

DUPLAY. "Des Luxations Anciennes de l'Épaule." *Le Progrès Médical*, 4 Mars, 1899.

Discussions on shoulder dislocations are always interesting, but few lesions give rise more frequently to an incorrect diagnosis resulting disastrously to the patient and to the reputation of the attendant. Although easily recognised after all swelling has passed away and atrophy of the shoulder muscles has taken place, the diagnosis is often difficult when the patient is stout, the muscles large and tumefaction present. The difficulties however can generally be overcome by a careful study of all the symptoms laid down in modern text-books on surgery.

M. Duplay deals especially with old dislocations. How are they to be treated? He would classify those of six weeks standing as old. In recent dislocations the difficulties occasionally experienced in effecting reduction are numerous. The head of the humerus may have traversed an intermuscular space. More frequently, the ligament offers an opposition almost impossible to overcome, or the capsule may be in the way of the return of the head. If the great tuberosity is torn off the difficulties are still greater.

In old dislocations the difficulties arise from changes in the muscles, ligaments, and bones.

*Ligaments.* The anterior part of the capsule retracts and the pos-

terior part covering the glenoid cavity forms adhesions with it which oppose the replacement of the head. The tuberosity when torn off may lie against the glenoid, become engaged in callus, and thus form an obstruction. Again, a new pseudo-capsule gradually forms. Malgaigne has drawn attention to the formation of fibrous bands adherent sometimes to the vessels; and the result of tearing these vessels by violent manipulation is easily understood.

*Muscles.* The muscles become displaced and form adhesions in their new situation and the long head of the biceps is especially mentioned as obstructing in this way.

*Bones.* The glenoid contracts and may form a part of the new articular cavity. The head of the humerus becomes altered in shape and occasionally gives origin to bony overgrowth.

The ideal treatment is to effect reduction, as in recent cases. Unfortunately, this is often impossible. Kocher has frequently succeeded by his method after the lapse of three or four months, although dislocations of eight years old are said to have been reduced by manipulations. Failing reduction by manipulation, M. Duplay recommends incision and reduction after loosening the head of the bone, provided it can be done without too great a division of muscles and adhesions. Otherwise a resection of the head of the bone gives a very good result.

### **Statistical Study of Epithelioma of the Lip.**

FRICHE. *Deut. Zeitsch. für Chir., Dec. 1898.* (Extracted by the Philadelphia Medical Journal.)

This statistical study of epithelioma of the lip is interesting because of the great number of cases upon which the statistics are based. In all, 1338 cases of epithelioma of both the upper and lower lip are included in this observation. The lower lip is involved nine times more frequently than the upper, and, as regards sex, we find the lesion in men twelve times oftener than in women. The greatest number of patients so affected were between the ages of 55 and 65. The chances for an individual to acquire an epithelioma increase gradually from the 25th to the 65th year, and from that time on, the chances gradually diminish.

As to the etiology, occupation seemed to play some part, inasmuch as 75 per cent. of the cases occurred in farmers or breeders of animals. Heredity, however, and the use of tobacco and alcohol seem to be of no etiological importance. The prognosis is seriously affected by extension of the disease to the inferior maxilla, for when this occurs, a radical operation is extremely dangerous and permanent cure can almost be excluded as a possibility. Involvement of the lymphatics, of course, renders the prognosis extremely grave, as does also the extent of the lesion.

Every warty growth, on the lip of a patient advanced in years, which resists rational treatment should be considered suspicious and should be extirpated. The incisions should be made at least 1 cm. from the border or edge of the tumour and if the submental or submaxillary glands are enlarged, they should of course be excised, and that too before the growth of the lip is attacked, in order to avoid infection.

Operations involving an attack on the jaw are always most dangerous and it is questionable whether they should not be considered unjustifiable. Erysipelas has been found to have no favourable influence upon the epithelioma, as it has been known to have upon other malignant growths. The operation mortality is from 6 per cent. to 7 per cent. and recurrences take place in about 32 per cent.

*G. E. Armstrong.*

# Gynaecology.

UNDER THE CHARGE OF WILLIAM GARDNER.

## Vaginal Fibromata.

PHILLIPS, JOHN, M. D., F. R. C. P. "On Fibromyomata of the Vagina."  
*British Medical Journal, February 4th, 1899.*

Dr. Phillips gives full reports of two cases of this rare affection which have come under his personal observation and makes some remarks upon the disease in general, giving a critical report of 29 cases which have been placed on record since 1882, the previously recorded cases having been fully analysed by Kleinwächter in that year. The variety containing both fibrous and muscular tissue, i. e., fibromyomata, is the one most commonly met with. The age at which the affection occurs varies, in this series the limits being from 29 to 52, the majority being seen in women between 45 and 50 years of age, although fibromyomata have been seen in a new-born infant. There is no proof of the theory that these tumours were originally attached to the uterus, as is held by some. The size of the tumour varies from that of a lentil to a growth weighing ten pounds, the usual being that of a small walnut. They are always single and in the vast majority of cases situated on the anterior vaginal wall with or without a pedicle.

The tumour may undergo various changes. The mucous membrane covering it may slough, or the tumour itself may calcify or contain a hæmatoma. As one would naturally expect the tumour is liable to seriously interfere with pregnancy, so should be at once removed if at all large, if still growing, or if there is a strong likelihood of pregnancy occurring. If pedunculated, it may be removed after the pedicle has been divided by either an ecraseur or scissors, but its size often renders its expulsion from the vagina very difficult. Where there is no pedicle, one should incise and enucleate the growth, either packing the cavity thus formed, or else bringing its sides together with both deep and superficial sutures.

## Juvenile Procidencia Uteri.

DUNCAN, J. D., M. B., C. M., Edin. "Case of Complete Prolapsus Uteri in a Girl of Sixteen." *British Medical Journal, February 18th, 1899.*

Prolapsus uteri in an unmarried girl is very rare and is well illustrated by the following case:—The patient, a nulliparous, unmarried girl, six-

teen years of age, was employed as a domestic servant. She complained of a "bearing down of the fore-body," and said that the condition had been present for about ten months and was gradually becoming worse, incontinence of urine compelling her to leave her situation.

On examining her, no congenital defect of the vulva or perineum could be seen, nor had the girl been subjected to any sudden, heavy strain or any harder work than the average domestic has to do. The whole uterus was outside of the vulva and had invaginated the vagina, carrying part of the posterior wall of the bladder with it. The whole mass could be easily returned. The treatment carried out was ventrofixation, packing the vagina, and rest in bed.

The author discusses rather fully the relative value of ventrofixation, vaginal-fixation, and shortening of the round ligaments, in treating cases of prolapsus uteri, giving the preference to ventrofixation.

### **Treatment of Urinary Incontinence.**

BALDWIN, L. GRANT, M. D. "Complete Incontinence of Urine." *American Gynæcol. and Obstet. Journal*, February, 1899.

The cases considered in this paper are those caused by injury to the anterior vaginal wall causing prolapse of the urethra, which is necessarily followed by the neck of the bladder. The author does not agree with those teachers who hold that there is no sphincter urethræ but thinks that such a structure does exist. Skene, in his article on vesical inflammation, speaks of partial incontinence of urine in moderate prolapse of the bladder with dilatation of the upper third of the urethra, the main cause for complaint being the frequent and painful micturition which is caused by any slight exertion; and also that this dilatation is caused by the prolapse of the parts.

The incontinence does not vary with the degree of injury to the vagina or displacement of the bladder, those with the most extreme displacement sometimes having but slight incontinence and *vice versa*.

*Case I.* Widow for six years, complained of incontinence of urine since the death of her husband. She had been married for thirty-five years and had given birth to four children, the youngest being twenty years of age. Her labour had been normal. Very careful examination showed the urethra to be prolapsed in its upper third. A short and small Emmet's hard rubber pessary was inserted and gave immediate and permanent relief.

*Case II.* This patient was 57 years of age, had been married for 25 years and was the mother of one child, 24 years old. The labour was easy. She stated that she had suffered from incontinence of urine for ten years and examination of the genitals revealed a similar condition

to that found in case 1. It was treated in the same way with the same good result.

*Case III.* This patient was a Sister of Charity aged thirty. In September 1897, she began to be troubled with partial incontinence of urine, which soon became complete except when reclining. Local examination of the parts revealed a very tight hymen but some prolapse of the upper third of the urethra which had been torn away from its attachments. Various pessaries were inserted without any benefit resulting until a rubber ball, one and three-quarter inches in diameter, was inserted into the vagina, since which time she has had perfect control over her bladder.

### **Pessaries and Tampons.**

WATKINS, J. T., M. D. "Tampons and Pessaries in the Treatment of Displacements of the Uterus." *Amer. Gynæcol. and Obstetr. Jour.*, March, 1899.

When tamponing the vagina is necessary, Dr. Watkins considers that lamb's wool is the best material to use as it is very elastic and soft, not caking when saturated with glycerine or the uterine discharge in the same way as absorbent cotton does. In order to be effective the tampon should be replaced within a few hours of its removal. They are best inserted with the patient in the Sim's or knee-elbow position, as then the uterus is not kept down by the weight of the intestines, and whether or not it is placed in front of or behind the cervix, is a matter of little importance.

The author has nothing to say in favour of any pessaries except those which "rest upon the pelvic floor," all others being either dangerous or useless or both. Each patient should be fitted with a pessary which suits her individual case, and this is often rather a difficult procedure to carry out. The pessary should extend from the posterior fornix to the level of the internal orifice of the urethra and should be broad enough to gently distend the vagina without producing any actual tension of its walls. Cases have been seen where continuous uterine hæmorrhage resulted from interference with the venous circulation produced by a too long pessary.

The best material from which to make a pessary is hard rubber as the soft variety absorbs the discharges, gets foul, and causes irritation and possibly subsequent ulceration of the vaginal mucosa. If the pessary requires to be moulded this is best done by softening it in hot water. The flame of a spirit lamp is sometimes used for this purpose but is injurious as it destroys the polish, leaving a roughened surface which readily corrodes and causes irritation.

"The routine use of pessaries, carelessness in studying the indications

for their use, and negligence in the proper selection and adjustment of the instrument to each individual case, has done much harm and cannot be too severely criticised."

### **Diagnosis of Early Tubal Pregnancy.**

MCCANN, J. F., M. D., Edin. "Cases Illustrating Difficulties in the Diagnosis of Early Tubal Pregnancy." *West London Med. Jour.*, Jan. 1899.

After relating three cases illustrating the title of his paper, Dr. McCann says that the diagnosis of tubal pregnancy before the occurrence of hæmorrhage in or around the ovum is usually accidental. Amenorrhœa, and the usual mammary changes seen in ordinary pregnancy, coupled with slightly enlarged uterus and a mass to one or other side of it, point strongly to the existence of an ectopic pregnancy. The character of the pain caused by rupture of the tube is important, it being sudden and sharp in its onset and gradually diminishing until another escape of blood sets it up afresh. An irregular hæmorrhagic discharge from the vagina is an important sign, although here it is seldom severe or continuous.

In differentiating tubal inflammation from tubal gestation, the history of the case will often throw considerable light upon the nature of the mass. In inflammations, there is usually a history of a previous attack of gonorrhœa, or else of chronic ill health or attacks of "inflammation of the bowels." Any elevation of temperature should lead one to expect inflammatory trouble, although now and then the temperature runs up in cases of ectopic pregnancy. Where any membrane is discharged, it should be carefully examined, as it differs in ectopic cases from that passed during an ordinary abortion. In the former, it merely consists of uterine decidua, while in the latter, one would see foetal membranes and chorionic villi.

*F. A. L. Lockhart.*

### **Small Cyst Degeneration of the Ovary.**

MARTIN und ORTHMANN. "Kleincystische Degeneration der Follikel."

In A. Martin's *Die Krankheiten der Eierstöcke*: Leipsig, 1899.

