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ORIGINAL ARTICLES.

AN HISTORICAL SKETCH OF CANADIAN MEDICAL EDUCATION.

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As the Province of Ontario was a wilderness at the time of the American revolution—much of it remaining in that condition for long afterwards—although now, the most populous and wealthy province of Canada, it is perhaps well to consider first the past history and present position of Medical Education within its borders.

During the last few years of the 18th century its population was very scanty, and the mode of living exceedingly primitive. Its people spent most of their time out of doors, engaged in the hard labour of clearing the dense primeval forest. As a rule they were as healthy as plenty of pure air and hard work could make them. Their need of medical aid was therefore neither frequent nor urgent, unless in case of accident. Some of the military medical officers whose regiments had served in Canada found their way to Ontario, which was then the far west. In course of time other doctors came over from Great Britain, and some from the recently formed neighbouring Republic, who met to some extent the medical and surgical wants of the early settlers. Doubtless, however, there were many sad cases of much needless suffering, and the loss of many valuable lives from the scarcity of medical men in those long past days, when many miles had often to be travelled over bad roads, and not seldom over mere paths, before medical help of any kind could be reached or given.

Necessity made the first settlers very self-reliant. Men, women, and children alike picked up what knowledge was obtainable from any of the old medical works they came across—very few and far between—and they even gathered what information they could from the Indians who in their own rude way did what was possible to relieve suffering. As the population increased, doctors, some well educated and others who knew but little, now and then came into the Province to practise. But for many years, and especially during the first half of the present century, the thinly settled parts of the Province were infested with ignorant

quacks who preyed upon the simplicity and credulity of the people under circumstances in which it was difficult, or impossible, to get more reliable assistance.

The earliest Medical Act affecting Canada was one passed in 1788 by the British Parliament. It provided that no one should practise Physic, Surgery, or Midwifery within the Province of Quebec (which then included all Ontario and a great deal more), or in the towns of Quebec and Montreal, without a license. Under this Act, the selling and distributing of medicine by retail, or prescribing for sick persons for gain without a license, was prohibited. The license was obtained by passing an examination conducted by capable persons appointed by the Governor or the Commander-in-Chief of the Province. All licenses granted to practise Physic, Surgery, Midwifery, or Pharmacy were ordered to be registered in the office of the Clerk of the Peace nearest to where the person licensed lived. Fines of £20 for the first breach of this Act, £50 for the second, and £100 and three months' imprisonment for each subsequent offence, indicate how stringent the law was intended to be. Probably the fines were seldom levied and still more rarely collected. University graduates in Medicine, and military or naval surgeons were exempt from its provisions.

Soon after the war of 1812, the first hospital was built in York (now Toronto), of which the present splendidly equipped and excellently managed Toronto General Hospital, and the other hospitals in that city, and indeed throughout the Province, may be regarded as the legitimate successors. In 1815 a Medical Act was passed for Upper Canada (now Ontario) having very similar provisions to those contained in the Act of 1788. At this time the number of medical men in the Province is said to have been about forty. The population was then small. What a contrast this presents to the present state of things with about 2,500 registered medical practitioners in Ontario!

In 1818 a new licensing Medical Act was passed. It authorized the appointment of a Board of Medical Examiners to examine all candidates for license. With a brief interval, this Board continued to exist for many years, and only finally discontinued its work when the College of Physicians and Surgeons of Ontario was called into existence in 1866. For a short time, from April, 1839, till July, 1841, it was in abeyance in consequence of the passing of an Act of the Legislature of Upper Canada incorporating the College of Physicians and Surgeons of the Province and conferring upon that body the duty of examining all applicants for license to practise medicine in the Province. This Act was disallowed by the British Government in December, 1840, on the representation of the Royal College of Surgeons of England, that it infringed the chartered rights of that college.

The Medical Board was then immediately re-appointed and resumed its duties in July, 1841. For twenty-five years longer it continued to hold its examinations regularly every three months, and did good service to the Province, its work being well and faithfully performed. Those candidates proved to be the wisest who prepared for their examinations long and carefully, for it was considered from early times to be a very good test of fitness to receive the Governor's license.

For several years before there was any regular medical school in Upper Canada—as early as during the “thirties,” Dr. John Rolph, who is deservedly known as the “Father of Medical Education” in the Province, was in the habit of receiving pupils into his house in York (now Toronto) from various parts of the country, to whom he gave a very thorough medical education—which he was exceptionally well qualified to do. Born and thoroughly educated in England, he was one of the most highly gifted of the many prominent men of that day, who in various walks of life made Upper Canada their home. Although a member of the legal profession, having been called to the bar in London, England, and a member of the Inner Temple, he was also a favourite pupil of Sir Astley Cooper, and a member of the Royal College of Surgeons of England. He loved the medical profession dearly, and was never happier nor more at home than when teaching its various branches to the young men whose good fortune it was to have so able and interesting a teacher. Some of his early pupils subsequently became distinguished, and many still occupy high positions as medical teachers and practitioners.

The Rebellion of 1837, which interfered with this work, however its occurrence may be regretted, proved to be an event which did much good to Canada in bringing about the peace, happiness, and perfect freedom she has now for many years past enjoyed. Dr. Rolph, who was a Hampden in his love of political freedom, was, as may be supposed, one of the leading reformers of the time, and sympathized with the movement in which he became more or less involved. The attempt at armed rebellion having speedily and fortunately failed, some of its promoters were arrested, and others fled the Province. Dr. Rolph was amongst the latter, and went to Rochester, U. S., where he resided and practised his profession till 1843, when the Canadian Legislature passed an act, of which he took advantage, permitting all exiles for political causes to return to Canada. Several Canadian students went to Rochester during his residence there in order to get the benefit of his excellent teaching.

Immediately upon his return to Toronto he resumed his favourite work, and formed a medical school which very shortly became famous, and did as good work in medical teaching as has ever been done in Canada. This school for many years bore the name of its respected founder. The late Dr. Joseph Workman, a man of great ability and an excellent and highly educated teacher, became, at Dr. Rolph's request, and continued for several years, his most energetic helper. The Medical School soon stood so high that its tickets were received everywhere, and its students were exceptionally successful in passing their examinations before the Medical Board. It may be interesting to recall here that when the number of students had increased so as to require more accommodation than an ordinary private house could furnish, the class-room first fitted up for them formed the end of a frame building in Dr. Rolph's yard. One part of this room had plain pine seats in it, ranged one above the other, while the table behind which Dr. Rolph and the other lecturers sat when they lectured, was the vat in use for anatomical purposes. The rest of this room was provided with dissecting tables on trestles, and this constituted the dissecting room where a great deal of good dissection was

done for a number of years. Only a thin wooden partition separated this medical college part of the building from the rest of it, in which were comfortably housed Dr. Rolph's horse and cow. So thin was this partition that while the medical students were drinking in their scientific knowledge as they listened to the lectures, or were working at their dissections, the four-legged occupants of the very adjacent stalls, who cared little and thought less about anatomy, medicine, and surgery could often be distinctly heard heartily enjoying their more substantial material aliment.

Humble as this building was, and small as such a beginning may appear when compared with the finely built and well equipped medical colleges of to-day, teaching of a very high order was given in it, and with a punctuality, earnestness, ability and fulness, not to be surpassed, and which is not now surpassed anywhere in Canada. True, since those days the study of medicine has greatly advanced—some subjects now being taught as separate departments, which were then comparatively unknown—but what at that time was considered essential to a good medical education, viz., complete instruction in anatomy, physiology, materia medica and therapeutics, including the necessary knowledge of chemistry, medicine, surgery, midwifery and diseases of women and children, was there exhaustively given. It is indeed a question whether to-day the young men studying anatomy in any of our schools are better, or in most cases even as good anatomists as were the students of those days, although the latter did all their work in so primitive a college building, and were not allowed the use of illustrated books or plates to any extent, but were obliged to study and trace out for themselves every part, great or small, of the human body, and were constantly and thoroughly examined in their work as they did it.

Dr. Rolph himself never neglected this latter essential part of a student's training. Speaking of the founding of his school in an Annual Announcement issued a good many years later he says that his School of Medicine was founded in 1843, and incorporated by Act of the Legislature in 1851, so that this school was really the first medical teaching body established in Upper Canada, and it was from the first entirely self-supporting. In the summer of 1850 a great advance was made by this medical school. Dr. Rolph, at his own expense, built a new brick building adjoining his house on Queen St. West, the north side, a few doors west of Teraulay St. The upper part of this building was reached by a stair leading direct from the street, and consisted of two large rooms, one of these being nicely fitted up as a lecture-room, and the other as a museum. The latter had on its walls, and on both sides of a special arrangement which extended from one end of the room to the other, a very large number of carefully prepared anatomical specimens—the work of industrious, painstaking students. These preparations made the museum attractive and very useful to the more studious members of the medical classes. At the same time, the old Sunday School building of Richmond St. West, on the Knox Church property, and then as now owned by that church, was rented and fitted up by Dr. Rolph as a second lecture-room. Half of this building is still standing, and may be easily seen inside a high fence, just

opposite the Methodist Book Room. Some of the medical lectures were delivered in the Queen St. lecture-room and some in that on Richmond St., and the students had a short walk and some fresh air in going from one to the other. The old dissecting-room in the yard of the Queen St. house was still used, and did good service for some time. After these changes, which in themselves indicated prosperity, the school suffered for a short time from the withdrawal of Dr. Rolph, who re-entered political life and accepted a seat in the Cabinet in 1851. He returned to his college duties with great pleasure in 1855.

The Toronto School of Medicine, as Dr. Rolph named it. In 1854, by arrangement with the Board of Victoria College, the school became the medical department of that university—it being considered that such an arrangement would be mutually advantageous. The connection of the Medical School with this institution, while adding to the prestige and influence of the latter, would enable students who desired to do so, to proceed to their degrees in medicine instead of taking only the license of the Medical Board as heretofore. In 1856 a large building, formerly used as a church on "Little Jarvis St., Yorkville" (now No. 10 Bismarck Avenue), was purchased and fitted up for the newly-formed "medical department," and for a good many years afforded ample accommodation and every facility for medical teaching in the many subjects students have to study.