The pathology of the very common condition of small cystic degeneration of the ovary is not definitely established. Is the condition merely a follicular hypertrophy, or is it due to inflammation? Most authorities hold the latter view. Virchow, in his well-known work (*Die Krankheiten Geschwülste*), describes the condition as due to a catarrh of the follicles, and points out the frequency of its occurrence in pregnancy and the puerperium. Ziegler states that the cysts are due to abnormal ripen-

ing of the follicles, their non-disappearance being due to the toughness of the covering of the follicles preventing the latter from bursting. Orth thinks that in some cases the cysts are due to excessive physiological activity, but that in others a pathological process is the cause. Nagel thinks that the condition is not a pathological one, but a number of observers, e. g., Buius, Steffeck, Stratz, Petitpierre, Popoff, Hölzl, and others, have controverted his view and regard the important causal factor as inflammation.

Two varieties may be noted in the development of the condition, viz, a marked increase in the number of the older or riper follicles, and a rapid development of younger follicles accompanied by degeneration. In connection with the first variety, the question arises as to the number of ripe follicles a normal ovary may contain. This is difficult to answer. The normal size of the ripe follicle is not even definitely known. The position and size of the follicles are important in deciding on these points.

In apparently normal ovaries, the visible follicles are arranged mainly close to the surface, round in shape, and distinct from one another. In the condition of small cyst degeneration, the cysts are distributed irregularly throughout the organ, in parts so closely pressed together as to have, on transverse section, very irregular outlines. The tendency of the follicles to lose their round shape, as Hölzl has especially pointed out, may be noted in very early stages of degeneration. Any cyst which is greater in diameter than the thickness of the ovary, even though it contains an ovum and is lined with epithelium, is to be regarded as pathological. Nagel's view to the contrary is to be regarded as wrong.

Next, as to the cause of the cystic degeneration; does it produce merely an increase in the follicle-contents, or hindrance to their escape, or both of these conditions? Undoubtedly both may be brought about as the result of inflammation. Normally the *liquor folliculi* is formed, on the one hand, by breaking down of the protoplasm of cells of the *membrana granulosa* (Fleming's "degeneration vacuoles"), and on the other, by transudation of fluid from the vessels surrounding the follicle. In interstitial oöphoritis, the condition of the vessels is such as to favour an increased transudation into the follicle as well as an increased destruction of the cells of the lining membrane. Moreover, the inflammatory process tends, at the same time, to thicken the follicle-wall as well as to bring about a sclerosis of the inter-follicular stroma, thus interfering with the natural bursting of the follicles. If, in addition, there be a periovaritis or adhesion of the ovary to neighbouring structures, the abnormal conditions are much aggravated.

As a rule, ovaries thus affected are larger than normal. In many cases the normal shape of the organ is very much altered. On longitudinal

section, twenty or more cysts may be seen. As Bulius has pointed out, it is common to find a very large one at one or other pole of the organ. In marked cases the ovary is completely filled with cysts of various sizes and shapes, separated from one another by very thin partitions. The fluid varies in appearance. In the early stages it is usually thin and transparent; in the older cysts, it is often of a whitish colour. Often it is blood-stained. It may also be of a brownish or yellowish tinge. On microscopical examination, inflammatory changes in various stages may be made out in the stroma. Congested vessels are seen, around which masses of leucocytes may be noted. These changes are especially marked around the follicles. Small extravasations of blood may also be made out. In advanced conditions, thickening and hyaline degeneration of the vessel-walls are found; when very marked these changes give rise to the appearances known as the *corpora fibrosa*. Increase in the cysts is accompanied by stretching and thinning of the interfollicular stroma; this may go on to such an extent as to obliterate the ordinary signs of the inflammatory process.

In the early stages, the cysts may resemble merely normally ripe follicles lined with epithelium and containing the ovum in its *discus proli-gerus*. Later, there is usually an alteration. Leucocytes may penetrate the *membrana granulosa* and the latter undergoes a granular degeneration for the most part; often fatty degeneration occurs and, in some cases, hyaline changes. Many cells may thus break down and run together. The ovum usually undergoes the same granular degeneration, according to Petitpierre, and becomes destroyed. Complete destruction of the epithelium does not always take place; the cells which remain, however, vary greatly in shape, differing markedly from those of the normal *membrana granulosa*. When the cells have been completely destroyed, their place is often taken by a homogenous membrane lying next the *tunica propria*. Hölzl points out that these changes are associated with the development of the irregular outline of the follicle-wall so characteristic of the process of cystic degeneration.

### **The Earliest Steps in the Formation of the Placenta.**

HUBERT PETERS. "Ueber früheste menschliche Placentation." *Monat-schr. f. Geb., Jan. 1899.*

This is a preliminary paper in which Peters gives some notes regarding a very early pregnant uterus. The ovum in its three diameters measured 1.6, 0.9, and 0.8 mm. It was embedded in the decidua vera except for a small extent next the uterine cavity. This portion was covered with a delicate fibrinous network containing blood corpuscles derived from maternal clot. Peters doubts if ever the decidua does close

over the ovum to form a complete reflexa, and believes that this polar gap may be permanently fibrinous. The epithelium of the uterine mucosa is somewhat flattened over the uterine elevation caused by the embedded ovum. The decidual stroma, also, in this portion shows signs of being stretched and immediately around the ovum has an œdematous appearance. New formation of blood vessels is in progress. The mucosal glands are stretched and pushed in all directions by the growing ovum. In some of them blood is found.

The outermost covering of the ovum consists of a thick layer of epiblast, (ectoblast, trophoblast). In this are large numbers of lacunæ filled with maternal blood, the appearance of the tissues being sponge-like. These lacunæ communicate with maternal capillaries many of which are dilated. Trophoblastic prolongations extend into the substance of the decidua. They may penetrate glands or vessels. The evidence as to the foetal origin of the trophoblast is very clear. In it may be distinguished two parts, viz; an innermost portion, known in later stages as the Langhans layer, and an outer portion, the syncytium. Peters thinks that the latter may probably be caused by some chemical influence of the maternal blood on the outer layer of the earliest trophoblast; blood corpuscles are frequently seen in its substance. The marked development of the epiblastic covering of the ovum probably takes place as the latter becomes embedded in the decidua and no villi are present before this stage. In this specimen may be seen the gradual extension of the foetal mesoblast tissue into the projections of the epiblast which project out towards the decidua; this tissue is of delicate mucoid structure and contains no vessels.

*J. C. Webster.*

# Pathology.

UNDER THE CHARGE OF J. G. ADAMI.

## The Elimination of Bacteria from the Animal Organism.

PERNICE and SCAGLIOSI. "Ueber die Ausscheidung der Bakterien aus dem Organismus." *Deutsche med. Woch.*, No. 24, 1892.

SHERRINGTON. "Experiments on the Escape of Bacteria with the Secretions." *Journal of Path. and Bact.*, 1.3., Feb., 1893, p. 258.

FÜTTERER. "Wie bald gelangen Bakterien, welche in die Portalvene eingedrungen sind, in den grossen Kreislauf und wann beginnt ihre Ausscheidung durch die Leber und die Nieren?" *Berl. Klin. Woch.*, Jan. 16th, 1899.

The fate of bacteria which gain an entrance into the animal economy and the method of their elimination through the various emunctories of the body, form a very important chapter in the history of bacteriology. Any time within the last 25 years the subject has attracted the attention of many able observers like Watson-Cheyne, Cohnheim, Chiari, Cavazzani, Sherrington, and Wyssokowitsch, etc. And to-day, with the perfection of scientific methods and the wealth of information which has been accumulated about the subject, we are only beginning to realise its vastness and the powerful though delicate methods which the body employs in its battle against invading micro-organisms.

It is the teaching of modern pathology that the life of the animal organism is a prolonged struggle against adverse conditions, in fact, a grand example of the theory of "the survival of the fittest," and that the preservation of life is only made possible by the possession on the part of the organism of an elaborate system of defence, more or less perfect; and on the condition of this protective armour, so to speak, depends the health of the animal.

One of the most notable factors is the reserve power of the tissues which enables them to meet effectively, for a time at least, an extra demand upon their resources. Besides this, the skin, mucous surfaces, lymphatic glands, the lungs, the liver, the kidneys, the intestines, and the blood, play a most important part in the elimination and inhibition of toxic agents, and in the maintenance of health. While we recognise the general principle, however, we as yet are only at the Jordan of our knowledge, viewing from afar the promised land; for we have not yet be-

gun to realize the beautiful perfection with which the vital processes of the body are carried on. While we have numerous experimental investigations upon the fate of the micro-organisms of certain infectious diseases and those injected artificially, the part which the body in its normal state plays in the struggle against bacteria, forms a volume which has yet to be written. The studies of Metchnikoff, Kanthack and Hardy, Cohnheim, Buchner, Pansini, Nuttall.—to mention only a few,—on the subjects of phagocytosis and immunity, have thrown a flood of light upon the question.

Franke and Gscheidlen in 1874, Cohnheim in 1877, and Watson-Cheyne in 1879, were the first to study the effects of the inoculation of animals with bacteria and the fate of the organisms. Cohnheim found that after the injection into the blood of bacterial cultures that he was able to find the bacilli in the urine and consequently drew the conclusion that in the urinary secretion the organism possessed a valuable means of eliminating not only chemical but organised bodies.

Wyssokowitsch was probably the first to investigate the subject systematically and with the help of modern bacteriological methods. He injected pure cultures of various pathogenic and saprophytic bacteria into the venous system, and controlled his work by culture experiments and microscopic study. He was led to the following conclusions:—  
 “That shortly after the injection a great diminution in the number of the bacteria in the blood occurred; that a physiological excretion of bacteria through the kidneys did not exist; that the bacteria did not pass into the lumen of the bowel unless there was a severe lesion of the intestinal mucosa; that the destruction of bacteria in the blood exactly in the terms of Metchnikoff's phagocytic theory could not be accepted; that injected organisms were collected in the liver, spleen, bone-marrow, and kidneys; and that saprophytic bacteria were killed by the action of the organic cells while the pathogenic increased, re-entering the blood stream, thus bringing about the death of the organism.”

It must be remarked, however, that similar experiments on the part of other observers have not always given rise to the same conclusions.

The experiments of Schweizer were mostly done to determine whether or not bacteria could pass through the normal kidney. This observer injected a bacillus, probably the pyocyaneus, into the pelvis of the kidney and also into the left ventricle. In both cases bacteria appeared in the urine after three or four hours. In a third series of animals he removed one kidney and after three days he injected the animal through the aorta. The animal died in two and a-half hours and the bacilli were found in the urine. He concluded that bacteria could pass through the kidney but only after they had overcome a certain resistance, on the part of the organic cells. He assumed further that the bacteria produce fine

changes in the cells, unrecognisable by ordinary methods, which rendered their excretion possible.

Maffucci and Trambusti also arrived at the same conclusion and further emphasized the fact that the eliminated bacteria preserved their virulence and power of growth.

Pernice and Scagliosi carried out very numerous and careful experiments upon experimental animals. They employed the bacillus anthracis, pyocyaneus, subtilis, prodigiosus, and staphylococcus pyogenes. Almost always were the bacteria found in the urine and bile, but were also recovered from the mucosa of the mouth, nose, trachea, stomach, intestine, uterus, and vagina, from the milk, semen, pleural and peritoneal exudates, and from the cerebro-spinal fluid. In one case they noted the communication of the *B. subtilis* from the mother to the foetus. The elimination began in from four to six hours after the injection. The eliminated anthrax bacilli retained their virulence, but the pyocyaneus was attenuated. The kidney epithelium was always affected before the bacteria appeared in the urine. The changes consisted in circulatory disturbances, occasionally glomerulo-nephritis, and degeneration of the secreting epithelium. The presence of the germs in the tubules caused swelling, fatty and hyaline degeneration of the epithelium, later exudation and casts. The contorted tubules were chiefly affected, but the straight tubules as well. Later there was desquamation of cells, collapse of the tubules and hyperplasia of the connective tissue. These authors got the same results with filtered toxins.

Cavazzani by injecting tincture of cantharides or pyrogallic acid into rats produced a degeneration of the kidney epithelium, and found that by injecting the *B. pyocyaneus* he could recover it in the urine in  $1\frac{1}{4}$ —2 hours, while in his control animals the urine was still free in  $2\frac{1}{2}$  hours.

The elaborate and painstaking work of Sherrington on this subject is of great interest. In his paper he refers to the well-known fact that the secretions of an infected individual sometimes contain the organised virus and gives a careful *résumé* of the work done previously to his own. Sherrington made use of the *B. anthracis*, *B. mallei*, *B. tuberculosis*, *B. cuniculicida*, *B. murisepticus*, Ribbert's bacillus, *B. pyocyaneus*, *Sp. cholera Asiaticæ*, *Sp. Finkler-Prior*, *B. pneumoniæ* (?), *St. pyogenes aureus*, which he injected subcutaneously or intravenously. He then examined the urine and the bile for bacteria and in one case the aqueous humour. The fluids were examined by means of plate cultures as this method proved to be more delicate than the examination of films or sections microscopically. In some cases the urine was examined spectroscopically for blood.

In 68 observations the presence of the micro-organism injected was detected 21 times; in 8 of these 21 cases blood was present in the urine,

and in one case tuberculosis was found in the kidney. The species appearing in the urine without the urine being sanguineous in every case were *B. mallei*, *B. anthracis*, *B. murisepticus*, *B. pyocyaneus*, and the (?) pneumo-bacillus.

With regard to the possible antiseptic power of bile, Sherrington found that none of the species he employed were injured by eight hours immersion in bile. In 49 experiments the specific bacillus was found in the bile in 18, in 6 of the 18 blood was also present. The species appearing in the bile were, *B. anthracis*, *B. pyocyaneus*, *B. murisepticus*, and the (?) pneumo-bacillus. There seemed to be a greater tendency for these species to pass into the bile than into the urine. In no case did the bacteria recovered from the bile or from the urine appear to have suffered change or injury in the process.

Sherrington concludes that his results do not support the suggestion of Cohnheim that the body in the event of bacterial invasion protects itself by excreting the living germs through the kidneys and through the liver. Further, the evidence is against believing that the bacteria can pass a normal membrane though at the same time it need not be ruptured or pervious to red blood-corpuscles. He thinks that before bacilli can pass the membrane the tissues must first be depressed by the action of soluble toxins. This view is supported by the fact that innocuous species of bacteria did not appear in the secretions.

The article is also rendered still more valuable by an extended bibliography.

In his latest contribution, Fütterer endeavours to discover what resistance the liver offers to the production of a general infection, and how soon after general infection is produced, bacteria are eliminated by the liver and kidneys. He first notes some very important observations which go to prove that bacteria can pass from the intestines into the general circulation. Kocher had recorded three cases of strumitis two with gangrene, associated with acute gastro-enteritis. Sittman, Ferrio and Boscio had also submitted evidence to show that bacteria, particularly *Staph. pyo. albus* and the *B. coli* could pass from an injected intestine into the general circulation and appear in the blood and urine.

Fütterer employed cultures of *B. pyocyaneus* and *B. prodigiosus* which he injected into the portal vein. He first tested the blood to make sure that the circulating blood was sterile. He found that the liver offered no resistance to the passage of the germs which appeared in the blood in less than a minute. Similar experiments with *B. tuberculosis* on an ape, calf, dogs, and rabbit were negative. Fütterer then took a dog and ligatured the left ureter just above the bladder. He then injected *B. prodigiosus* into the left jugular vein and recovered the bacilli

from the urine in three minutes. He thinks that only when great masses of bacteria are injected, thus plugging the vessels of an organ, or when there is some predisposition, do local changes manifest themselves.

Investigation of clinical cases in human beings gives analogous results. For instance, Faulhaber in 53 infectious diseases of various sorts found bacteria, notably the diplococcus lanceolatus, *B. Friedländeri*, *B. typhi*, and streptococci in the kidney by the microscope and in many cases by cultivations. The inflammatory disturbances in the kidney were attributed to the presence of the bacteria while the degeneration of the parenchyma was due to intoxication.

With respect to the bile, Chiari, from an examination of 22 typhoid cases, concluded that it was the rule for the *B. typhi* to appear in the bile.

Bacteria have also in human beings been found in the sweat, the milk, and the conjunctival secretion. The general conclusion must be that in the various infectious diseases the specific bacteria at some time appear in the urinary and other excretions of the body. The interpretation of the phenomena is, however, still a matter of dispute.

We may conclude, I think, that all observers are agreed that when bacteria are injected into the blood they sooner or later appear in the various excretions, being found in the bile a little sooner than in the urine. The period of time varies from two to four hours, the elimination of non-pathogenic germs lasting for about 48 hours, of pathogenic germs continuing until the death of the animal. There is still doubt as to whether bacteria can pass a normal basement membrane. The majority, however, seem to hold that there must be at least a slight lesion of the membrane though it need not be one that can be recognised microscopically. At first, the bacteria pass everywhere by the blood, but sooner or later tend to localise in the liver, spleen, kidneys, and bone-marrow. The contradiction between the different observers as to the time it takes bacteria to appear in the urine seems to be due to their probably using different amounts of the culture fluid. If large numbers of bacteria be injected they plug the capillaries of the kidney, hæmorrhage easily takes place and in that case bacteria might appear in the urine in a few moments. As to the fate of the injected bacteria, the process does not yet seem to have been sufficiently worked out. The part of the leucocytes, for instance, in the process does not appear to have been settled. It is clear, however, from the investigations of Prof. Adami lately, that the parenchymatous cells of the liver and the endothelium of the liver capillaries can take up the bacteria by the species of phagocytic action. It is important that in the case of pathogenic bacteria, while for a time they disappear out of the blood and appear to be inhibited, they multiply and re-enter the blood bringing about a fatal termination. Are we to regard the

excretion of the bacteria as an attempt at elimination on the part of the organism? Tizzoni, Preto, Brunner, Gärtner, Geissler, and many others think so. Neumann and Konjajeff, on the contrary, consider that there must be a local kidney lesion to allow the passage of bacteria into the urine. It is difficult, however, to say whether a lesion, which may be present in the kidney, preceded the elimination of the germs, or is a consequence of their presence. It would seem reasonable to regard the elimination of bacteria as one of nature's means of getting rid of offending substances.

The doctrine that the various secretions of the normal body do not contain germs which was so long disputed and finally accepted by most pathologists must, in the light of recent work, be again examined. Létienne, in examining the bile from 6 experimental animals presumably healthy, found his cultures sterile in only one case. This may have depended upon the nature of his culture media, however, and certainly his result has not been corroborated by others. Prof. Adami's recent work shows that normal livers and bile contain bacteria even when no cultures could be obtained. These were apparently dead. We may well, I think, examine further to see if the excretion and destruction of bacteria is not one of the normal functions of the liver-cells and perhaps of those of several other organs. Because cultures are sterile it does not necessarily follow that no bacteria are present. In fact, the whole subject of the natural means of defense of the animal organism against bacteria must be more fully gone into.

A. G. Nicholls.

## Reviews and Notices of Books.

---

AN HISTORICAL SKETCH OF OUR CANADIAN INSTITUTIONS FOR THE INSANE. T. J. W. BURGESS, M. D. Being the Presidential Address in the Section of the Geological and Biological Sciences of the Royal Society of Canada. pp. 122, for sale by J. Hope & Sons, Ottawa; Copp-Clark Co., Toronto; and Bernard Quaritch, London, Eng.

As President of the Biological Section of the Royal Society of Canada, Dr. Burgess most wisely took up for his Presidential Address a subject connected with his life's work, and the pamphlet before us forms a most valuable contribution to the knowledge of the progress of an important branch of medical science in the Dominion. We shall not here attempt to epitomise the many interesting facts brought out by Dr. Burgess; rather, we would ask all interested in the subject to read this work in which Dr. Burgess has collected all that bears upon the history of our Canadian Asylums in a most interesting and readable manner.

On the whole it has to be confessed that while the present condition of our institutions for the insane is, in the main, excellent, and while we possess a body of alienists second to none in their enthusiasm for their subject and in their readiness to utilise every and all means to alleviate and improve the condition of those under them, "the past history of the treatment afforded to those mentally afflicted from one end to the other of Canada, is one that is not creditable to us as a people, one over which we would willingly draw a veil." Brilliant exceptions there have been—men like Workman in Toronto and De Wolf and Reid in Halifax, but it is painful reading to glance over the early history of the institutions in Ontario and even in British Columbia, and still more painful to study what Dr Burgess has to say with regard to Beauport and Longue Pointe and the appalling obstructions that have in the past been placed in the way of anything like adequate treatment of the mentally afflicted in this Province.

In passing, it is interesting to note how important a part was played by our Montreal Medico-Chirurgical Society in remedying the condition of affairs.

Dr. Burgess simply states facts, but it is clear from his pages that the system employed in this Province is radically wrong. Those incapable of caring for themselves are surely the wards of the State, and the Province has no right to delegate its functions of caring for them to inde-

pendent corporations, still less is it permissible for the Province to farm out the unfortunates to corporations to whom their care is a matter of pecuniary interest. Although the Verdun Asylum is, we are proud to say, a model establishment, and although great improvements have occurred within the last few years in the management at Beauport and Longue Pointe, this Province will not be able to hold up its head until it assumes its right responsibility with regard to this matter of caring for the insane.

Works such as this of Dr. Burgess, drawing public attention to and arousing interest in asylums and asylum work, are of the greatest public value. We cordially recommend careful perusal of the same to all interested in philanthropic work and the material advance of our Dominion.

*J. G. A.*

A TEXT-BOOK OF PATHOLOGY, by ALFRED STENDEL, M. D., Instructor in Clinical Medicine, University of Pennsylvania; Physician to the Philadelphia Hospital, etc. 8 vo., pp. 848, 372 Illustrations. Philadelphia, W. B. Saunders, 1898.

Dr. Stengel has produced what is, taking all in all, the clearest and best one-volume textbook of Pathology with which we are acquainted. It is impossible to cover the entire ground of special and general pathology within the compass of a single volume of under one thousand pages of legible text, but Dr. Stengel has most nearly achieved the impossible, and he is to be congratulated upon producing a work which fills a distinct gap.

The subject of general pathology is treated very briefly, too briefly in fact to be satisfactory. This will be understood when we state that the etiology of disease is discussed in a chapter of less than 14 pages, in which the discussion on heredity takes up but some 25 lines, while inflammation and regeneration are given less than 17 pages, and immunity again is discussed in less than 5 pages. It is to be admitted, however, that within these narrow limits, what is said is put in a singularly clear manner.

It is more especially in the discussion of the diseases of the various organs and systems and in the special pathological portion, that the real value of the work appears. In reading this we have been surprised to see the amount of material Dr. Stengel has condensed without passing over the important points. The illustrations are on the whole admirable, and the work itself is thoroughly reliable and most highly commendable to the fourth year student wishful to gain a broad grasp on the main features of the special pathology of the various systems.

*J. G. A.*

A MANUAL OF OTOTOLOGY, by GORHAM BACON, A. B., M. D., Professor of Otology in Cornell University, New York; Aural Surgeon, New York Eye and Ear Infirmary. With an Introductory Chapter by CLARENCE J. BLAKE, M. D., Professor of Otology in Harvard University. With 110 illustrations and a coloured plate. 398 pages. Lea Brothers and Company, Philadelphia and New York.

This is a remarkably complete treatise for its size and a most readable little book. It is, moreover, thoroughly up to date and contains excellent illustrations of such new instruments as are required by the otologist for the surgical treatment of morbid conditions in the nasal and nasopharyngeal cavities with a description of the operative procedures in which they are employed; as, for example, the surgical treatment of adenoids in the vault of the pharynx, which clearly belongs to the domain of otology rather than that of laryngology. The same thing may be said of nasal deformities, such as deviation of the septum causing obstruction to nasal respiration. For the relief of this condition the author recommends the operation devised by Dr. Morris J. Asch a description of which, together with that of the instrument used, he gives very fully. There is also a brief but fairly complete account of the modern operations for the renewal of the drum membrane and ossicles with illustrations of the instruments to be used in these operations.

The chapter on mastoid disease and the intercranial complications of suppurative middle ear affections conveys a fund of thoroughly practical information that can hardly be obtained elsewhere in so convenient a form. Much valuable information is contained also in the chapter on diseases of the labyrinth and on deaf-mutism.

The work only needs to become known to attain a wide and general popularity in the ranks of the medical profession. It is especially adapted for all who wish to obtain a practical knowledge of otology with the least possible expenditure of time.