Some difference in connection with the school arose between Dr. Rolph, who was the Dean of the Faculty, and his colleagues, soon after these changes had taken place. Most of his colleagues had been educated in medicine chiefly, and some solely, by himself. The Victoria College Board supported Dr. Rolph on its being appealed to in the matter. On this account his colleagues resigned in a body just the day after the opening of the session of 1856-7. The University authorities promptly accepted the resignations which had been sent in, and directed the Dean, as the responsible head of the department, to fill the places of the gentlemen who had retired, as well and as speedily as he could. Although placed in an exceedingly difficult position, the Dean proved himself quite equal to the occasion. During the little more than two weeks it took him to complete new arrangements for carrying on the work of the session, Dr. Rolph alone, kept everything going on in the college. He lectured during this period four or five times every day on the various subjects to the entire satisfaction of the students, who, with hardly an exception, stood by their able teacher and Dean.

The high character of the Dean's teaching during this time made it even more difficult, than it would otherwise have proved, for the new professors whom he called to his aid, and appointed to fill the vacancies. At this time the writer was appointed Professor of *Materia Medica* and *Therapeutics*, to which chair the duties of another were very soon added, viz., those of *Midwifery* and *Diseases of Women and Children*; a large burden with which to begin, with no special preparation, the responsible duties of medical teaching. With further and very willingly rendered help, the session was successfully completed.

Throughout Dr. Rolph's Deanship, which lasted till 1870, this Medical School was singularly prosperous. He at first continued to use the

name as advertised when the arrangement with Victoria College was first entered into, which was "The Toronto School of Medicine—the Medical Department of Victoria College." The professors who had resigned, as they constituted a majority of the members of the Corporation of the "Toronto School of Medicine," lost no time in renting a building from the University of Toronto, in which they established themselves under the old name of "The Toronto School of Medicine." They soon applied for an injunction to restrain Victoria College and Dr. Rolph from continuing to use the name of "The Toronto School of Medicine." The decision of the Court was adverse to the Victoria College and Dr. Rolph (who acted as his own counsel), and the injunction was granted on the ground that, as "The Toronto School of Medicine" was a corporate body, no arrangement such as that alleged to have been made by "The Toronto School of Medicine" with Victoria College could be legally entered into without an Act of the Legislature authorizing the School to make such an arrangement, and that, as this had not been done, the arrangement made was legally null and void. Unquestionably neither of the parties interested had thought of such a thing being necessary when the arrangement was entered into.

This decision was of no moment so far as Victoria College and Dr. Rolph were concerned. The students and the general public knew well that "Rolph's School," as it was called, was wherever Dr. Rolph was teaching, and the Medical Department of Victoria was thereafter advertised as such, with the addition of the words, "Commonly known as Rolph's School," which answered every purpose. From year to year, with the Dean at its head, this Medical Department steadily grew in public favour—year by year, and was for years the most largely attended Medical College in Canada. At length in 1870, having become somewhat feeble from age (being then in his 78th year) he resigned his position. His resignation was sent in just when it was, because some of his colleagues thought it right, notwithstanding his decided wishes to the contrary, that an "Assistant Dean" should be appointed, and the College Board saw fit to carry this recommendation into effect, upon which the venerable Dean forthwith resigned. The writer, whose views were in full sympathy with those of Dr. Rolph, also resigned at the same time.

The Medical Faculty of Victoria, as then constituted, never recovered from the shock it received by the retirement of its honoured head, and of the other Professors who either retired with the Dean, or soon afterwards. It came to an end during the session of 1874-5. About three years before this time, the Faculty had received permission to sell the Yorkville College building, and had obtained a lot and erected a new building on Gerrard Street, near the General Hospital. The Faculty soon after this resigned, and, this new building came to be occupied by the Toronto School of Medicine which carried on its school there till 1887, when, having joined the Toronto University as its Medical Faculty it ceased to teach as a separate body. Toronto University's Medical Faculty now (1900) continues to use this building for final medical teaching purposes; its primary work being done in the buildings in the Queen's Park. The Toronto School of Medicine, although its charter is in abeyance, contin-

ues to send a representative to the Medical Council, although it has not carried on a Medical School in its own name since 1887. It also sends a representative to the Senate of the University of Toronto, which it joined thirteen years ago and of which some of its surviving members still form a part of the Medical Faculty. The old school corporation therefore still legally exists.

During the fourteen years ending in 1870 this School and the Medical Department of Victoria under Dr. Rolph were the two rival Medical Institutions in Toronto. The Toronto School was in affiliation with Toronto University, as was also Dr. Rolph's Victoria School. The students of the latter graduated for the most part at Victoria University. In time many of the Toronto School Teachers became members of the Government Medical Board, of which Dr. Rolph was also a member, and a good deal of rivalry was not seldom manifested at its quarterly meetings. In course of time the Toronto School obtained power from the legislature to grant certificates which were equivalent to the Governor's license. Thus for some years while a number of the Toronto School students graduated at Toronto University, some went up before the Board for license, and others obtained the certificate of the School, after examination by its teachers. In 1866, however, great changes took place. In that year Dr. Parker's Bill was passed, which established a Medical Council. This body was further and more perfectly established by the subsequent Act of 1874 as mentioned in the later part of this sketch. When, in 1875, the Toronto School occupied the building erected by Victoria Faculty, on Gerrard Street, it became affiliated also with Victoria University, and its students took their degrees, some from Victoria and some from Toronto University, and some took both degrees.

In the early "seventies" Trinity Medical School, whose restoration and progress is given further on in this article, was in full blast. For some years it and Toronto School were keen but not unfriendly rivals. In 1874, however, the permanent establishment of a Medical Council and a Central Board of Examiners placed the various teaching and examining Medical bodies of Ontario exactly in the same position as regards obtaining a License to practise in Ontario, which the Medical Council alone has the power to grant after full examination. This has had the good result of largely depriving all rivalries which exist, of much of that bitterness which cannot be too strongly deprecated.

The Toronto University Medical Department. In 1844 the Medical Faculty of King's College (now the University of Toronto) had been first constituted. The building in which the lectures were first delivered was an unpretending frame one, close to the west wing of the old Legislative buildings on Front Street. Further accommodation was provided for the Faculty subsequently in these buildings as it came to be required. But at the first session the attendance was very small, consisting of two, or at the most three, matriculated students. But it increased from year to year. The Faculty consisted of Professors Gwynne, King, Beaumont, Herrick, Nicol and Sullivan, all well-known and highly respected Medical men in their day, who were considered good teachers of the branches they respectively taught. Each of the Professors was paid an annual salary

from the University funds ranging from £200 to £250 (\$800 to \$1000). The salary of one Professor, whose duties were lighter than that of his colleagues, was only £100 (\$400 Halifax currency) a year.

The Medical Faculty continued in operation and the attendance of students became larger as the years went on till 1853, when a change was made in the University Act under which Medicine and Law ceased to be taught in the University. This decision was reached by the Legislature of Canada, which had before it the experience of a good many years on which to form a judgment, and after the most careful investigation of the entire question as to the teaching of Law and Medicine by a State University, at very considerable cost to the public, this vote was given by the Legislature, all but unanimously—there being only two dissentients. The view held by the Legislature being that "State Institutions ought not to train men for the lucrative professions of Law and Medicine at the public expense, but should leave this to be done by private enterprise, that is, to self-supporting Institutions." Those who desire to enter such professions were properly supposed by the Members of the House, to be quite able to pay adequate fees for their training.

It was provided by the University Act of 1853 that candidates for degrees in Medicine and Law should be examined by examiners appointed annually by the University for that purpose. The chief reason why so few of the students, taught by the University Medical Faculty prior to 1853, took their degrees in Medicine at the University was the fact that as a general rule they went up before the old Medical Board of Upper Canada, whose license gave as full authority to practise as a University degree, while the latter was a good deal more costly. In 1887 a Medical Faculty was restored to the University by the Ontario Legislature (No. 149, 1st Session 6th Legislature, 50 Vic., 1887). The chairs were filled largely by the Faculty of the Toronto School of Medicine. Up to two or three years ago the members of the present University Medical Faculty were appointed every five years, and the Senate of the University is now its supreme governing body. The appointments on the Medical Faculty are not now limited as to time.

The Trinity School of Medicine. In June, 1850, Dr. Hodder and Dr. Bovell, after having carefully considered the subject, decided that the time was opportune to organize a new Medical School. They decided to call it the Upper Canada School of Medicine, and associated with themselves as its Medical Faculty, Drs. Badgley, Bethune, Hallowell and Melville. In November of the same year this Faculty tendered its services to the Bishop of Toronto, the Right Rev. Dr. Strachan, who had just returned from England, as the Medical Faculty of Trinity College, which latter Institution was being founded by His Lordship. The offer made was gratefully accepted, and on Nov. 7 the first session of the new Medical Department was formally opened in the Hall of the Mechanics' Institute, Toronto, with introductory lectures by the respective Professors. A large house on the west side of Spadina Avenue just north of Queen Street was fitted up for Medical teaching purposes, and there the first winter's course of lectures was delivered. This Medical School made from the first a very favorable impression from the popularity and ability of its

well-known Professors. Its success was great, and increased from session to session, but it was unfortunately destined to be comparatively short lived, as, owing to circumstances over which the Faculty had no control whatever, and which could not occur now, all the Professors resigned in 1856.

After the lapse of fifteen years, the Medical Faculty was re-established in the spring of 1871, free this time from the danger of a sudden collapse which had befallen the former Faculty, for it was established on a much broader and more liberal basis. The time chosen for the restoration proved to be most fortunate. Dr. Rolph and the writer, and very shortly afterwards Dr. Fulton, had withdrawn from Victoria College. Drs. Hodder, Bethune and Hallowell, members of the former Faculty, were still vigorous and glad to co-operate in the restoration of the Faculty in which years before they had taken so much pride, and had done such good work. There appeared to be a possibility of also securing Dr. Bovell's valuable assistance, although that gentleman had some years before gone into the Church, and was living in the West Indies. Dr. Beaumont, formerly Professor of Surgery in the University of Toronto, also agreed to accept a Professorship, although his health never admitted of his entering upon its duties. The following list of teachers is given in the Calendar for the winter session of 1871-2: Dr. Hodder, Dean, Obstetrics; Dr. Beaumont, Surgery; Dr. Bethune, Anatomy; Dr. Hallowell, *Materia Medica*; Dr. Geikie, Medicine; Dr. Fulton, Physiology; Dr. Covernton, Pathology; Dr. D. McLarty, Assistant in Surgery; Dr. Kennedy, Medical Jurisprudence; Dr. A. J. Johnston, Demonstrator of Anatomy and Surgical Anatomy. Chemistry and Botany were to be taught by the Professors at Trinity College.