*F. B.*

NOTES ON SURGERY FOR NURSES, by JOSEPH BELL, M. D., R. C. S., Edin., Consulting Surgeon to the Royal Infirmary, and to the Royal Edinburgh Hospital for Sick Children, Fifth Edition, thoroughly revised, Edinburgh, Oliver and Boyd; London, Simpkin, Marshall, Hamilton, Kent & Co., Ltd. 1899.

This little book of less than 200 pages gives to nurses who peruse it a good insight into inflammatory processes, suppuration, ulceration, gangrene, pyæmia, and the history of wounds. It also teaches them how to deal in emergencies with fractures and dislocations, burns and scalds, and how to prepare the patient and rooms for an operation. A valuable

chapter is devoted to the nursing of children, and finally, a chapter of thoroughly good advice to those who think they are especially fitted to become trained nurses.

The remarks on the discipline necessary in a training school for nurses, and the relation of probationers to fully trained nurses, are clear and to the point; and are given in a kindly way by a hospital surgeon whose large and long experience entitles him to speak with authority. The fact of this being the fifth edition indicates the value and appreciation of the work.

*G. E. A.*

## Society Proceedings.

---

### MONTREAL MEDICO-CHIRURGICAL SOCIETY.

*Stated Meeting, March 20th, 1899.*

H. A. LAFLEUR, M.D., VICE-PRESIDENT, IN THE CHAIR.

#### **Multiple Diverticula of the Small Intestine—Adeno-Carcinoma of the Prostate—Primary Contracted Kidney.**

Dr. A. G. NICHOLLS showed these pathological specimens.

In the first case the specimen consisted of about three feet of the jejunum in which there were fifty diverticula varying from the size of a pea to that of a walnut. These were situated along the mesenteric attachment of the bowel and consisted of herniæ of the mucous membrane into the serosa without fœcal contents. The patient was a female, aged 64, who had had a double inguinal hernia for thirty years and bronchitis for twenty-five.

The cause of the condition was not further made out. There seemed to be very few references in the literature to this condition. It was first mentioned in an article in Baillie's Anatomy by Sömmering. Rokitsansky was the first to point out that the condition was really a hernia of the mucosa into the serosa into the sheath of the mesenteric vessels. Hansemann had recorded a case in which there were 400 diverticula in the large and small intestine: those in the small bowel being real herniæ while those in the large were actual sacular protuberances the walls of which contained thinned muscular fibres.

There was a physiological tendency for the wall of the bowel to give way at the point of exit of the mesenteric vessels. This tendency was marked in stout people and increased with age. A division had to be recognised between true and false diverticula. Outside of the congenital forms they were due to pressure from within or traction.

Dr. Nicholls referred to a case recorded by Powell White in the Lancet of Nov. 8, 1898, and to a case of his own in which there were two diverticula apparently the result of pressure on an inflamed bowel wall (MONTREAL MEDICAL JOURNAL, Nov., 1898). A case had also been shown him by Dr. Wyatt Johnston.

*The Carcinoma of the Prostate* was found in the case of an old gentleman aged seventy-six. The prostate was enlarged to the size of a small

orange and the growth was beginning to appear within the cavity of the bladder. There were secondary growths in the pelvic retroperitoneal tissues, on the ramus of the right pubic bone, and on one of the ribs, There was a history of prostatic trouble for a period of twelve years and the tumour had apparently originated in an adenoma.

*The Contracted Kidneys* were an example of a somewhat uncommon condition, the "primäre Schrumpfnieren" of the German school. The cause was lead. The patient was thirty years old, a painter who had had six attacks of lead colic. He had had symptoms referable to the kidneys, —failing vision, weakness, headache, and œdema of the legs, for one year. On admission the heart was enlarged there was moderate arteriosclerosis with high pulse tension. The urine during twenty-five days showed an amount of albumin ranging from  $\frac{1}{2}$  to 2 grammes to the litre, the specific gravity from 1005 to 1010. It contained numerous hyaline and granular casts and varied in amount from 25 to 81 ounces per diem. He developed a pericarditis and had three uræmic convulsions just before death. The kidneys weighed 100 and 95 grammes respectively. The capsule was adherent, the surface was not granular but the cortex was diminished and the organ very firm. Microscopically, the fibrosis was very diffuse and well-developed and there was relatively only very little round-celled infiltration. The glomeruli were atrophied and there was very much periglomerular fibrosis. The vessels were slightly thickened. The tubules were very atrophic and collapsed, only a few showing moderate dilatation, with a few hyaline casts. The condition was very different from the ordinary granular kidney of Bright's Disease.

THE CHAIRMAN asked if it was always the case that the ordinary granular kidney passed through the stage of large white kidney, and if the condition here present was not much the same as the small red kidney of Bright's classification.

#### **Œdema of the Glottis during Anæsthesia.**

Dr. F. R. ENGLAND gave the clinical notes of this case and Dr. MACPHAIL described the post-mortem appearances. (See page 346.)

#### **Dominion Registration.**

Dr. T. G. RODDICK read a paper on this subject which, together with the discussion upon it, will be found on page 321.

THE  
**Montreal Medical Journal.**

*A Monthly Record of the Progress of Medical and Surgical Science.*

---

VOL. XXVIII.

MAY, 1899.

No. 5.

---

THE "LODGE DOCTOR" IN RELATION TO MEDICAL ETHICS.

Some apology seems needed for again recurring to the thread bare subject of the "Lodge Doctor," but we are not aware that the view indicated by the above heading has had special attention, and are convinced, from recent events, that it undoubtedly raises a question, the proper solution of which is of interest to every practitioner in Canada.

The wonderful increase, of late years, in the membership of the different lodges and benefit societies, a part of whose system is to have medical services rendered at a certain fixed sum per annum, has brought into sharp relief the relations which should exist between these lodge doctors, in the discharge of their duties as such, on the one hand, and the old family physician on the other. For obvious financial reasons, the lodge doctor is generally a young man, probably just beginning practice, who finds that at the outset of the struggle for existence, it is a very convenient thing to have a certain fixed income per year from his lodge, no matter though he may have to render five dollars worth of service for every dollar he receives. There is, besides, a fair chance that he may eventually become the family physician, and thus make a paying practice for himself. In doing this he is almost sure to come into conflict with the former family physician, and the question is raised, how far will the provisions of the present medical code of ethics solve the conflict between the two men? The code was framed for independent medical men—men not under contract to attend when sent for, regardless of the fact that this family are patients of some brother practitioner; and there is no provision in it, so far as we are aware, which will allow the lodge doctor to see another man's patient without his knowledge or consent. Should the code, then, be amended, and the lodge doctor recognised as such?

But the difficulty is not all on the side of the lodge doctor. He may inform the old family physician that he is attending the head of one of

his families in his capacity as lodge physician. A few days later, a request comes to the family physician to see the patient. What should he do? He knows that the patient has another medical man already in attendance, and that according to the code, he has no right to see the case except in consultation with that attendant. But this is not what is wanted, and the patient cannot realize that in calling in his lodge physician he is no longer free to send for his former medical man. It seems, too, hardly fair to the family physician that he should be compelled to refuse to go and see his former patient—perhaps a friend for many years,—just because the medical code is binding on him and yet does not prohibit his fellow practitioner from undertaking duties which must lead to an infringement of its precepts—moreover, in many small towns almost every head of a family belongs to some lodge or benefit society, and a refusal on the part of the regular medical attendant, to attend under the conditions above cited, would soon leave him without any practice. The reader may reason, as many medical men of good standing do, “Why not go? The lodge physician will be none the poorer, and you have no right to neglect your families because they have entered into a contract with another man for certain services at a fixed rate per annum.” But this is not the question to be answered. The code of medical ethics is not one of expediency, or of fees, but one of honor between medical men; and it will not allow us to treat lodge physicians, who are in every sense our fellow practitioners, as a different species of the genus *Medicus*, toward whom our conduct is to be regulated by another and a lower code. How, then, must we get over the difficulty? Should we amend the code in order to recognize the functions of the lodge physician, and thus render it perfectly legitimate for the family physician to see the case and ignore the lodge doctor? This would be throwing open a dangerous door. If the family physician could then be called in, why not any one else? On the other hand, it would now be practically impossible to insist that lodge work shall not be done at all by regular medical practitioners, which seems to us the only other alternative. While we are firmly of the opinion—and we feel certain that this opinion is shared in by a majority of the lodge physicians themselves—that the doing of lodge or society medical work is degrading both to the medical man and to his profession; still we confess that, as society is now constituted and as the medical profession is yearly becoming more over-crowded, it seems more than likely that the number of physicians will increase. Is it not our duty, then, to meet the position fairly and squarely, hear both sides of the case, and draw up some code which will be equitable both to the man doing society-work and to the man who will not, so that in their professional relations may be relieved of that heart-burning jealousy which is often so evident now? The

scheme may be Utopian, but some solution of the difficulty must be arrived at, or the medical code will ere long fall into desuetude, and our whole profession will fall to the level of some of the so-called learned professions, whose members openly solicit patronage without losing cast among their fellow practitioners. May that day be far distant for us!

---

INTERNATIONAL COMMISSION FOR THE DECENNIAL  
REVISION OF THE BERTILLON NOMENCLATURE  
OF DISEASES.

*Circular to Provincial Boards of Health, to Local Boards of Health, to Statistical Bureaus, to Medical and Surgical Colleges, to Medical Faculties, to Medical Societies and to members of the Medical Profession, in the Dominion of Canada.*

In order to make more easy and exact the comparison of the vital statistics of different countries, Dr. Bertillon presented to the "International Institute of Statistics" in 1893, a scheme for an *international* nomenclature of diseases, which is in a manner a compromise between the English, the German, the Italian, and those of other countries. This nomenclature has been successively adopted by the City of Paris, by Mexico, by the Province of Quebec, by the State of Michigan, by the Province of Ontario, by the State of Maryland, and by the State of Indiana. It is also in use in Uruguay, the Argentine Republic and Costa Rica.

The "Conference of State and Provincial Boards of North America," and the "American Public Health Association" have recommended its adoption in each state of the American Union and of Mexico, and in each of the provinces of Canada. Its adoption has also been recommended to the authorities charged with the preparation of the coming census of the United States of America, of the Republic of Mexico and of Canada. Others have promised to adopt the system, so that speaking generally, it may be said that the adoption of this nomenclature is destined to become practically universal, for the Continent of America at least.

In adopting a nomenclature of diseases, it is necessary, *always keeping in view the desirability of making the fewest changes possible*, to provide for its revision at stated periods, in order to keep it in touch with the progress of medical science; and to this end the American Public Health Association, at its Ottawa meeting (1898), approved of the scheme for revision submitted by Dr. Wilbur, after he had already been assured of the co-operation of the French sanitary authorities. The scheme of revision should be completed ready for presentation to the "International Congress of Hygiene and Demography", which will sit in Paris during the summer of 1900.

The American Public Health Association, in which are represented the United States of America, the Republic of Mexico and the Dominion of

Canada, has nominated the following committees to receive suggestions, and in a word to direct the work in their respective countries.

UNITED STATES OF AMERICA.	{	Dr. SAMUEL W. ABBOTT, Boston, Massachusetts. Dr. A. G. YOUNG, Augusta, Maine. Dr. CRESSY L. WILBUR, Lansing, Michigan, <i>Secretary</i> .
MEXICO.....	{	Dr. EDUARDO LICÉAGA, Mexico. Dr. JÉSUS MONJARAS, San Luis, Potosi. Dr. JOSÉ RAMÍREZ, Mexico, <i>Secretary</i> .
CANADA .....	{	Dr. E. PERSILLIER-LACHAPELLE, Montreal, P.Q. Dr. PETER H. BRYCE, Toronto, Ont. Dr. ELZÉAR PELLETIER, Montreal, P.Q., <i>Secretary</i> .

In order to carry out its portion of the work, the Committee for Canada forwards with this circular, a copy of the nomenclature (Bertillon), and requests all who have interested themselves in vital statistics to carefully peruse the same, and to thereafter, point out any omissions in it, &c., &c.

As we will have to compile the suggestions received before forwarding them to the committees of the other Countries, we cannot promise to consider communications sent in later than the 1st of June next, and consequently we request that each will address to us his suggestions without delay.

The Canadian Committee,

April 14th 1899.

E. P. LACHAPELLE,

PETER H. BRYCE,

ELZÉAR PELLETIER, *Secretary*,

76 St. Gabriel St., Montreal.

P.S.—It is recommended to correspondents to indicate clearly: (a) the number of the title in the nomenclature, (b) the change proposed, (c) the reason for the change, (d) their name, office and address. The following form, which contains one of the suggestions already made to the Commission, is an illustration of this:

(a) Number of the title, which it is proposed to amend: 130

(b) Change proposed: Transfer Pott's Disease to "22E Tuberculosis of other organs."

(c) Reason for change: Pott's disease is usually tubercular. Other similar tubercular diseases may well be joined with it for general statistical treatment. All tuberculosis should be together under one general title.

Signature: CRESSY L, WILBUR, M. D.

March 16th 1899. Office: Chief of Vital Statistics,  
Michigan.

Address: Lansing, Michigan.

Most of the nomenclatures now in use are derived more or less directly from that of William Farr, in which diseases are classed for the most part, *according to their anatomical seat, and not according to their nature.* This is evidently right, since the progress of science constantly modifies the opinions of physicians as to the nature of diseases, and consequently, a statistical nomenclature should be modified with the least possible frequency in order to admit of comparison with those of earlier date. The diseases of each system of organs should be grouped together; for example, the nervous system, the circulatory, the respiratory, the digestive, the genito-urinary, the affections of the skin, and those of the organs of locomotion (bones, joints, muscles). Besides these diseases, the seat of which is known, there are others which involve the whole organism. Formerly these general diseases were separated into several sub-divisions which to-day are out of date. It is better to group these diseases together, placing at the head of the list those which, with much reason, Dr. Farr called "zymotic"; then those which are termed "virulent"; finally, other general diseases and slow poisons. But it would doubtless be a mistake to make these distinctions in a new nomenclature, since we can to-day foresee that they will soon lose the importance which was once attached to them. For example, at the present day, the list of diseases called infectious includes additional diseases which were once classed under other titles. It is better, then, to avoid these classifications which are necessarily only provisional, and are also useless for statistical purposes.

We believe that, in the present state of medical science, we should not attempt to establish a definite grouping of diseases. What significance can be attached to-day to the terms "enthetic, dietetic, diathetic" diseases which Dr. Farr proposed for the adoption of the statistical congress of 1855? They have lost all their meaning, and a statistical system which informs us to-day, for example, how many persons died of diathetic diseases conveys but little meaning. But, if the name of the group or subdivision has lost its meaning, the name of any separate disease still preserves its significance; for example, this group of diseases, the "diathetic" was made up of gout, anæmia, cancer and senile gangrene. These diseases which seem to us to-day so oddly associated, when considered separately still preserve very definitely the meaning which they had in 1855. The history of the past should be our guide for the future. Those disease groups which once seemed most natural have rapidly lost their alleged value. We cannot, then, employ them in medical statistics if we aim at permanent work. On the contrary, the meaning of each disease taken separately changes much more slowly.