When the time came for opening the session, Dr. Bethune had to teach Surgery, for the reason given above. He taught Anatomy as well, without assistance, for a time. Dr. H. Robertson was subsequently appointed to teach Anatomy, and Professor Ellis to teach Chemistry and Dr. C. W. R. Biggar, Esq., M.A., to teach Botany. Of the original Faculty Drs. Hodder, Hallowell, Bethune, Beaumont, Fulton, Robertson and Kennedy have since died, and Dr. Geikie and Dr. J. Algonon Temple are still (1900) in charge of their professorial duties. In April, 1871, soon after being constituted, the Faculty announced that examinations would be held at Trinity University in April of that year, at which candidates for the primary and final examinations might present themselves. A large number did so. This first graduating class numbered thirty. The first winter session opened with a good attendance, fifty-seven having entered. A building on Spruce Street had been erected during the summer, of good size and arranged in every way for Medical teaching purposes. The beginning of the School was considered as most encouraging, and its prosperity has been continuous from then till now.

In 1877, the Ontario Government, after much importuning, at length sanctioned a change long urged upon it by the Senate of the University of Toronto in the terms of the affiliation of all Medical teaching bodies with that institution. Up to that date, all of these in Upper or in Lower Canada, whether forming part of other Universities or not, were affiliated with the Provincial University by Statute. The chief change made in 1877

was, that thereafter no Medical teaching body which formed part of another University could continue in affiliation. Some of the Medical students of Trinity had gone up for examination to Toronto University, as was their right, and had succeeded in winning some gold and silver medals. It was said and believed by some at the time, that the change was sought for in order to prevent further competition of this kind in future. This action proved to be a very good thing for Trinity. It resulted in the Faculty applying for, with the consent of Trinity University, and obtaining, a special Act of Incorporation as an entirely independent Medical School under the name of Trinity Medical School (1877, Ontario Legislature). This Act gave the School power to hold property; to conduct Medical teaching; to appoint officers, Professors and Lecturers; to hold examinations and award honours. It gave it the right to affiliate "with any University or Universities," and all other privileges enjoyed by any other Medical School in Ontario, including representation on the Medical Council, and on the Medical Council's Board of Examiners.

The Act was afterwards amended by changing the name of the School to "Trinity Medical College." It occupies still the building in which it began to work, although this has been, at its own expense, largely added to as circumstances required from year to year. Its success has been pronounced. The annual attendance at its various classes continued for years at about from 250 to 300 students from all parts of Canada, the United States, and other countries. It is entirely self-sustaining, and never did better work than now. In the same year in which its Act was amended (1887) it was invited to join the Toronto School of Medicine, and leaving its independent charter in abeyance as that School had done, to become part of the University of Toronto when the Faculty of Medicine was restored to that institution. The invitation was unanimously declined, as the College preferred to remain under its own charter, as an independent body.

The Kingston Medical Faculty. For a brief outline of the history of the Medical Faculty of Queen's University, Kingston, I am indebted to a speech delivered by Dr. Fife Fowler, Dean of that Medical institution in Kingston in December, 1896. Early in the year 1854 the School seems to have been first formed under somewhat remarkable circumstances. A petition headed by Robert Douglas, a noble specimen of nature's gentlemen, was presented to Queen's College and the Medical profession of Kingston, praying them to establish a Medical Faculty in Kingston. The University responded favourably and promised all the aid and accommodation it could spare. It gave permission to the new Medical Faculty to retain all graduation and registration fees, in full confidence that the best would be done to advance the cause of higher education, while at the same time entailing no financial burdens on the University."

The Government of Canada, on application being made, and through the late Sir John A. Macdonald who was a staunch friend of the College, gave an annual grant to the Medical School at Kingston, absolutely refusing to give it to the University. By the receipt of this grant the Medical Faculty was enabled to erect the commodious building it now occupies. The Faculty as at first constituted was as follows: James

Sampson, M.D., Professor of Clinical Medicine and Surgery, and President of the Faculty; John R. Dickson, M.D., Professor of the principles and practice of Surgery; Horatio Yates, M.D., Professor of principles and practice of Medicine; William Hayward, M.R.C.S., England, Professor of Midwifery and Diseases of Women and Children; Fife Fowler, M.D., L. R. C. S., Edin., Professor of *Materia Medica* and Pharmacy, and last, although always first, John Stewart, L. R. C. S., Edin., Professor of Anatomy, and Secretary of the Faculty. Queen's Medical Faculty continues to prosper as the Medical Faculty of Queen's University, Kingston, and has many good men in the Medical profession.

The London Medical Faculty. In 1878 Bishop Hellmuth obtained the charter for the Western University. He approached several Medical men in London, Ontario, on the subject of forming a Medical Faculty, and in 1880 a meeting was held to discuss the matter, but nothing was done till 1882 when the Faculty was organized as follows: Dr. C. G. Moore, Dean; with Drs J. M. Fraser, Bucke, Eccles, Arnott, J. S. Niven, W. Waugh, J. Wishart, W. H. Moorehouse, and J. A. Stevenson (Registrar). On the 1st of January following the class numbered five. In the year 1896-7 seventy were in attendance. The Faculty has been greatly enlarged and considerably changed since it began its work. The present Dean is Dr. W. H. Moorehouse, an old graduate of Trinity, to whom I am indebted for these facts. The success of this College so far has been quite encouraging.

The Ontario Medical College for Women. This is now the only one of its kind in Canada. It was established in Toronto in 1882, mainly through the persistent efforts of Dr. Michael Barrett, who was appointed its first Dean. In 1894 it was placed upon a more permanent basis, a good College building having been erected for its accommodation. Its name too was duly authorized by law. During the first session it had but two students. It is now, after fifteen years, well equipped and has a list of fifty graduates and sixty registered students. It is affiliated with Trinity University and with the University of Toronto, and is entirely self-sustaining.

McGill University Medical Faculty. Turning to the Province of Quebec we find that the McGill University Medical Department had, like all the Ontario Colleges, a very humble beginning. In 1822 four of the members of the acting staff of the Montreal General Hospital, Drs. Robertson, Caldwell, Holmes, and Stephenson, having talked over the matter together, considered it very desirable, indeed imperatively necessary, that there should be a School of Medicine established in Montreal. They thought that it would be well to take for its model the Medical Faculty of Edinburgh University, and have it connected with the Montreal General Hospital, as that of Edinburgh is with the Royal Infirmary. In accordance with this plan the Montreal Medical Institution was organized in 1824 in a small building which stood on part of the present site of the Bank of Montreal. The first class consisted of twenty-five students, and the four gentlemen just named did the entire work of the winter session. These energetic men, who did all the teaching and did it well for years, found it up-hill work; however, they secured the recog-

nition of their School in Edinburgh, which was one decided advantage. In 1829-30 it began the session for the first time as "the Medical Faculty of McGill University" with an attendance of thirty students. Although for years its growth was hardly perceptible, yet as part of a chartered University, it worked its way under great difficulties.

As in Upper Canada, so in the Lower Province (now Quebec), the Rebellion interfered a great deal with Medical education. So much was this the case that the McGill Faculty had to close its doors for three years. In 1839-40 with a class of twenty-eight, two smaller than the class of ten years before, it resumed active work and soon obtained full recognition in Great Britain. Death, by the year 1844, had left only one of the four original promoters of the School—Dr. Holmes. The best successors who could be found were appointed in place of those who had passed away, and the Faculty was strengthened by many additions. In 1851 a good building was erected on Cote Street, and accommodated the Medical classes very well, giving the School the advantage of a more central position than it had heretofore occupied. There it remained for twenty-one years. Dr. Holmes was the first Dean of the Faculty, and was appointed to that position in 1854. By 1866 the attendance had increased to 184, and in 1896-7 had reached the high figures of 400 students. The growth of this department in recent years and its ample endowment by private beneficence is well known to all interested in Medical education. The success attained by it is the reward of much devotion to duty, and great energy in the prosecution of the work during many years, when the toil was very great, and the remuneration of the toilers exceedingly small.

(Concluded in the February issue.)

A CASE OF TUBERCULAR MENINGITIS WITH RECOVERY.

Reported by DR. P. L. SCOTT from service of DR. J. T. FOTHERINGHAM, in Hospital for Sick Children, Toronto.

N. D.—Admitted May 14th, 1900; age when admitted, 3 years, 3 months; temperature, $99\frac{1}{2}$; pulse, 118; respiration, 28.

Family History.—Father, mother, four brothers and sisters, living and healthy.

Previous History.—Pneumonia when a year old. Had measles two months before admission, general health had not been good for a year past. Complained of pains in the legs and especially in the left hip; no history of lameness could be obtained.

Present illness.—About May 1st patient was struck by a stone on the side of the head but seemed none the worse for the blow. Ten days later he complained of pains in his legs and of feeling very tired. Next day, May 11th, he complained of frontal headache and seemed feverish and drowsy. On May 12th it was noticed that his head was retracted. On the 13th and 14th he vomited several times and seemed more drowsy but would awaken up screaming with the pain in his head. His appetite failed with the onset of the acute illness, the bowels were regular. There was a slight cough. Examination on admission showed marked opistho-

tonos with tenderness of the cervical muscles. The pupils were equal, reacting to light. Dr. Reeve was kind enough to examine retinae and could find no tubercle nor other lesion there. The abdomen was somewhat distended, Kernig's sign was present. A possible tuberculous focus was found in the base of the left lung.

During the first fortnight there was no marked change in his condition. He cried a great deal from pain, some times lying quiet, some times screaming. The temperature was extremely irregular, ranging from 96° to 104°, sometimes up at night and down in the morning, sometimes the reverse. There was a good deal of constipation and a progressive emaciation. At the end of the fortnight a marked convergent strabismus developed and the pupils reacted sluggishly to light; the pain in the head was more severe.

During the second fortnight there was more stupor and less pain. The pulse and respiration were irregular, *the extremities often cold*. The temperature became less irregular and toward the end of the fortnight was subnormal, remaining so for several days. The strabismus disappeared. The patient now lay on his right side with the head retracted. He slept a great deal but cried frequently from pain which he located in the back of the head. When he slept the eyes were partly open, the pupils equal and slightly dilated, the eyeballs rolled up showing the sclerotics.