## Class I.—GENERAL DISEASES. (a)

- |  |   |                   |  |                               |                                  |                       |                 |                     |             |               |  |               |  |  |  |                  |                           |                               |                                  |                   |                 |            |             |  |                 |  |           |  |               |  |                          |  |                        |  |               |  |                        |  |                             |  |                                    |  |                     |  |  |  |                               |  |
|--|---|-------------------|--|-------------------------------|----------------------------------|-----------------------|-----------------|---------------------|-------------|---------------|--|---------------|--|--|--|------------------|---------------------------|-------------------------------|----------------------------------|-------------------|-----------------|------------|-------------|--|-----------------|--|-----------|--|---------------|--|--------------------------|--|------------------------|--|---------------|--|------------------------|--|-----------------------------|--|------------------------------------|--|---------------------|--|--|--|-------------------------------|--|
| 1. Typhoid fever.                            |   |                   |  |                               |                                  |                       |                 |                     |             |               |  |               |  |  |  |                  |                           |                               |                                  |                   |                 |            |             |  |                 |  |           |  |               |  |                          |  |                        |  |               |  |                        |  |                             |  |                                    |  |                     |  |  |  |                               |  |
| 2. Typhus.                                   |   |                   |  |                               |                                  |                       |                 |                     |             |               |  |               |  |  |  |                  |                           |                               |                                  |                   |                 |            |             |  |                 |  |           |  |               |  |                          |  |                        |  |               |  |                        |  |                             |  |                                    |  |                     |  |  |  |                               |  |
| 3. Scurvy.                                   |   |                   |  |                               |                                  |                       |                 |                     |             |               |  |               |  |  |  |                  |                           |                               |                                  |                   |                 |            |             |  |                 |  |           |  |               |  |                          |  |                        |  |               |  |                        |  |                             |  |                                    |  |                     |  |  |  |                               |  |
| 4. Smallpox.                                 |   |                   |  |                               |                                  |                       |                 |                     |             |               |  |               |  |  |  |                  |                           |                               |                                  |                   |                 |            |             |  |                 |  |           |  |               |  |                          |  |                        |  |               |  |                        |  |                             |  |                                    |  |                     |  |  |  |                               |  |
| 5. Measles.                                  |   |                   |  |                               |                                  |                       |                 |                     |             |               |  |               |  |  |  |                  |                           |                               |                                  |                   |                 |            |             |  |                 |  |           |  |               |  |                          |  |                        |  |               |  |                        |  |                             |  |                                    |  |                     |  |  |  |                               |  |
| 6. Scarlet fever.                            |   |                   |  |                               |                                  |                       |                 |                     |             |               |  |               |  |  |  |                  |                           |                               |                                  |                   |                 |            |             |  |                 |  |           |  |               |  |                          |  |                        |  |               |  |                        |  |                             |  |                                    |  |                     |  |  |  |                               |  |
| 7. Whooping cough.                           |   |                   |  |                               |                                  |                       |                 |                     |             |               |  |               |  |  |  |                  |                           |                               |                                  |                   |                 |            |             |  |                 |  |           |  |               |  |                          |  |                        |  |               |  |                        |  |                             |  |                                    |  |                     |  |  |  |                               |  |
| 8. Diphtheria and croup.                     |   |                   |  |                               |                                  |                       |                 |                     |             |               |  |               |  |  |  |                  |                           |                               |                                  |                   |                 |            |             |  |                 |  |           |  |               |  |                          |  |                        |  |               |  |                        |  |                             |  |                                    |  |                     |  |  |  |                               |  |
| 9. Influenza.                                |   |                   |  |                               |                                  |                       |                 |                     |             |               |  |               |  |  |  |                  |                           |                               |                                  |                   |                 |            |             |  |                 |  |           |  |               |  |                          |  |                        |  |               |  |                        |  |                             |  |                                    |  |                     |  |  |  |                               |  |
| 10. Miliary fever.                           |   |                   |  |                               |                                  |                       |                 |                     |             |               |  |               |  |  |  |                  |                           |                               |                                  |                   |                 |            |             |  |                 |  |           |  |               |  |                          |  |                        |  |               |  |                        |  |                             |  |                                    |  |                     |  |  |  |                               |  |
| 11. Asiatic cholera.                         |   |                   |  |                               |                                  |                       |                 |                     |             |               |  |               |  |  |  |                  |                           |                               |                                  |                   |                 |            |             |  |                 |  |           |  |               |  |                          |  |                        |  |               |  |                        |  |                             |  |                                    |  |                     |  |  |  |                               |  |
| 12. Cholera nostras.                         |   |                   |  |                               |                                  |                       |                 |                     |             |               |  |               |  |  |  |                  |                           |                               |                                  |                   |                 |            |             |  |                 |  |           |  |               |  |                          |  |                        |  |               |  |                        |  |                             |  |                                    |  |                     |  |  |  |                               |  |
| 13. Other epidemic diseases.                 | <table border="0"> <tr> <td>A. Yellow fever.</td> </tr> <tr> <td>B. Plague.</td> </tr> <tr> <td>C. Mumps.</td> </tr> <tr> <td>D. Others.</td> </tr> </table>  | A. Yellow fever.  | B. Plague.   | C. Mumps.                     | D. Others.                       |                       |                 |                     |             |               |  |               |  |  |  |                  |                           |                               |                                  |                   |                 |            |             |  |                 |  |           |  |               |  |                          |  |                        |  |               |  |                        |  |                             |  |                                    |  |                     |  |  |  |                               |  |
| A. Yellow fever.                             |   |                   |  |                               |                                  |                       |                 |                     |             |               |  |               |  |  |  |                  |                           |                               |                                  |                   |                 |            |             |  |                 |  |           |  |               |  |                          |  |                        |  |               |  |                        |  |                             |  |                                    |  |                     |  |  |  |                               |  |
| B. Plague.                                   |   |                   |  |                               |                                  |                       |                 |                     |             |               |  |               |  |  |  |                  |                           |                               |                                  |                   |                 |            |             |  |                 |  |           |  |               |  |                          |  |                        |  |               |  |                        |  |                             |  |                                    |  |                     |  |  |  |                               |  |
| C. Mumps.                                    |   |                   |  |                               |                                  |                       |                 |                     |             |               |  |               |  |  |  |                  |                           |                               |                                  |                   |                 |            |             |  |                 |  |           |  |               |  |                          |  |                        |  |               |  |                        |  |                             |  |                                    |  |                     |  |  |  |                               |  |
| D. Others.                                   |   |                   |  |                               |                                  |                       |                 |                     |             |               |  |               |  |  |  |                  |                           |                               |                                  |                   |                 |            |             |  |                 |  |           |  |               |  |                          |  |                        |  |               |  |                        |  |                             |  |                                    |  |                     |  |  |  |                               |  |
| 14. Pyæmia and septicæmia.                   |   |                   |  |                               |                                  |                       |                 |                     |             |               |  |               |  |  |  |                  |                           |                               |                                  |                   |                 |            |             |  |                 |  |           |  |               |  |                          |  |                        |  |               |  |                        |  |                             |  |                                    |  |                     |  |  |  |                               |  |
| 15. Glanders and farcy.                      |   |                   |  |                               |                                  |                       |                 |                     |             |               |  |               |  |  |  |                  |                           |                               |                                  |                   |                 |            |             |  |                 |  |           |  |               |  |                          |  |                        |  |               |  |                        |  |                             |  |                                    |  |                     |  |  |  |                               |  |
| 16. Malignant pustule.                       |   |                   |  |                               |                                  |                       |                 |                     |             |               |  |               |  |  |  |                  |                           |                               |                                  |                   |                 |            |             |  |                 |  |           |  |               |  |                          |  |                        |  |               |  |                        |  |                             |  |                                    |  |                     |  |  |  |                               |  |
| 17. Rabies.                                  |   |                   |  |                               |                                  |                       |                 |                     |             |               |  |               |  |  |  |                  |                           |                               |                                  |                   |                 |            |             |  |                 |  |           |  |               |  |                          |  |                        |  |               |  |                        |  |                             |  |                                    |  |                     |  |  |  |                               |  |
| 18. Relapsing fever.                         |   |                   |  |                               |                                  |                       |                 |                     |             |               |  |               |  |  |  |                  |                           |                               |                                  |                   |                 |            |             |  |                 |  |           |  |               |  |                          |  |                        |  |               |  |                        |  |                             |  |                                    |  |                     |  |  |  |                               |  |
| 19. Intermittent fever.                      |   |                   |  |                               |                                  |                       |                 |                     |             |               |  |               |  |  |  |                  |                           |                               |                                  |                   |                 |            |             |  |                 |  |           |  |               |  |                          |  |                        |  |               |  |                        |  |                             |  |                                    |  |                     |  |  |  |                               |  |
| 20. Malarial cachexia.                       |   |                   |  |                               |                                  |                       |                 |                     |             |               |  |               |  |  |  |                  |                           |                               |                                  |                   |                 |            |             |  |                 |  |           |  |               |  |                          |  |                        |  |               |  |                        |  |                             |  |                                    |  |                     |  |  |  |                               |  |
| 21. Pellagra.                                |   |                   |  |                               |                                  |                       |                 |                     |             |               |  |               |  |  |  |                  |                           |                               |                                  |                   |                 |            |             |  |                 |  |           |  |               |  |                          |  |                        |  |               |  |                        |  |                             |  |                                    |  |                     |  |  |  |                               |  |
|  | <table border="0"> <tr> <td>22. Tuberculosis.</td> <td> <table border="0"> <tr> <td>A. Of the lungs.</td> </tr> <tr> <td>B. Of the meninges.</td> </tr> <tr> <td>C. Of the peritoneum.</td> </tr> <tr> <td>D. Of the skin.</td> </tr> <tr> <td>E. Of other organs.</td> </tr> <tr> <td>F. General.</td> </tr> </table> </td> </tr> <tr> <td>23. Scrofula.</td> <td></td> </tr> <tr> <td>24. Syphilis.</td> <td></td> </tr> <tr> <td></td> <td> <table border="0"> <tr> <td>A. Of the month.</td> </tr> <tr> <td>B. Of the stomach, liver.</td> </tr> <tr> <td>C. Of the intestines, rectum.</td> </tr> <tr> <td>D. Of the female genital organs.</td> </tr> <tr> <td>E. Of the breast.</td> </tr> <tr> <td>F. Of the skin.</td> </tr> <tr> <td>G. Others.</td> </tr> </table> </td> </tr> <tr> <td>25. Cancer.</td> <td></td> </tr> <tr> <td>26. Rheumatism.</td> <td></td> </tr> <tr> <td>27. Gout.</td> <td></td> </tr> <tr> <td>28. Diabetes.</td> <td></td> </tr> <tr> <td>29. Exophthalmic goitre.</td> <td></td> </tr> <tr> <td>30. Addison's disease.</td> <td></td> </tr> <tr> <td>31. Leukæmia.</td> <td></td> </tr> <tr> <td>32. Anæmia, chlorosis.</td> <td></td> </tr> <tr> <td>33. Other general diseases.</td> <td></td> </tr> <tr> <td>34. Alcoholism (acute or chronic).</td> <td></td> </tr> <tr> <td>35. Lead poisoning.</td> <td></td> </tr> <tr> <td>36. Other chronic poisonings of occupations.</td> <td></td> </tr> <tr> <td>37. Other chronic poisonings.</td> <td></td> </tr> </table> | 22. Tuberculosis. | <table border="0"> <tr> <td>A. Of the lungs.</td> </tr> <tr> <td>B. Of the meninges.</td> </tr> <tr> <td>C. Of the peritoneum.</td> </tr> <tr> <td>D. Of the skin.</td> </tr> <tr> <td>E. Of other organs.</td> </tr> <tr> <td>F. General.</td> </tr> </table> | A. Of the lungs.              | B. Of the meninges.              | C. Of the peritoneum. | D. Of the skin. | E. Of other organs. | F. General. | 23. Scrofula. |  | 24. Syphilis. |  |  | <table border="0"> <tr> <td>A. Of the month.</td> </tr> <tr> <td>B. Of the stomach, liver.</td> </tr> <tr> <td>C. Of the intestines, rectum.</td> </tr> <tr> <td>D. Of the female genital organs.</td> </tr> <tr> <td>E. Of the breast.</td> </tr> <tr> <td>F. Of the skin.</td> </tr> <tr> <td>G. Others.</td> </tr> </table> | A. Of the month. | B. Of the stomach, liver. | C. Of the intestines, rectum. | D. Of the female genital organs. | E. Of the breast. | F. Of the skin. | G. Others. | 25. Cancer. |  | 26. Rheumatism. |  | 27. Gout. |  | 28. Diabetes. |  | 29. Exophthalmic goitre. |  | 30. Addison's disease. |  | 31. Leukæmia. |  | 32. Anæmia, chlorosis. |  | 33. Other general diseases. |  | 34. Alcoholism (acute or chronic). |  | 35. Lead poisoning. |  | 36. Other chronic poisonings of occupations. |  | 37. Other chronic poisonings. |  |
| 22. Tuberculosis.                            | <table border="0"> <tr> <td>A. Of the lungs.</td> </tr> <tr> <td>B. Of the meninges.</td> </tr> <tr> <td>C. Of the peritoneum.</td> </tr> <tr> <td>D. Of the skin.</td> </tr> <tr> <td>E. Of other organs.</td> </tr> <tr> <td>F. General.</td> </tr> </table>  | A. Of the lungs.  | B. Of the meninges.  | C. Of the peritoneum.         | D. Of the skin.                  | E. Of other organs.   | F. General.     |                     |             |               |  |               |  |  |  |                  |                           |                               |                                  |                   |                 |            |             |  |                 |  |           |  |               |  |                          |  |                        |  |               |  |                        |  |                             |  |                                    |  |                     |  |  |  |                               |  |
| A. Of the lungs.                             |   |                   |  |                               |                                  |                       |                 |                     |             |               |  |               |  |  |  |                  |                           |                               |                                  |                   |                 |            |             |  |                 |  |           |  |               |  |                          |  |                        |  |               |  |                        |  |                             |  |                                    |  |                     |  |  |  |                               |  |
| B. Of the meninges.                          |   |                   |  |                               |                                  |                       |                 |                     |             |               |  |               |  |  |  |                  |                           |                               |                                  |                   |                 |            |             |  |                 |  |           |  |               |  |                          |  |                        |  |               |  |                        |  |                             |  |                                    |  |                     |  |  |  |                               |  |
| C. Of the peritoneum.                        |   |                   |  |                               |                                  |                       |                 |                     |             |               |  |               |  |  |  |                  |                           |                               |                                  |                   |                 |            |             |  |                 |  |           |  |               |  |                          |  |                        |  |               |  |                        |  |                             |  |                                    |  |                     |  |  |  |                               |  |
| D. Of the skin.                              |   |                   |  |                               |                                  |                       |                 |                     |             |               |  |               |  |  |  |                  |                           |                               |                                  |                   |                 |            |             |  |                 |  |           |  |               |  |                          |  |                        |  |               |  |                        |  |                             |  |                                    |  |                     |  |  |  |                               |  |
| E. Of other organs.                          |   |                   |  |                               |                                  |                       |                 |                     |             |               |  |               |  |  |  |                  |                           |                               |                                  |                   |                 |            |             |  |                 |  |           |  |               |  |                          |  |                        |  |               |  |                        |  |                             |  |                                    |  |                     |  |  |  |                               |  |
| F. General.                                  |   |                   |  |                               |                                  |                       |                 |                     |             |               |  |               |  |  |  |                  |                           |                               |                                  |                   |                 |            |             |  |                 |  |           |  |               |  |                          |  |                        |  |               |  |                        |  |                             |  |                                    |  |                     |  |  |  |                               |  |
| 23. Scrofula.                                |   |                   |  |                               |                                  |                       |                 |                     |             |               |  |               |  |  |  |                  |                           |                               |                                  |                   |                 |            |             |  |                 |  |           |  |               |  |                          |  |                        |  |               |  |                        |  |                             |  |                                    |  |                     |  |  |  |                               |  |
| 24. Syphilis.                                |   |                   |  |                               |                                  |                       |                 |                     |             |               |  |               |  |  |  |                  |                           |                               |                                  |                   |                 |            |             |  |                 |  |           |  |               |  |                          |  |                        |  |               |  |                        |  |                             |  |                                    |  |                     |  |  |  |                               |  |
|  | <table border="0"> <tr> <td>A. Of the month.</td> </tr> <tr> <td>B. Of the stomach, liver.</td> </tr> <tr> <td>C. Of the intestines, rectum.</td> </tr> <tr> <td>D. Of the female genital organs.</td> </tr> <tr> <td>E. Of the breast.</td> </tr> <tr> <td>F. Of the skin.</td> </tr> <tr> <td>G. Others.</td> </tr> </table>  | A. Of the month.  | B. Of the stomach, liver.  | C. Of the intestines, rectum. | D. Of the female genital organs. | E. Of the breast.     | F. Of the skin. | G. Others.          |             |               |  |               |  |  |  |                  |                           |                               |                                  |                   |                 |            |             |  |                 |  |           |  |               |  |                          |  |                        |  |               |  |                        |  |                             |  |                                    |  |                     |  |  |  |                               |  |
| A. Of the month.                             |   |                   |  |                               |                                  |                       |                 |                     |             |               |  |               |  |  |  |                  |                           |                               |                                  |                   |                 |            |             |  |                 |  |           |  |               |  |                          |  |                        |  |               |  |                        |  |                             |  |                                    |  |                     |  |  |  |                               |  |
| B. Of the stomach, liver.                    |   |                   |  |                               |                                  |                       |                 |                     |             |               |  |               |  |  |  |                  |                           |                               |                                  |                   |                 |            |             |  |                 |  |           |  |               |  |                          |  |                        |  |               |  |                        |  |                             |  |                                    |  |                     |  |  |  |                               |  |
| C. Of the intestines, rectum.                |   |                   |  |                               |                                  |                       |                 |                     |             |               |  |               |  |  |  |                  |                           |                               |                                  |                   |                 |            |             |  |                 |  |           |  |               |  |                          |  |                        |  |               |  |                        |  |                             |  |                                    |  |                     |  |  |  |                               |  |
| D. Of the female genital organs.             |   |                   |  |                               |                                  |                       |                 |                     |             |               |  |               |  |  |  |                  |                           |                               |                                  |                   |                 |            |             |  |                 |  |           |  |               |  |                          |  |                        |  |               |  |                        |  |                             |  |                                    |  |                     |  |  |  |                               |  |
| E. Of the breast.                            |   |                   |  |                               |                                  |                       |                 |                     |             |               |  |               |  |  |  |                  |                           |                               |                                  |                   |                 |            |             |  |                 |  |           |  |               |  |                          |  |                        |  |               |  |                        |  |                             |  |                                    |  |                     |  |  |  |                               |  |
| F. Of the skin.                              |   |                   |  |                               |                                  |                       |                 |                     |             |               |  |               |  |  |  |                  |                           |                               |                                  |                   |                 |            |             |  |                 |  |           |  |               |  |                          |  |                        |  |               |  |                        |  |                             |  |                                    |  |                     |  |  |  |                               |  |
| G. Others.                                   |   |                   |  |                               |                                  |                       |                 |                     |             |               |  |               |  |  |  |                  |                           |                               |                                  |                   |                 |            |             |  |                 |  |           |  |               |  |                          |  |                        |  |               |  |                        |  |                             |  |                                    |  |                     |  |  |  |                               |  |
| 25. Cancer.                                  |   |                   |  |                               |                                  |                       |                 |                     |             |               |  |               |  |  |  |                  |                           |                               |                                  |                   |                 |            |             |  |                 |  |           |  |               |  |                          |  |                        |  |               |  |                        |  |                             |  |                                    |  |                     |  |  |  |                               |  |
| 26. Rheumatism.                              |   |                   |  |                               |                                  |                       |                 |                     |             |               |  |               |  |  |  |                  |                           |                               |                                  |                   |                 |            |             |  |                 |  |           |  |               |  |                          |  |                        |  |               |  |                        |  |                             |  |                                    |  |                     |  |  |  |                               |  |
| 27. Gout.                                    |   |                   |  |                               |                                  |                       |                 |                     |             |               |  |               |  |  |  |                  |                           |                               |                                  |                   |                 |            |             |  |                 |  |           |  |               |  |                          |  |                        |  |               |  |                        |  |                             |  |                                    |  |                     |  |  |  |                               |  |
| 28. Diabetes.                                |   |                   |  |                               |                                  |                       |                 |                     |             |               |  |               |  |  |  |                  |                           |                               |                                  |                   |                 |            |             |  |                 |  |           |  |               |  |                          |  |                        |  |               |  |                        |  |                             |  |                                    |  |                     |  |  |  |                               |  |
| 29. Exophthalmic goitre.                     |   |                   |  |                               |                                  |                       |                 |                     |             |               |  |               |  |  |  |                  |                           |                               |                                  |                   |                 |            |             |  |                 |  |           |  |               |  |                          |  |                        |  |               |  |                        |  |                             |  |                                    |  |                     |  |  |  |                               |  |
| 30. Addison's disease.                       |   |                   |  |                               |                                  |                       |                 |                     |             |               |  |               |  |  |  |                  |                           |                               |                                  |                   |                 |            |             |  |                 |  |           |  |               |  |                          |  |                        |  |               |  |                        |  |                             |  |                                    |  |                     |  |  |  |                               |  |
| 31. Leukæmia.                                |   |                   |  |                               |                                  |                       |                 |                     |             |               |  |               |  |  |  |                  |                           |                               |                                  |                   |                 |            |             |  |                 |  |           |  |               |  |                          |  |                        |  |               |  |                        |  |                             |  |                                    |  |                     |  |  |  |                               |  |
| 32. Anæmia, chlorosis.                       |   |                   |  |                               |                                  |                       |                 |                     |             |               |  |               |  |  |  |                  |                           |                               |                                  |                   |                 |            |             |  |                 |  |           |  |               |  |                          |  |                        |  |               |  |                        |  |                             |  |                                    |  |                     |  |  |  |                               |  |
| 33. Other general diseases.                  |   |                   |  |                               |                                  |                       |                 |                     |             |               |  |               |  |  |  |                  |                           |                               |                                  |                   |                 |            |             |  |                 |  |           |  |               |  |                          |  |                        |  |               |  |                        |  |                             |  |                                    |  |                     |  |  |  |                               |  |
| 34. Alcoholism (acute or chronic).           |   |                   |  |                               |                                  |                       |                 |                     |             |               |  |               |  |  |  |                  |                           |                               |                                  |                   |                 |            |             |  |                 |  |           |  |               |  |                          |  |                        |  |               |  |                        |  |                             |  |                                    |  |                     |  |  |  |                               |  |
| 35. Lead poisoning.                          |   |                   |  |                               |                                  |                       |                 |                     |             |               |  |               |  |  |  |                  |                           |                               |                                  |                   |                 |            |             |  |                 |  |           |  |               |  |                          |  |                        |  |               |  |                        |  |                             |  |                                    |  |                     |  |  |  |                               |  |
| 36. Other chronic poisonings of occupations. |   |                   |  |                               |                                  |                       |                 |                     |             |               |  |               |  |  |  |                  |                           |                               |                                  |                   |                 |            |             |  |                 |  |           |  |               |  |                          |  |                        |  |               |  |                        |  |                             |  |                                    |  |                     |  |  |  |                               |  |
| 37. Other chronic poisonings.                |   |                   |  |                               |                                  |                       |                 |                     |             |               |  |               |  |  |  |                  |                           |                               |                                  |                   |                 |            |             |  |                 |  |           |  |               |  |                          |  |                        |  |               |  |                        |  |                             |  |                                    |  |                     |  |  |  |                               |  |