During the third fortnight there was no change of importance. He ground his teeth frequently when sleeping. Occasionally he complained of pain in various parts of the body, *e. g.* arms and right hip. The temperature for the most part was about normal. There was less pain.

For a week or two longer no change was noticeable and then a gradual improvement in the condition became manifest. At first hardly perceptible it became more rapid from week to week and by the middle of August—twelve weeks after admission—the patient was able to sit up in bed and to move his head freely from side to side. At the present time he seems perfectly well.

In presenting this case I desire to acknowledge the valuable services of Dr. P. L. Scott, late acting House Surgeon in Hospital for Sick Children. In summarizing the history, the points in favour of a diagnosis of meningitis are:

- (a) *The mode of onset*, very gradual, with headache, stupor, etc.
- (b) *Eye-signs*, squint, in this case convergent, usually divergent. Slight and varying, but for a time distinct enough, inequality of pupil.
- (c) *Spasm of neck* muscles and opisthotonus with pain on moving head; persistent and severe for weeks.
- (d) *Kernig's sign*, marked response on slight stretching of sciatic nerve.
- (e) *The cry*, a characteristic hydrocephalic night-cry, apart from the usual crying of a sick child.
- (f) *The vomiting* occurring during onset and not very persistent.
- (g) *The clinical course*, gradual and extreme emaciation, equal almost to that occurring in marasmic infants.

The temperature, very varying. For some weeks during the middle period of the illness so low that he had to be kept warm by hot water bags, etc., in the bed, and resembled in some respects a hibernating animal.

(h) *The respiration*, slow and irregular, especially at early middle period.

(i) *Paresis*, marked muscular insufficiency, especially in limbs, with inequality of distribution.

(j) *Irritative* symptoms, scarcely to be noted at all; very little, if any, twitching or continuous movement of arm or leg, as so often seen; but on two occasions the facial muscles of one side were found contracted and twitching as if general convulsions were impending.

Points in favour of a diagnosis of tubercular as against simple meningitis are:

1. Suspected lesion in base of left lung and absence of otitis or other suppurative focus.

2. Gradual onset.

3. Slow development of symptoms and course of disease. Simple meningitis usually begins in healthy child so suddenly as to simulate pneumonia or other acute disease.

4. Absence of marked reaction and constitutional disturbance; temperature and pulse at first not far from normal.

5. Squint and other cranial-nerve symptoms not early developed, as usually is the case in simple meningitis; no general hyperæsthesia, so often seen in early stages of non-tubercular meningitis.

6. Great preponderance of tubercular over non-tubercular cases in sporadic meningitis, at least three to one.

Other theories such as cervicæ caries, cerebral abscess, tumor, meningeal hemorrhage from blow, etc., do not seem to me to be arguable.

TREATMENT.

May 14. Purgative.

May 15. Ice bag ordered to head; worm at nape of neck for weeks.

Two doses of ammon. brom. gr. xij four hours apart.

R	Potass. iodid.	gr. ʒ.
	Ammon. bromid.	gr iv.
	Tr. gelsem.	℥ iiij.
	Elix. lactopept.	ʒss.
	Aq. cassiæ ad.	ʒj.

S. ʒj every 4 hours.

Purgatives as required.

May 26. Morphine $\frac{1}{30}$ hypodermically.

May 28. Morphine $\frac{1}{30}$ hypodermically.

June 26. Phenacetin gr. ss every 4 hours if temperature up.

July 9. Tr. gelsem. discontinued; mixture continued otherwise as before.

Sept. 11. Ferrol ʒj t. i.d. p.c.

Sept. 13. Former mixture discontinued.

R	Potass. iodid.	ʒj.
	Elix. lactopept.	ʒiij.
	Ag. Cassiæ ad.	ʒiu.

S. ʒj every 4 hours.

Hæmaboloids ordered about July 10th.

A CASE OF ASTHMA ASSOCIATED WITH PROLAPSE OF THE LIVER.*

By H. B. ANDERSON, M.D., C.M., M.R.C.S., L.R.C.P.

Professor of Pathology, Trinity Medical College : Physician to St. Michael's Hospital and to the Outdoor Department, Hospital for Sick Children, &c.

The etiological relationship which various sources of reflex irritation bear to attacks of spasmodic asthma, makes the report of the following case of interest, particularly as the determining factor in this instance is certainly an unusual one.

T.R., aged 25 years. Family history good ; no record of asthma or other nervous affection. Patient was always rather delicate. In the summer of 1890, while working on his father's farm, keeping bachelor's hall at the time, he became very thin, was troubled with "catarrh" in the throat and nose and noticed a tendency to wheezing at times. For a year the wheezing disappeared. In the fall of 1891 the catarrh became worse and he had fits of coughing usually worse towards morning. In January 1892, he suffered from an attack of pneumonia and pleurisy on the right side. The amount of pleuritic effusion at this time could not be ascertained. Following this attack, Dr. D. J. Gibb Wishart treated him for the nasal trouble, removing several polypi. The catarrh was improved but the cough continued and he now began to suffer from asthmatic attacks at intervals of about three months, though he suffered from more or less wheeziness all the time. About Christmas, 1893, the patient suffered from a second attack of pleurisy on the right side, which confined him to the house for a month. The asthmatic trouble not improving, he was examined by a doctor the following May, who told him his liver was enlarged. Under medical advice, he went to the Northwest Territory in June, 1894, but gained no relief. Towards the fall, the attacks became more frequent and severe. He now began to suffer from indigestion, which was always worse before and during an attack, though it continued more or less all the time. The bowels were irregular and mucus appeared in the stools. A physician who examined him at this time told him his liver was displaced downwards. Under treatment for indigestion the asthma improved, and for a year he was pretty well ; then he had another attack of right-sided pleurisy lasting about a month. He returned to his home in Toronto in January, 1896, and soon after the asthmatic attacks recurred. At this time he first came under my care. The asthmatic attacks were always preceded and accompanied by severe indigestion. On examination I found the liver displaced downwards, its lower margin as low as the umbilicus, with corresponding absence of liver dulness in the usual area over the ribs. The patient was put in bed and kept at rest, the diet carefully regulated and

* Presented before the Toronto Clinical Society.

the indigestion treated. An attempt to replace the liver by mechanical pressure failed, but after the asthmatic attack subsided, the organ returned to its proper position of itself, the patient experiencing a distinct sense of relief. After this the asthma was better, the attacks were much less severe and for long periods—5 months at one time—he was quite free. The liver remained in place until July, 1900, when it again became prolapsed. The patient immediately began to suffer from wheeziness. He sought relief by going to Muskoka but he only became worse. He wanted to sit all the time as he experienced a feeling of pressure or fulness, and at times pain, which was aggravated by standing. On eating he had a peculiar feeling as if the food did not enter the stomach. He suffered from bloating after meals, the tongue was thickly coated with a white fur, breath offensive; no vomiting; bowels fairly regular. He returned to Toronto August 1st, not any better, and I was called to see him. The liver formed a prominence on the right side easily noted on inspection. It was hard, tense, and smooth and the lower edge could readily be palpated as low as the umbilicus. Percussion revealed a corresponding area of dulness, the upper edge being just above the free margin of the ribs. There was a distinct depression of the lower true ribs on the right side in the lateral region of the chest. The patient was put to bed, the foot of which was raised, saline purgatives were administered; diet was carefully regulated and an attempt was made to return the liver by putting the patient in a favorable posture and applying pressure, but owing to the tension from enlargement and the retraction of the ribs, this was impossible. An anti-spasmodic mixture was ordered.

In a short time the liver became softer to palpation, the sensation of fulness and discomfort became less, digestion improved, the dyspnoea was relieved and altogether the patient became much more comfortable. The liver now began to return to its proper position, the upper margin being found higher on percussion and the lower margin could be palpated about half way between the umbilicus and the free margin of the ribs.

About a fortnight ago the patient had a recurrence of the asthma with descent of the liver: at the same time he suffered from an attack of diarrhoea. The condition again improved by rest, etc., as before. The right kidney is palpable, the lungs show some evidences of emphysema. Physical examination of the other organs discovers nothing abnormal. Urine is normal.

The exact relationship between the various conditions noted, is not easily traced. The attacks of right sided pneumonia and pleurisy from which the patient suffered may have helped to produce the hepatic prolapse, though it is impossible to prove that they did. Certain it is that the first real attack of asthma followed the pneumonia. That the hepatic prolapse aggravated, if it did not actually occasion the asthmatic attacks, there can be no doubt. The patient noted this fact himself and so long as the liver remains in place he is comfortable. Moreover the asthmatic attacks are always improved by treatment directed towards the replacement of the organ. Whether the prolapse acts directly as a cause, or indirectly by producing the gastric disturbances noted before the attacks, it is impossible to say. Probably the reflex disturbance produced in each of these ways would play a part.

At present an attempt is being made to support the organ by a bandage. If this is not successful operative measures may be resorted to.

The case presents the following points of special interest:—

1. The occurrence of hepatic prolapse is in itself not very frequent. Graham collected only 70 cases reported during the last 30 years.

2. The condition occurs far most frequently in women who have borne several children and have loose abdominal walls, very rare in men.

3. The etiological association of hepatic prolapse with asthma has not previously been noted so far as I am aware.

SELECTED ARTICLES.

DIET IN TYPHOID FEVER.

By DR JAMES TYSON.

Professor of Medicine, University of Pennsylvania.

In the majority of cases of typhoid fever milk is the safest and most satisfactory diet. My belief thus stated is founded on experience sustained by what we know of the physiology of digestion and nutrition. As to experience I shall say nothing more, since the weight allowed it must rest solely upon whatever confidence is placed in my ability to deduce conclusions from an experience extending over more than thirty years of active hospital and private practice.

A word, however, as to the support such belief receives from other sources. First is the fact that milk furnishes in an easily assimilable form the food constituents which observation and experiment have shown to be essential to a properly constituted diet, viz., proteids, fats, sugars, minerals and water. These may require modification as to proportion by reason of age, occupation and climate, but these elements in some proportion go to make up every dietary the world over. It is to be remembered that starch is practically sugar. They constitute the food of the young of all mammals, furnished by nature through the mothers, at an age when artificial foods are regarded as unnatural, and used only when accident interferes with the natural source. As to quantity required in typhoid fever it may be put down for an adult at from four ounces as a minimum to eight ounces as a maximum every two hours. More definite amounts must be determined by watching the events of digestion, especially the state of the stools. If there is diarrhea the milk should be boiled or peptonized. If the stools contain fragments of undigested casein the quantity is too large and must be reduced. Should the use of the smaller amounts be followed by similar evidence of indigestion dilution with water or carbonated water should be practised or peptonizing again employed. Rich milk should always be avoided.

In declaring that milk is the most suitable food for the majority of cases of typhoid fever, I do not wish to be understood as holding that there are no conditions demanding modifications of the initial statement.

These conditions, I may add, however, do not very often present themselves. The first which may demand a deviation from the rule is an inability to take milk, either because of its evidently disagreeing or because of some insuperable prejudice against it. I believe the experience of all practising physicians agrees with my own, that this is a condition far more seldom met than some suppose. In other words, there are many persons who think they cannot take milk, who, when actually sick, find no difficulty whatever in doing so.

A second effect of a milk diet which sometimes demands deviation from it is an increase in the tendency to constipation which sometimes occurs in typhoid fever and which undoubtedly milk favors. In such cases milk should not be boiled. This tendency may be further counteracted by the addition of buttermilk, of animal broths, and particularly of chicken broth, of beef juice and of the various forms of peptonized foods, either liquid or reduced to the liquid form by the addition of hot water. An objection to animal broths made by those who are anxious to depart still farther from the milk diet is that they are typical culture media, and as such illy adapted as nutrients, since they favor the multiplication of bacteria in the intestines. This sounds well, but I believe apprehended danger from this source has little practical foundation. Certainly when made by the aid of heat, as they should be, they are sterile at the outset, and it is doubtful whether there is any food which may not become more or less a culture medium when introduced into the bowel. It is to be remembered, too, that antiseptic qualities are possessed by certain digestive fluids, notably the gastric juice and the bile. Such antiseptic effect may be increased by the administration of hydrochloric acid or other antiseptic.

Should evidences of inability to assimilate milk continue to present themselves after reducing the quantity of milk to reasonable limits, there is no more satisfactory nourishment than albumen water, which consists of the white of eggs mixed with water in varying proportions. The whites of two eggs to a pint of cold water may be considered an average proportion, but the mixture or solution may be made weaker than this, or even stronger. A little lemon juice, a fluidram or more, may be added to the pint as a flavor, or the same quantity of brandy or whisky. In extreme cases of delicate stomach, albumen water may be used alone for a time or in conjunction with milk or beef juice.

Modifications in diet demanded by symptoms or complications arising in the course of the disease, as well as by convalescence and recovery, should form a part of remarks on diet in typhoid fever. The complications of hemorrhage and peritonitis are the most important. The occurrence of hemorrhage calls for an immediate reduction in the amount of food. The reduction should be positive, and it may be that for a number of hours it is better to give no food at all. The indication for an arrest of peristalsis far exceeds all others, and in no way is this so well secured as by the total omission of food. Where total cessation of feeding is not deemed necessary, the quantity of milk may be reduced to half an ounce or an ounce every two hours until the danger of hemorrhage has passed away. The same remarks apply when there is perforation of the bowel.

Most important are correct notions as to the transition from the diet of one actually ill from typhoid fever to that suitable to convalescence. With a view to simplicity in instruction to nurses and young physicians, I lay down quite an arbitrary rule, of which it may be said that if it errs, it errs on the safe side. This rule is to adhere to liquid food in the shape of milk or broths, beef juice or albumen water, until the temperature has been normal one week. Then I allow a single soft boiled egg. If nothing happens in twenty-four hours after this, I allow an egg daily. If after two or three days everything goes well, I permit a small dish of very soft milk toast, tentatively at first, as with egg. If all continues well, a small quantity of well-boiled rice or of strained, well-cooked oatmeal, is added. Next a small piece of steak may be chewed, or, if in season, two or three small raw oysters. Thus each article of food is added, one after another, until a reasonable mixed diet is taken. Chicken is one of the last foods allowed. Even earlier than at the end of a week of normal temperature a raw egg may be given, mixed with milk and perhaps a little sherry or whisky to flavor it, if the patient complains of being hungry, or it is thought he is not being sufficiently nourished.

I do not deny that there are articles of food which may be given with safety, but there are very few of these not already mentioned which I feel quite comfortable to use, and as I believe that they are not necessary and the patient can get along very well without them, I do not think it right to take the risk, except for some extraordinary reasons. Under such circumstances I reserve the right to make such changes as common sense dictates. I am sure I have seen fever arise after the allowing of soft boiled eggs, for example, at a date earlier than that named.

I have said nothing in the foregoing as to the convenience of the milk diet. Convenience should certainly be made secondary to efficiency, and no sacrifice of the latter to the former is justified. Yet no one can question the great help afforded in most cases by having at hand a food ready prepared such as milk, while there are circumstances in which the preparation of other foods become an impossibility. When this is the case it is a great satisfaction to know that the food which requires no preparation, or, at most, heating or dilluting, is the best for our patient.—*Univ. Med. Mag.*

TREATMENT OF DYSPEPSIA.

The *Medical Review*, London, July, 1900, quotes T. Lauder Brunton (*Clinical Journal*, April 25th, 1900), as stating that the first rule for the patient who suffers from indigestion is, eat slowly, masticate thoroughly, insalivate completely. Many patients will say that they eat slowly, yet they do not masticate thoroughly. If the patient will not, of his own accord, follow the rule, he must, if necessary, follow Sir Andrew Clark's rule—count the bites. For every mouthful of meat he must allow 32 bites, or one bite to every tooth, if the meat is tough he must allow 64 bites, and if very tough, 96 bites.

The next rule is, let the patient take his solids and liquids separately. The reason for this is that if a patient with a weak digestion swallows much liquid—whether it be soup, plain water, mineral water, whisky and water, or beer—he dilutes his gastric juice, and thus lessens its digestive power. So it is better for a patient, who has weak digestion, to take his food without liquid. One meal, however, may be made an exception, and that is breakfast, because the food is generally of a soft and chiefly farinaceous character, and therefore a little more latitude may be allowed. But there is another reason for making the patient take food and liquid separately, and that is that unmasticated food cannot be swallowed without liquid. So that, even at breakfast, tell the patient that he can, if he likes, take a breakfast cupful of tea, not strong, but towards the end of the meal. Of course the gastric juice is diluted by the tea, but this does not matter so much in the case of farinaceous food as in the case of luncheon and dinner, into which proteids enter largely.

In many cases those rules are sufficient to remove dyspepsia. But in cases where they are insufficient, the third one comes into play: Let the patient take his farinaceous foods at different meals. That is to say, he may take bread and butter for breakfast, but he must take neither fish, eggs, nor meat. In the middle of the day he must take fish, eggs, or meat, but no farinaceous food whatever. At about five o'clock he should again have a farinaceous meal, such as he had at luncheon. Only food of the same kind is put into the stomach at each meal, and so there is no delay from the different digestibility of the different kinds of food, the whole contents of the stomach become comminuted and digested and passed on into the intestine about the same time. Under these three rules a great number of dyspeptic patients can be cured.

But patients must have some fluid. The best liquid they can drink is hot water, and the best times to drink it are on rising in the morning, again between 11 and 12 in the forenoon, again about 4 or 5 in the afternoon, and, lastly, at night before going to bed. Thus the patient is given all the fluid he requires, not when it will dilute the gastric juice, but when it will assist in washing out of the stomach the remnants of the previous meal. Given at 12 o'clock, it tends to wash the breakfast out of the stomach, at 4 it washes out the remains of the luncheon, and so on.

In cases where the stomach is weak it may be an advantage to supplement the normal gastric juice by giving some acid and pepsin; and,

apparently, there is sometimes an advantage in giving mixed enzymes—not pepsin alone, but pepsin containing rennin. Just before meals it is often advisable to give a little alkali, which tends to stimulate the secretion of gastric juice. The common way of giving this stimulant is with some bitter, containing no tannin, such as calumba; and this seems useful when the stomach is not irritable, and when there does not seem to be much catarrh. But if there is much catarrh in the stomach better results are often got from substances containing tannin, such as the infusion of gentian; and in patients with a flabby tongue perchlorid of iron combined with quassia is often useful. When the tongue is large, pale, and flabby, and marked by the teeth at the edges, better results are sometimes got from quassia and iron than from pepsin and other remedies.

In some cases, when the habit of taking large meals or drinking large quantities of water has led to dilation of the stomach, the plan of taking fluids and solids at separate times very often aids greatly in restoring the normal condition. But when it does not, then the use of a soft rubber tube to wash out the stomach either every morning on rising, or every night before going to bed, will often help very greatly. In cases of permanent dilation of the stomach due to pyloric contraction, the only remedy is gastroenterostomy.

EXPERIMENTAL STUDY OF OXALURIA, WITH SPECIAL REFERENCE TO ITS FERMENTATIVE ORIGIN.

From a series of experiments upon lower animals, and from a careful study of the subject, H. Baldwin (*Journal of Experimental Medicine*, October, 1900) has reached the following conclusions:

1. As varying amounts of calcium oxalate may be held in solution in the urine, conclusions based upon the presence or number of calcium oxalate crystals found therein are of no real value as an indication of the quantity of oxalic acid present.

2. Unless the utmost care is exercised, the result obtained by quantitative estimation of oxalic acid are subject to large percentages of error. This is especially true in the use of Neubauer's or Schultsen's methods, in which the calcium oxalate is precipitated in an alkaline solution.

3. An ordinary mixed diet regularly contains traces of oxalic acid or its salts.

4. A portion of the oxalic acid ingested with the food may be absorbed and reappear unchanged in the urine.

5. The normal daily excretion of the oxalic acid in the urine fluctuates with the amount taken in the food, and varies from a few milligrammes to two or three centigrammes, being usually below ten milligrammes.

6. In health no oxalic acid, or only a trace, is formed in the body, but that present in the urine has been ingested with the food.

7. In certain clinical disturbances which in some cases were associated with absence of free hydrochloric acid from the gastric juice, oxalic acid is formed in the organism.

8. This formation in the organism is connected with fermentative activity in the alimentary canal.

(a) The prolonged feeding of dogs with excessive quantities of glucose, together with meat, leads eventually to a state of oxaluria.

(b) This experimental oxaluria is associated with a mucous gastritis, and with absence of free hydrochloric acid in the gastric contents.