## Class II.—DISEASES OF THE NERVOUS SYSTEM AND OF THE ORGANS OF SENSE. (b)

- |   |   |              |               |            |
|---|---|--------------|---------------|------------|
| 38. Encephalitis.                       | 48. Non-puerperal eclampsia.  |              |               |            |
| 39. Simple meningitis.                  | 49. Convulsions of infants.   |              |               |            |
| 40. Progressive locomotor ataxia.       | 50. Tetanus.  |              |               |            |
| 41. Progressive muscular atrophy.       | 51. Chorea.   |              |               |            |
| 42. Cerebral hæmorrhage and congestion. | 52. Other diseases of the nervous system.   |              |               |            |
| 43. Softening of the brain.             | <table border="0"> <tr> <td>A. Hysteria.</td> </tr> <tr> <td>B. Neuralgia.</td> </tr> <tr> <td>C. Others.</td> </tr> </table> | A. Hysteria. | B. Neuralgia. | C. Others. |
| A. Hysteria.                            |   |              |               |            |
| B. Neuralgia.                           |   |              |               |            |
| C. Others.                              |   |              |               |            |
| 44. Paralysis without indicated cause.  |   |              |               |            |
| 45. General paralysis.                  | 53. Diseases of the eyes.   |              |               |            |
| 46. Other forms of insanity.            | 54. Diseases of the ears.   |              |               |            |
| 47. Epilepsy.                           |   |              |               |            |

(a) We have not placed puerperal fever with other infectious diseases, since it would be necessary to place puerperal phlebitis, phlegmasia dolens, etc., in the same class, diseases which most likely are also infectious diseases. All these diseases are inseparable from the other puerperal diseases with which they are too often confounded, under the general term "sequelæ of childbirth," it is then important to make for all the diseases of pregnancy and childbirth a special class.

(b) When epidemic cerebro-spinal meningitis prevails, it will be necessary to double title *meningitis*.

We must insist upon maintaining the title *paralysis without known cause*. In fact, paralysis is often stated as a cause of death when it can be only a symptom. But the physician is often unable to decide whether the paralysis is due to apoplexy or to cerebral softening.

The title 'Convulsions' exists in all existing nomenclatures, and it is always well filled because of the difficulty in locating the disease which has caused the convulsions. This title should, therefore, be retained.

## Class III.—DISEASES OF THE CIRCULATORY SYSTEM. (c)

- |  |  |
|--|--|
| 55. Pericarditis.                                      | 62. Phlebitis and other diseases of the veins. |
| 56. Endocarditis.                                      | 63. Lymphangitis.                              |
| 57. Organic diseases of the heart.                     | 64. Other diseases of the lymphatic system.    |
| 58. Angina pectoris.                                   | 65. Hæmorrhage.                                |
| 59. Diseases of the arteries, atheroma, aneurism, etc. | 66. Other diseases of the circulatory system.  |
| 60. Embolism.  |  |
| 61. Varices, varicose ulcers, hæmorrhoids.             |  |

## Class IV.—DISEASES OF THE RESPIRATORY SYSTEM. (d)

- |  |  |
|--|--|
| 67. Diseases of the nasal fossæ.             | 73. Pleurisy.  |
| 68. Diseases of the larynx and thyroid body. | 74. Congestion and apoplexy of lungs.                        |
| 69. Acute bronchitis.                        | 75. Gangrene of lungs.                                       |
| 70. Chronic bronchitis.                      | 76. Asthma and pulmonary emphysema.                          |
| 71. Broncho-pneumonia.                       | 77. Other diseases of respiratory system (phtisis excepted). |
| 72. Pneumonia.                               |  |

## Class V.—DISEASES OF THE DIGESTIVE SYSTEM. (e)

- |  |   |   |
|--|---|---|
| 78. Diseases of the mouth and adnexa.                |   |   |
| 79. Diseases of the pharynx and œsophagus.           | 87. Other diseases of the intestines.   | { A. Other diseases of the intestines.<br>B. Diseases of the anus; faecal fistulas. |
| 80. Ulcer of stomach.                                |   |   |
| 81. Other diseases of the stomach (cancer excepted). | 88. Acute yellow atrophy of the liver (icterus).                                |   |
| 82. Infantile diarrhoea, athrepsia.                  | 89. Hydatid tumor of the liver.   |   |
| 83. Diarrhoea and enteritis.                         | 90. Cirrhosis of the liver.   |   |
| 84. Dysentery.                                       | 91. Biliary calculi.  |   |
| 85. Intestinal parasites.                            | 92. Other diseases of the liver.  |   |
| 86. Hernia, intestinal obstructions.                 | 93. Inflammatory peritonitis (non-puerperal).                                   |   |
|  | 94. Other diseases of the digestive system. (cancer and tuberculosis excepted). |   |
|  | 95. Iliac abscess.  |   |

## Class VI.—DISEASES OF THE GENITO-URINARY SYSTEM AND ADNEXA. (f)

- |  |  |   |
|--|--|---|
| 96. Acute nephritis.   | 106. Other diseases of the male genital organs.              |   |
| 97. Bright's disease.  | 107. Abscess of the pelvis.                                  |   |
| 98. Perinephritis and perinephritic abscess.                       | 108. Periuterine hæmatocele.                                 |   |
| 99. Renal calculus.  | 109. Metritis.   |   |
| 100. Other diseases of the kidneys and adnexa.                     | 110. Uterine hæmorrhage (non-puerperal)                      |   |
| 101. Vesical calculi.  | 111. Uterine tumors (non-cancerous).                         |   |
| 102. Diseases of the bladder.                                      | 112. Other diseases of the uterus.                           |   |
| 103. Diseases of the urethra.                                      | 113. Ovarian cysts and other ovarian tumors.                 |   |
| { A. Bleorrhagia (males).<br>B. Others (stricture, abscess, etc.). | 114. Other diseases of the female genital organs.            | { A. Bleorrhagia (females).<br>B. Leucorrhœa.<br>C. Others. |
|  |  |   |
| 104. Diseases of the prostate.                                     | 115. Non-puerperal diseases of the breast (cancer excepted). |   |
| 105. Diseases of the testicle and its envelopes. Orchitis.         |  |   |

(c) We do not employ the title "syncope." This word often means *sudden death without known cause*, a title which figures in Class XIV.

(d) We unite emphysema with asthma, since a careful examination is often necessary to distinguish these two diseases which, however, are quite dissimilar in their nature.

(e) When epidemic dysentery prevails, it will become necessary to double the title "dysentery."

(f) Following the example of Italy and Switzerland we have made no special title for *uræmia*, because it constitutes only a consequence of Bright's disease or of diseases of the bladder.

Class VII.—PUERPERAL CONDITION. (*g*)

- |                                |   |
|--------------------------------|---|
| 116. Accidents of pregnancy.   | 120. Puerperal metropéritonitis.              |
| 116. <i>bis.</i> Normal labor. | 121. Puerperal albuminuria and eclampsia.     |
| 117. Puerperal hæmorrhage.     | 122. Puerperal phlegmasia alba dolens.        |
| 118. Other accidents of labor. | 123. Other puerperal accidents. Sudden death. |
| 119. Puerperal septicæmia.     | 124. Puerperal diseases of the breast.        |
| { A. Puerperal septicæmia.     |   |
| { B. Puerperal phlebitis.      |   |

Class VIII.—DISEASES OF THE SKIN AND CELLULAR TISSUE. (*h*)

- |                               |   |   |
|-------------------------------|---|---|
| 125. Erysipelas.              | 129. Other diseases of the skin and adnexa (cancer excepted). | A. Soft chancre.                          |
| 126. Gangrene.                |   | B. Tinea favosa.                          |
| 127. Anthrax, carbuncle.      |   | C. Tinea tonsurans, trichophytosis.       |
| 128. Phlegmon, acute abscess. |   | D. Alopecia areata.                       |
|                               |   | E. Scabies.                               |
|                               |   | F. Other diseases of the skin and adnexa. |

Class IX.—DISEASES OF THE ORGANS OF LOCOMOTION. (*i*)

- |   |  |               |
|---|--|---------------|
| 130. Pott's disease.                    | 134. Other diseases of the joints.           | A. Arthritis. |
| 131. Cold abscess, symptomatic abscess. |  | B. Others.    |
| 132. Other diseases of bones.           | 135. Amputation.                             |               |
| 133. White swellings.                   | 136. Other diseases of organs of locomotion. |               |

(*g*) We distinguish : (1) The accidents of pregnancy ; (2) Those of delivery ; (3) Those which follow delivery. Extra-uterine pregnancy is, in our opinion, too rare a phenomenon to deserve a separate heading.

The exact limits of puerperal septicæmia have not yet been traced ; the existing tendency is to attribute to the principle of infection a great number of accidents which were formerly believed to be independent of puerperal fever. This point not being scientifically determined, statisticians should be prudent and create special titles for the more frequent of these accidents. Later, when it shall become known where they belong, it will always be possible to add together the figures which follow each of these titles. We propose, therefore, to introduce special titles for the following diseases : 1. Septicæmia ; 2. Phlebitis ; 3. Metropéritonitis ; 4. Puerperal albuminuria and eclampsia (diseases which perhaps are not identical) ; 5. Phlegmasia alba dolens ; 6. Other diseases.

It would be unfortunate not to place these titles near together, or to transfer some of them to the infectious diseases. We do not yet know, in fact, what diseases among these are of bacterial origin ; some physicians willingly apply this title to them now, and no one knows just where we shall find them in the future.

Moreover, many diagnoses are practically incomplete. Many women are registered as dead from the "accidents of childbirth," no indication being given whether death was caused by infection.