(c) The oxaluria and the accompanying gastritis are referable to fermentation induced by the excessive feeding with sugar.

(d) The experimental gastritis from fermentation is associated with the formation of oxalic acid in the gastric contents.

9. The symptoms attributed to an oxalic acid diathesis, with the exception of those due to local irritation in the genito-urinary tract, do not appear to be due to the presence in the system of soluble oxalates, but are more likely to depend on other products of fermentation and putrefaction.—*Med. Age.*

CAUSES OF SUICIDE.

Dr. J. W. C. Cuddy, professor of medicine in the University School of Medicine, Baltimore, contributed to *The Baltimore American* an able article on the subject of suicide. He is of the opinion, which is probably shared by most scientific men, that no absolutely sane person takes his own life. In those cases in which an individual commits suicide there is undoubtedly an unhinging of the mental balance. This may be temporary, but nevertheless self-destruction must be attributed to an insane impulse. There are many, however, of course, who do not hold this view, but believe that suicide may be a deliberate sane act. Dr. Cuddy writes as follows on the matter: "There are very few direct causes of suicide, and these are the very ones which will most readily disarrange the harmonious workings of a healthy mind. The most frequent causes of self-destruction to which I allude can best be told by a quotation from one of my own lectures to the medical class during the last session. In that lecture I said: 'The main exciting causes of suicide are financial depression, religious mania, and unrequited love. The first mentioned are generally male adults, who, as a rule, complete their sad taking off by the help of the leaden ball or glistening steel; the unbalanced religionist generally seeks some secluded spot, where with hempen cord he chokes out the God-given life which should have been used for a better purpose; while it remains for lovesick maidens and half-crazed men to terminate their useless existence by the aid of some poisonous drug, nearly always the same, for the intelligence of such persons rarely leads them beyond the laudanum bottle of the household, in whose somnolent depths they seek their voluntary oblivion.' Now these three causes which cover the majority of cases of suicide are all producing agencies of deranged nerve action, and it is but natural to conclude that in these instances the brain cells are sufficiently disorganized to produce a condition whereby normal

or mental control is lost prior to the consummation of the suicidal act. The question might be asked, Why do not these operative causes act alike in all similar cases? All brains are not constituted nor developed alike. Some are able to resist the most distressing and depressing agents, just as some bodies will exist in a bacteria-laden atmosphere and escape unscathed, while others similarly placed will readily succumb, even to fatal results."

Dr. Cuddy also mentions heredity as perhaps a predisposing cause, but fails to draw attention to one of the most potent causes of suicide—alcoholism. There can be no doubt whatever that strong drink drives a vast number of human beings to death by their own hands. It would, of course, be extremely difficult, probably impossible, to tabulate definitely in their correct order the various causes of suicide. The majority of observers would haply declare both religion and the lack of religion to be responsible for more suicides than any other one cause, but few will deny that to excessive drinking is due directly and indirectly a holocaust of victims.—*N. Y. Med. Record.*

DELIRIUM TREMENS.

By CHARLES J. DOUGLAS, M.D., Boston.
Physician-in-charge of the Walter Baker Sanitarium.

At the last meeting of the American Medical Association a paper was read on the treatment of acute alcoholism by large doses of digitalis. The writer of the paper reports ten cases thus treated in Bellevue Hospital, and he concludes that the results, in properly selected cases, are "exceptionally favorable." Two of these patients died—a mortality of twenty per cent. The two cases in which he says this treatment showed its "most beneficial effects" are described in substance as follows: Both patients were robust young men suffering with delirium tremens. The first one came to Bellevue Hospital late in the afternoon, and did not sleep till nine o'clock the next morning, a period of about fifteen hours. During all this time he was delirious and was "restrained," probably in a strait-jacket or a cell. The second of the two patients whose treatment was considered particularly successful was delirious twenty-four hours, during which time "the ordinary treatment of narcotics was followed, with no effect." Digitalis was then prescribed with no better results than in the first case, many hours of delirium under restraint preceding sleep.

If such results in the treatment of delirium tremens are considered so exceptionally favorable as to warrant their report to the American Medical Association, it would be interesting to learn what results are deemed ordinary. If so excellent a hospital as Bellevue can do no better than this, what can be expected of hospitals that are less fortunately situated and less thoroughly equipped? To allow a delirium tremens patient to remain shackled in sleepless delirium from six p.m. to nine o'clock the next morning is inexcusable and cruel. Several mistakes, in

my opinion, were made in the treatment of these patients, mistakes which, perhaps, are made in many hospitals.

First, such patients should be put to sleep soon after their arrival, which can be done with apomorphine in a few minutes without danger and without emesis. The "stream of consciousness" can be shut off with valve-like precision by the use of this remedy, and sleep is the one specific for delirium tremens. My method of employing apomorphine for this purpose, I have fully described in articles published in various medical journals of this country and Europe. (See, especially, *New York Medical Journal*, October 28, 1899, and March 17, 1900; also *Lancet*, April 14, 1900, etc.) Secondly, patients should not be restrained by physical force. This not only adds to their suffering, but increases and prolongs the delirium. It is needless, ineffective and cruel. Thirdly, whiskey or alcohol in some other form should be prescribed, as sudden withdrawal aggravates the disease and frequently causes it. The records of death furnished by police stations where drunken men are suddenly deprived of liquor, supply abundant proof of the danger attending such a course. Fourthly, the patients should be nourished with milk, egg-nog, or some other liquid food. Delirium tremens seldom affects those who have not been deprived of proper nourishment for some time. Hence easily assimilable food is indicated. One case will sufficiently illustrate my methods:

M. A., after a spree, placed himself in the hands of an excellent Boston physician and a trained nurse. The physician at once prohibited the use of all forms of alcoholic liquor, and prescribed the ordinary narcotics hypodermically and by the stomach. This treatment continued one week, during which time he slept but little and suffered with hallucinations. During the last forty-eight hours of that period he had continuous delirium and did not sleep at all. His physician then sent him to our sanitarium. I at once prescribed whiskey and milk, and administered the apomorphine treatment. In fifteen minutes he voluntarily lay down and immediately went to sleep. He slept five hours, and when, at 6 p.m., I awoke him to give him nourishment, I found him greatly improved in every way, with but slight traces of hallucination. At 10 p.m., I again administered the same hypnotic treatment and he promptly went to sleep as before, sleeping all night. In the morning he was perfectly sane.

These methods are the result of my experience in the treatment of hundreds of alcoholics in all forms of the disease. In delirium tremens I never use forcible restraint, never suddenly withdraw alcohol, and have never had a death.—*N. Y. Med. Journal*.

INTERNAL ANTISEPSIS.*

By REYNOLD WEBB WILCOX, M.D., LL.D.,

Professor of Medicine and Therapeutics in the New York Post-Graduate Medical School and Physician to the Hospital; Physician to St. Mark's Hospital.

The author begins with the statement that it is in the field of the infectious diseases that internal antiseptics will of necessity have its most important application. It should be useful in septicæmia, and possibly in pyæmias in which the pus foci are not accessible to the surgeon. Not that the author rejects surgical methods; accessible foci of infection should receive that treatment. His plea is for a method of combating infection in cases where surgery fails.

Is internal antiseptics possible? If the symptoms indicative of septicæmic infection retrogress, if the chills, malaise, headache, remittent fever, restlessness, prostration, sweating, muttering delirium, red and glazed or leathery tongue, full, bounding and compressible pulse, enlargement of the spleen, and hypostatic congestion of the lungs gradually become less marked under the administration of a remedy, it may be suspected that the improvement is due to it. If this association of remedy and relief becomes fairly constant, and the failures explainable, the suspicion may become a well-established belief.

To be an efficient antiseptic, a remedy must reach the micro organisms anywhere in the entire area of distribution of the blood, and either completely destroy them or prevent their further growth. The symptoms due to bacterial activity, as well as the evidences of the presence of the micro-organisms in the excreta, must diminish and disappear.

The author then proceeds to instance some of the various methods by means of which the efficacy of internal antiseptics is demonstrated. Thus, as he proved in his Albany paper, of 1895, chlorin administered in typhoid fever cleans the tongue, improves the appetite and digestion, lessens the fever, deodorizes the stools, betters the general condition and the nervous system, and shortens the duration of the disease. In tuberculosis the administration of creosote, and more especially the carbonate of that drug in prolonged doses, is followed by a diminution of the number of bacilli in the expectoration, as has been demonstrated by Holscher and others. In many disease conditions of the alimentary canal, Bouchard found that the number of pathogenic bacteria in the fæces was markedly diminished by the administration of naphthol. Hueppe found that no cultures could be made from the intestinal contents of a patient who had died from an apoplexy appearing in the course of an attack of Asiatic cholera who had been treated with bismuth tribromo-phenolate (xeroform) exclusively. In other and exactly similar instances, when tannic acid injections had been used, cultures were made without difficulty.

*Abstracted from a paper read before the Medical Association of the Greater City of New York, and published in the *Medical News*, of October 6, 1900.

Finally, it has been known for some years, that most typhoid fever patients discharge large numbers of Eberth's bacilli in their urine. Quite recently, Richardson, Horton-Smith, Gwyn and Andrews have demonstrated that hexamethylen-tetramine or urotropin administered by the mouth causes them to disappear completely.

Urinary toxicity itself, as shown by its varying toxicity when injected experimentally, Wilcox does not believe an accurate method of determining the value of a certain plan of treatment. Whilst changes in the uro-toxic co-efficient may be assumed to indicate variations in the elimination of toxins by the kidneys, physical or chemical analysis is necessary to prevent misleading results.

To the question as to whether internal antiseptics may ever be harmful the author answers in the affirmative. Certain substances which are most trustworthy antiseptics *in vitro* are poisonous in the body. Instances of fatal poisoning by phenol, iodoform, corrosive sublimate, etc., have been too frequent to be ignored; and these and all substances which are local irritants or destroyers of blood corpuscles cannot be employed.

More especially as regards the employment of intestinal antiseptics it is often held that the bacteria are essential for digestion and assimilation and that their destruction is liable to interfere with the nutrition of the patient. The researches of Nencki, Nuttall, Thierfelder and other observers would show that bacteria are not necessary for these physiological processes, though certain loosely-combined compounds such as salol, bismuth salicylate, and others are broken up by them. This is confirmed by Levin's observations in the polar regions, where he found the intestinal contents of bears, seals, ducks, sharks, sea-urchins, crabs and other animals bacteria-free and sterile.

Dr. Wilcox then explains the conditions under which internal antiseptics should be employed. Surgical measures should be used when the infective foci are accessible. Infections resulting in septicæmias in which the toxins are most potent in causing danger, such as diphtheria, should be neutralized by antitoxins. Internal antiseptics are in place where the streptococcal infection is of most importance, and where a serum treatment is not thoroughly established. He warns his hearers that care must be taken in the administration of remedies like naphthalin or salicylic acid, which may act unfavorably upon the kidneys, or any of the phenols, which are cardiac depressants. Kind Providence is just as watchful over the pathogenic bacteria as over their unwilling host. On the other hand he deprecates the position of bacteriologists who deny the efficacy of small doses of intestinal disinfectants which do not kill the bacteria; forgetting that they may paralyze them and prevent the formation of toxins.

Among the general internal antiseptics the author considers chlorin, the salicylates, and quinin, and silver, recently suggested for that purpose. In 1890, Carey Lea first produced it in allotropic form, and seven years later, Credé first used the colloidal silver in medicine. It is almost entirely soluble in water and albuminous fluids, and it seems either to inhibit the action of staphylococci and streptococci, or destroy them altogether.

Colloidal silver is employed internally, dissolved in equal parts of albumin and glycerin, to prevent its conversion into a chloride in the stomach; in aqueous solution hypodermically, since it is non-irritating; as a 15 per cent. ointment, known as unguentum Credé, for inunction; and by rectal and intravenous injection. Schlossmann has shown that it is non-toxic and unirritating to mucous membranes and thus far no case of argyria has been reported.

Credé claimed that the colloidal silver has a very beneficial influence and often effects a rapid cure in recent and chronic sepsis and furunculosis, when secondary changes in the vital organs have not occurred. He and others have treated osteomyelitis, phlegmonous angina, furunculosis, erysipelas, so-called gonorrhœal and articular rheumatism, etc., by this method. Various reports, some very enthusiastic, have been presented; on puerperal fever (Peters, Jones, Voorhees), cerebrospinal meningitis (Schirmer), acute mastitis (Cumston), malignant scarlet fever (Credé), divers septic processes (Werler), furunculosis (Wolfram), and finally in purpura in the horse (Dieckerhoff). Wilcox's own experience in septic phlebitis, of which an unusually large percentage has occurred in his typhoid fever cases, has been most satisfactory. He employed it as inunctions of thirty minutes' duration. In one instance of septic phlebitis following amœbic dysentery the results were almost marvelous.

The author then considers intestinal antiseptics, of which there are many methods. Amongst the most useful remedies for this purpose are various insoluble substances, such as naphthalin, betanaphthol and various bismuth compounds. Naphthalin, however, sometimes produces vesical irritation and other untoward symptoms. Salol is effective in many cases, but its use presupposes sound kidneys, and if fever is present, or the contents of the duodenum are too acid, it is not decomposed into its constituents. Betanaphthol, though its antiseptic action was conclusively proven by Bouchard, is found too irritating to the stomach. The bismuth compounds are not irritant, and their use has been crowned with success.

The two compounds of bismuth that have been especially studied are the naphtholate (orphol) and the tribromo-phenolate (xeroform). With the former, Jasenski found that whilst the bismuth was almost completely excreted by the bowels, some of the naphthol was eliminated by the kidneys. It is certainly not poisonous in daily doses of seventy-five to one hundred and twenty grains for adults, and this quantity is quite sufficient to inhibit bacterial action. The literature has been extensive, and, in general, confirms Wilcox's personal observations.

In regard to the tribromo-phenolate, the observations of Fasano are quite conclusive. It rapidly diminishes the amount of indican in the urine and the putrefactive action in the intestines. After five days' use the fæces of patients suffering from typhoid fever give no cultures of typhoid bacilli or the bacterium coli. Intestinal tuberculosis in some instances yields to emulsions administered either by the mouth or the rectum. The tribromo-phenol is apparently slowly liberated, so that no poisonous symptoms appear even from daily doses of over one hundred grains. Some of it, at least, passes out through the urine, for Reynders

has been able to detect tribromo-phenol, twenty-four hours after the absorption of the drug.

Internal remedies designed to act on the tubercle bacilli are too numerous to mention. Beechwood creosote, conceded to be useful in the treatment of pulmonary tuberculosis, has well-known disadvantages. The non-toxic and unirritating carbonate and perhaps other derivatives and guaiacol carbonate have thoroughly supplanted it. If it is not germicidal to the bacilli, it renders the soil unsuitable and hinders their development. Twenty to sixty drops of the creosotal thrice daily in port or sherry seems to be efficient. Thomson, Smith, Cassoute and Corgier testify to its value in pneumonia. Eschle has shown that guaiacol carbonate is certainly harmless. Four to seven grains four times a day is a sufficient dosage.

Urotropin (hexamethylen-tetramine), a condensation product of formaldehyde and ammonia, first made by von Butlerow, in 1860, is probably the best of the urinary antiseptics. It is used to sterilize the urine by destroying its micro-organisms, which it does effectually in pyelitis, pyelo-nephritis and cystitis. Nicolaier employs about eight grains thrice daily; but doses of even one hundred and fifty grains are well borne. Formaldehyde is liberated in the urine; and this, even in the smallest amounts, prevents the development of micro-organisms. Richardson found that its use by typhoid patients always freed the urine from the bacilli. Wilcox has made a personal observation in a case of tubercular cystitis, in which the bacilli diminished notably in the urine during its administration, but a continuance of the medication is necessary.

Thirty years ago, the author concludes, the foundations of surgical antiseptics were laid, and the ideal result has now been nearly attained. Internal antiseptics to-day rests upon quite as secure a basis as did the surgical at the beginning, and the ensuing three decades will doubtless see the fruition of our most daring hopes. As the surgeon gives credit to Lister, so must we acknowledge our indebtedness to Bouchard. We can now safely say that internal antiseptics is more than the dream of the theorist.—*New England Medical Monthly*.

TREATMENT OF TAPEWORM.

Little has been added of late years to our knowledge of the treatment of this somewhat common affection. Any one referring to a work upon materia medica or practice will be surprised at the number of remedies which are recommended for the removal of tapeworm. In actual practice it is found that with all remedies there are a considerable number of failures. For certainty of results the ethereal extract of male-fern, easily leads the list.

If the entire worm is not removed it will grow again, so that it is quite important to find and identify the head, that the patient may be assured of a cure. Theoretically the head is supposed in some cases to be attached in the folds of the intestine in such a way that the valvulæ conniventes protect the head from the poisonous action of the anthel-

mintic. The late Professor Agassiz suffered from a tapeworm for many years, which resisted all efforts at removal. He was accustomed to use his personal worm in the class-room demonstrations. It is not known that his general health suffered from the parasite.

It is commonly believed that the *Tenia solium*, or pork tapeworm, is a common parasite in this country, but such is not the case; it is by far the most frequent parasite in Europe. In this country the beef tapeworm, or the *Tenia saginata*, is by far the most frequent. In not more than one case in twenty in this country is the variety of worm the *Tenia solium*. There are a number of varieties of tapeworm, but they are rare in man, and some which occur in the human have never been found in this country. The treatment of the beef and pork tapeworms is identical.

The remedy most frequently employed is the extract of male-fern. Pumpkin seeds are effectual sometimes, but the dose is very large; it is sometimes difficult to keep it on the stomach, and it is not always easy to procure the pumpkin seeds in a comparatively fresh condition. The more recently they have been gathered and the care with which they have been kept determine to a large degree their efficiency. At least four ounces of the seed should be employed, the cortex removed, and the kernel bruised in a mortar with sufficient fluid to admit of the mixture being drunk. The distinct advantage of the pumpkin seed treatment is its freedom from poisonous properties, but it is somewhat less efficient than the male-fern and more difficult of application.

In using male-fern, poisonous results, and in rare cases, death, have been noted. These cases were attended with nausea, vertigo, syncope, convulsions and unconsciousness. Delirium may be present, and in fatal cases this passes into coma and death. Occasionally there is contraction of the retinal arteries with temporary amblyopia and amaurosis, which sometimes is followed by optic atrophy. The anthelmintic as well as the toxic properties of male-fern are to be found in the filicic acid. This is said to be freely soluble in oils; hence, theoretically it is supposed that the poisonous properties are increased by the coincident administration with castor oil. Of the truth of this statement we are not sure. One thing is certain, that experimentally it has been shown that the toxic action of male-fern is much less upon the worm in the presence of oil. One German observer found that in an ethereal extract of male-fern a worm would live but one hour, while another worm retained its vitality six hours in the same strength of solution, provided castor oil were added to it. The theory of this observer was that the oil protected the worm. It is difficult to see how the claim of Grawitz can be maintained, that the male-fern is more toxic if followed by oils. Be this as it may, it is certain that castor oil should not be given as an accompanying cathartic with male-fern. Another common practice is to starve the patient for a day or two, or at least withhold all food for twenty-four hours preceding the administration of the fern. Such practice is of doubtful propriety, as the stomach is rendered somewhat irritable, and the susceptibility of the patient to the toxic action of the drug is markedly increased by the fasting. There is no good evidence to the effect that

this fasting has very much effect upon the worm. On the day that the dose is administered it is perhaps well that the patient should take no breakfast, and a saline cathartic might be administered the preceding night without objection.

The male-fern is preferably administered in combination; the best adjuvant is kamala. This substance is certainly a valuable and much neglected tænicide, and at the same time it is a brisk cathartic. One drachm of the normal liquid of tincture of kamala, combined with one drachm of the ethereal extract of male-fern, the whole made into an emulsion of about two ounces, forms a most efficient combination and one that is quite free from toxic properties in the absence of special idiosyncrasy. Such a dose administered upon an empty stomach in the morning is almost invariably followed by the expulsion of the entire worm early in the afternoon.

It is difficult to find and identify the head of the worm. This is due to the fact that it is easily broken, and if the passages take place into an open vessel the neck of the worm is easily broken. This may avour re-attachment of a loosened worm further down in the intestine, and it is avoided by having the contents of the bowel discharged into warm water. This prevents contraction of the worm with a subsequent breaking, and enables us to readily find and identify the head in case it is passed.