(*h*) Erysipelas, anthrax, and also phlegmon are classed to-day as infectious diseases, but since these diseases affect only the skin and its adnexa, there is no advantage in classifying them as general diseases since they are not general diseases. All the nomenclatures take this course so far as anthrax and phlegmon are concerned ; but they are less unanimous regarding erysipelas. Moreover, the figures which represent this last disease are always incomplete, since it is very often nothing but a complication of some other disease.

(*i*) Among the diseases of the bones, we have given a separate place to Potts' disease (as done in the Italian nomenclature). In our opinion it would be a mistake to classify this disease with tuberculosis, since it may happen that Potts' disease be not tuberculous.

We are compelled by the neglect of a few physicians to introduce the title "amputation." Amputation is not a disease and ought not to be considered as a cause of death, since it is on the contrary an operation designed to prevent death. But it often happens that medical men, instead of stating definitely the disease or lesion which has made the amputation necessary, write simply the word "amputation."

## Class X.—MALFORMATIONS. (j)

137. Malformations.

## Class XI.—INFANTILE.

137. *bis.* Newly-born; foundlings, dis- 139. Neglect.  
 charged from hospital without hav- 140. Other diseases peculiar to infancy.  
 ing been sick.
138. Congenital debility, icterus and  
 sclerema.

## Class XII.—OLD AGE.

141. Senile debility,

## Class XIII.—EXTERNAL VIOLENCE. (k)

- |  |   |                                       |   |               |                             |
|--|---|---------------------------------------|---|---------------|-----------------------------|
| 142. Suicide or<br>attempt<br>at sui-<br>cide. | { | A. By poison.                         | 144. Sprains and dislo-                                 | {             | A. Sprains.                 |
|  |   | B. By asphyxia.                       | cations.  |               | B. Dislocations.            |
|  |   | C. By strangulation.                  | 145. Other accidental injuries.                         | {             | A. By fire.                 |
|  |   | D. By firearms.                       | 146. Burns.   |               | B. By corrosive substances. |
|  |   | E. By cutting instru-<br>ments.       | 147. Sunstroke and freezing.                            |               | {                           |
|  |   | F. By drowning.                       | 148. Accidental drowning.                               | B. Inanition. |                             |
|  |   | G. By precipitation from<br>a height. | 149. Overwork and<br>inanition.                         | {             | A. Overwork.                |
|  |   | H. By crushing.                       | 150. Inhalation of noxious gases (suicide<br>excepted). |               | B. Inanition.               |
|  |   | I. Others.                            | 151. Other accidental poisoning.                        |               |                             |
143. Fractures.
152. Other external violence.

## Class XIV.—ILL-DEFINED DISEASES. (l)

- |  |   |
|--|---|
| 153. Exhaustion, cachexia.                   | 157. Sudden death.                      |
| 154. Fever. { A. <i>Embarras gastrique</i> . | 158. Abdominal tumor.                   |
| { B. Inflammatory fever.                     | 159. Other tumors.                      |
| 155. Dropsy.                                 | 160. "Plaie."                           |
| 156. Asphyxia; cyanosis.                     | 161. Unknown or not specified diseases. |

(j) Since malformations, even though congenital, may cause death at later periods of life they should be placed in a separate class.

(k) The different modes of death by violence are many in number; we have selected those which are the most frequent, and have presented titles which are sufficiently comprehensive, so that any one may, without difficulty, classify any unforeseen cases which may occur.

(l) It often happens that the physician cannot state definitely the cause of death, and is compelled to give as the cause some symptoms which are common to several different diseases. This frequently happens, for example, in cases of sudden death. It may be apoplexy, it may be the rupture of an aneurism, it may be angina pectoris or possibly some other disease which has caused death. The physician cannot ascertain the cause, and therefore writes upon the certificate the words "sudden death." Statistics would deprive us of important information if these deaths were to be confounded with those from "unknown or unspecified causes." Titles should therefore be given to them.

[CANADIAN REVISION COMMISSION'S NOTE.—In the above pages, only the *long nomenclature* has been reproduced, as it is impossible to revise the two abridged nomenclatures, which are a *résumé* of the long one, without an agreement being previously reached regarding the main nomenclature. In regard to Bertillon's annotation of the nomenclature, it has been possible to reprint only the most important parts.]

## DR. J. CLARENCE WEBSTER.

We have to chronicle with mingled feelings of pleasure and regret the early departure from our midst of Dr. J. Clarence Webster, Lecturer in Gynæcology in McGill University. While it is gratifying to know that his ability has led to his appointment as Professor of Obstetrics and Gynæcology in the University of Chicago, his genial presence and his scholarly attainments have, in a few years, attached him very closely to the profession in this city and his fellow teachers at McGill.

Dr. Webster has had a distinguished career. He was educated at Mount Allison University, where he took his degree of B.A. in 1882. He graduated M.B. at Edinburgh University in 1888, receiving the degree of M.D. in 1891. He was subsequently made a Fellow of the Royal College of Physicians, Edinburgh, and a Fellow of the Royal Society, Edinburgh. He has also had a Continental training in Leipzig, where he worked under Sanger, and also in Berlin. In 1889, he became Assistant Lecturer on Obstetrics in the Edinburgh School of Medicine. In 1890 he was appointed First Assistant in the Midwifery Department of the University of Edinburgh, as well as private assistant to Prof. A. R. Simpson.

Dr. Webster has taken a number of research scholarships and is a member of several foreign medical societies. He is the author of a text-book on gynæcology, a monograph on extra-uterine pregnancy, and numerous other medical works. Since 1897 he has been connected with McGill University. It is a pleasure to recognise that one of our number has, by his labours, gained for himself a reputation in both continents, and while we admit sorrowfully that the University of Chicago offers to him in position, emoluments and opportunities, inducements with which we in Montreal cannot vie, we feel a jealous bitterness that we cannot retain so brilliant a colleague, and he will perhaps forgive us if we express the hope that he may find the stress and strain of Chicago so inimical to research and quiet thought, that we may at not too distant a date see him back in our midst. We extend to Dr. Webster our congratulations on his appointment to such an important position, and our best wishes for his success in his new sphere of work.

---

NOTE.

Owing to an error on the part of the printer in making up the forms for the April number of THE JOURNAL, pages 313 and 314 were transposed, also the three first lines on page 313. Readers interested in the editorial on "Glycerinated Vaccine" will therefore read from line 3 on page 313 to page 314: and in the editorial "Prescribing Opticians" read from foot of page 14 to third line of page 313, and from page 313 to 315.

THE EDITORS can only express regret if their readers have been inconvenienced through this error on the part of their printers.

CONGRÈS PÉRIODIQUE INTERNATIONALE DE GYNÉCOLOGIE  
ET D'OBSTÉTRIQUE.

3e SECTION—AMSTERDAM—AOUT 1899.

Amsterdam, September 1898.

Dear Sir,

We have the honour of soliciting your presence at the 3d Intern. Congress for Gynæcology and Obstetrics to take place at Amsterdam from the 8th to the 12th of August 1899 under the patronage of the Minister of the Interior.

The leading questions for discussion will be the following:

1. The surgical treatment of fibro-myoma.
2. The relative value of antiseptics and improved technique for the actual results in Gynæcological Surgery.
3. The influence of posture on the form and dimensions of the pelvis.
4. The indication for Cæsarean section compared to that for symphysectomy, craniotomy and premature induction of labour.

We have succeeded in obtaining the valuable concurrence as reporters of Drs. Doyen, Howard Kelly and Schauta who will treat the first question; Drs. Bumm, Richelot and Lawson Tait the second; Drs. Ronnaire, Pinzani and Walcher the third; and Drs. Leopold, Pinard, Pestalozza and Fancourt Barnes the fourth.

We propose sending the reports with their translations in the official languages to all the members, a month before the opening of the Congress. As regards private communications, preference will be given to those bearing upon the above mentioned leading questions. Time will also be allowed sufficient for any demonstrations kindly afforded by the members.

The official languages are: English, French, German and Italian.

We venture to urge our request that you will honour the Congress with your presence and, by communicating your experience, insure scientific results as satisfactory as those obtained by the previous Congresses of Brussels and Geneva.

The Committee :

H. TREUB,  
President.

J. VEIT,  
Vice-President.

G. C. NIJHOFF,  
J. P. BARNOUW,  
Treasurer.

M. A. MENDES DE LEON,  
Secretary.

## NEW BOOKS, ETC., RECEIVED AND NOTED.

Progressive Medicine. A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences.—Edited by H. A. Hare, M. D. Vol. I., March, 1899. Lea Brothers and Co., Philadelphia and New York, 1899.

On Principles which govern Treatment in Diseases and Disorders of the Heart.—The Lumleian Lectures delivered before the Royal College of Physicians, London, by Sir Richard Douglas Powell, Bart., M. D. (London). London, H. K. Lewis, 1899.

Diseases of the Eye.—A handbook of Ophthalmic Practice for Students and Practitioners. By G. E. de Schweinitz, A. M., M. D. Third Edition, Revised and Enlarged. Philadelphia, W. B. Saunders, 1899.

La Vie de Joseph-François Perrault, un des fondateurs et principaux promoteurs de la Société Littéraire et Historique de Québec.—Par P. B. Casgrain. Québec, C. Darveau, 1899.

Transactions of the Literary and Historical Society of Quebec No. 22.—Sessions of 1892 to 1898. Québec, Raoul Renault, Publisher, 1898.

An American Text-Book of Diseases of the Eye, Ear, Nose, and Throat. Edited by G. E. de Schweinitz, A. M., M. D. and B. A. Randall, A. M., M. D., Ph. D. Philadelphia, W. B. Saunders, 1899.

Nervous and Mental Diseases. By Archibald Church, M. D., and Frederick Peterson, M. D. Philadelphia, W. B. Saunders, 1899.

Sajous Cyclopaedia of Practical Medicine Volumes II. and III.—The F. A. Davis Company, Philadelphia, 1899.

The Pathology and Treatment of Sexual Impotence.—By Victor G. Veckl, M. D. From the Author's second German edition, Revised and Rewritten. Philadelphia, W. B. Saunders, 1899.

Saunders Medical Hand-Atlases.—Atlas of the External Diseases of the Eye, including a Brief Treatise on the Pathology and Treatment. By Prof. Dr. O. Haab. Authorised Translation from the German. Edited by G. E. de Schweinitz, M. D. Philadelphia, W. B. Saunders, 1899.

Practical Materia Medica for Nurses.—By Emily A. M. Stoney, Philadelphia, W. B. Saunders, 1899.

The Exploration of the Urethra and Bladder.—By M. Tuchmann, M. R. C. S. Eng., M. D. Wurzburg. London H. K. Lewis, 1899.

Transactions of the American Dermatological Association at its Twenty-Second Annual Meeting.—Official Report of the Proceedings by John T. Bowen, M. D., Secretary. Concord, N. H., The Rumford Press, 1899.

The Progress of Rhino-Laryngology.—By W. Schenpegrell, A. M., M. D. Reprinted from The Laryngoscope, January, 1899.

Annual Reports of the Bureau of Health of the City of Denver for the Years 1897-'98.

A Rapid and Successful Treatment of Chronic Ulcers of the Leg.—By A. H. Ohmann-Dumesnil, A. M., M. D. Reprinted from the St. Louis Medical and Surgical Journal, March, 1899.

Corpulence and Fatty Heart.—By Thomas E. Satterthwaite, M. D. Reprinted from the Pots-Graduate, March, 1899.

Pericardial Diseases, Illustrated Clinically. By Thomas E. Satterthwaite, M. D. Reprinted from the Medical Times, April, 1899.

Clinical Report from the Winyah Sanitarium.—By Karl von Ruck, B. S., M. D. Ashville, N. C., 1899.

Medical Education.—By Leo M. Crafts, B. L., M. D. (Harv.) Reprint from the North-Western Lancet, September 15th, 1898.

Growing Children. Their Clothes and Deformity.—By E. Noble Smith. London, Smith Elder and Co., 1899.

The Physician in Practice.—By Leo M. Crafts, B. L., M. D. Reprinted from the Journal of the American Medical Association, May 28th, 1898.