A method which has been referred to in MEDICINE is that of J. W. Kime, of Iowa, who has devised a means of directly poisoning the worm. After a portion of the worm has passed, and while it is still attached, a string is tied around the broken portion and a half-grain of morphine is injected into its body. The tapeworm is said to have circulating tubes between each of the segments, and this injection is said to effectually poison the worm so that the head comes away entire. This ingenious method of getting rid of tapeworm is worthy of further trial. Since the original publication over a year ago, we have seen no reference to it in the literature.—*Medicine*.

THE SIGNIFICANCE AND TREATMENT OF OXALURIA.

For many years physicians were wont to believe that considerable quantities of the oxalates in the urine indicated certain pathological conditions and enabled us to institute therapeutic measures for their relief. Even such accurate students of clinical medicine and of the conditions of the urine as Golding, Bird, Begbie, and Prout, thought the so-called oxalic acid diathesis of very considerable importance, and it was not until the investigations of Smoler, Bacon, and others, that it was proved that most of the oxalic acid excreted in the urine had been ingested with the food. These remarks have been induced by an interesting article just published in the *Journal of Experimental Medicine* for October, 1900, by Dr. Helen Baldwin, who has been working in the laboratory of Dr. C. A. Herter, of New York. Dr. Herter's investigations into the subject of changes and conditions in the organs of secretion and excretion are, many of them, well known to our readers, and we are therefore much

interested in any contribution coming from his laboratory aside from the intrinsic merits of the present paper. The points which Dr. Baldwin undertook to solve in her research were as follows:

First, to discover whether oxalic acid is ever formed in the animal economy; then to estimate the influence of the ingestion of oxalic acid in foods upon the amount excreted in the urine; and finally, to study the physiological action of soluble oxalates with a view to deciding in what measure the presence of oxalic acid in the system is responsible for the symptoms attributed to the oxalic acid diathesis.

Among the foods which are known to contain considerable quantities of oxalic acid or oxalates may be mentioned spinach, rhubarb, dried figs, cocoa, tea, coffee, green beans, plums, tomatoes and strawberries. On the other hand, those foods which contain practically no oxalates are the various proteids, such as milk, meat and eggs, sugar, butter, corn-meal, and rice.

The conclusions arrived at by Dr. Baldwin seem to us of considerable importance, and are as follows:

1. As varying amounts of calcium oxalate may be held in solution in the urine, conclusions based upon the presence or number of calcium oxalate crystals found therein are of no real value as an indication of the quantity of oxalic acid present.
2. Unless the utmost care is exercised, the results obtained by quantitative estimation of oxalic acid are subject to large percentages of error. This is especially true in the use of Neubauer's or Shultzen's methods, in which the calcium oxalate is precipitated in an alkaline solution.
3. An ordinary mixed diet regularly contains traces of oxalic acid or its salts.
4. A portion of the oxalic acid ingested with the food may be absorbed and reappear in the urine.
5. The normal daily excretion of oxalic acid in the urine fluctuates with the amount taken in the food, and varies from a few milligrammes to two or three centigrammes, being usually below ten milligrammes.
6. In health, no oxalic acid, or only a trace, is formed in the body, but that present in the urine has been ingested with the food.
7. In certain clinical disturbances which were associated with absence of free hydrochloric acid from the gastric juice, oxalic acid is formed in the organism.
- 8: This formation in the organism is connected with fermentative activity in the alimentary canal.
 - (a) The prolonged feeding of dogs with excessive quantities of glucose, together with meat, leads eventually to a state of oxaluria.
 - (b) This experimental oxaluria is associated with a mucous gastritis, and with absence of free hydrochloric acid in the gastric contents.
 - (c) The oxaluria and the accompanying gastritis are referable to fermentation induced by the excessive feeding of sugar.
 - (d) The experimental gastritis from fermentation is associated with the formation of oxalic acid in the gastric contents.

9. The symptoms attributed to an oxalic acid diathesis, with the exception of those due to local irritation in the genito-urinary tract, do not appear to be due to the presence in the system of soluble oxalates, but are more likely to depend on other products of fermentation and putrefaction.

These conclusions are of considerable interest because they throw some light upon the method of treatment which has long been known to medical clinicians, and because there has been, so far as we are aware, no adequate explanation, namely, the fact that in certain cases of melancholia associated with oxaluria, the administration of full doses of freshly prepared nitrohydrochloric acid will often do great good. It has been thought by some that this acid, under certain circumstances, influenced the action of the liver; and this may be true. But it would seem more probable from Dr. Baldwin's researches that the acid acts by preventing fermentation in the alimentary canal and that it also aids the gastric juice in properly dealing with food, since, as she points out in the conclusions already quoted, there is often an absence of free hydrochloric acid from the gastric juice when oxalic acid is formed in the organism; and further than this, that it is possible to produce an absence of free hydrochloric acid in the gastric contents by the artificial induction of oxaluria. Finally, it is also possible that the antiseptic influence of this acid in the stomach, by preventing fermentation, prevents the formation of oxalic acid in the gastric contents.—*The Therapeutic Gazette*.

THE ELECTROSTATIC TREATMENT OF NEURASTHENIA.*

BY WILLIAM BENHAM SNOW, M.D.

Neurasthenia, also known as the American disease, from the fact that it is so much more common with us than among the slow, easy-going nations of the old world, is a functional disorder caused by errors of life and habit.

The indulgence in luxuries by those who as a matter of fact take but little exercise, with excesses, both of eating and drinking, sexual excess, self abuse, and erotic states induced by undue excitement of passion, long engagements, tight lacing, social engagements, late hours, together with the hustle and bustle of modern competition in business are causes creating a variety of derangements finally ending in nervous exhaustion with all degrees of hyperesthesia, anesthesia, insomnia, and perversions innumerable. Various as are the causes and conditions arising from unnatural habits of life, one word is coined to include them all, *Neurasthenia*, and one rule—a return to a natural life—is the requisite if health is to be restored.

Many sufferers from this condition in this generation have received it, or a strong predisposition, as a heritage. Such furnish the most stubborn and intractable cases, and may never be cured, but may or may not gradually lapse into grave nervous conditions. While the aggregate of this class is large, they make up but a small percentage of the neuras-

*Read before the American Electro-Therapeutic Association, Sept. 25, 1900.

thenics we meet. The prognosis is hopeful if some organic disease has not already attacked the patient. If only functional derangements are to be combatted the chances of recovery are good.

As varied as are the causes, so are the symptoms of neurasthenia. Anemia, insomnia, constipation, indigestion, sluggish conditions of the organs of secretion and excretion, irregular pains—especially in the back, neck, and head, are symptoms all present in a large percentage of the cases. Hysteria is present in very many and must be mastered early. Areas of anesthesia or hyperesthesia, and irregular neuralgic pains are frequent symptoms. Some lapse into melancholia. There may be grave apprehension of impending death from suspected disease of the heart, or other imagined disorder. Temporary impotence, suspension of menses, and disorders of the pelvic organs may play a large part in the causation, or obstacle to the prompt recovery of the patient. A most complete and careful analysis of every case is imperative before any treatment is instituted, then start right. Find the cause or causes and remove them. Place the patient under favorable surroundings, and do not prescribe rest, but healthful and well regulated out-of-door exercise and diversion in most every case. To this add careful judicious feeding and insure one daily evacuation commensurate to food ingested and encourage drinking of pure water. Discourage use of stimulants and excitement or recreation that will cause fatigue. Very cautiously prescribe hypnotics and nerve sedatives, but allow iron or strychnin if indicated. Such a resume would cure many cases in a season, but in others the sway of the pendulum has become so slow, and nervous and physical resources have been reduced to such a low ebb that some active energizing force is necessary to gently but firmly turn back the tide. Will rest and massage best serve the purpose? No, both are passive; they lack initiative. Impulse must be started from centers even though first aroused from the periphery. The normal relation of nerve and muscle is one designed for concerted action, and they always rise and fall together. Passive motion or rest neither afford an incentive to restoration nor do they induce nutrition. On the other hand an agency under control, gently and judiciously administered, which promotes the functional activity, not of one muscle but of all muscles, not of one nerve but of all nerves, not of one organ but of all, requires in addition only nutritive pabulum to promote restoration. The first law of life and health is exercise, not passive but active.

The body recuperates during rest—most vigorously when rest follows exercise. The muscle that develops most is the one that has the most judicious exercise. Under forced rest a muscle atrophies. Nature then demands properly regulated exercise, not rest, for recuperation and development. The means required to facilitate nature's efforts to restore the neurasthenic are; first correction of habit; second, congenial surroundings; third, judicious, well-regulated exercise; and, fourth, an agency, which by unlocking secretions, quieting nervous irritability, and overcoming local disturbances, will best assist the normal resumption of every bodily function.

The varied applications of static electricity satisfactorily meet these requirements. For the general tonic effects indicated in every case of neurasthenia, the wave current should be administered by placing the long spinal electrode (one inch in width and 18 to 22 inches in length, over the vertebral column from the cervical to the lumbar region for from at least 15 to 20 minutes, and employing as long a spark-gap as may be used without causing uncomfortable muscular contractions.

Patients will usually take a treatment with four inch spark discharging. Though persons with small muscles and with but little fat may not bear a two-inch spark-gap current, large or fat persons will bear and require one measured by a five or six inch spark discharge. After the first few applications, the patient perspires gently with each such treatment. Not only does the activity of sweat glands resume, but there is a gradually increasing resumption of other functions. There is marked increase in the daily excretion of solids in the urine, digestion improves, appetite returns, the bowels become more regular. In short there is a general improvement of every metabolic function.

While many cases have been cured by no other agency than the wave current, we believe that the active peripheral stimulation and massage afforded by the long and friction sparks hasten the recovery of every case, the time factor of which will depend on the duration of the affection, the adherence to regimen, the extent of functional derangement, the recuperative powers of the patient, the regularity with which the treatments are administered, and the technique employed. Treatment should be given daily for at least two weeks, when every second day may suffice.

Special symptoms will require special attention, as follows :

A dilated or atonic condition of the stomach will require sparks applied directly over the organ. And the same treatment will awaken the activity of a torpid liver and assist in overcoming the constipation usually present.

All sensory disturbances may be relieved by long or short sparks, friction sparks, or local application of the wave current. Headaches will be relieved by placing the stand electrode with point over head if patient is anemic, or at the level of the knees if asthenic during the administration of static wave current.

Palpitation of the heart and conditions of general malnutrition will usually call for no additional treatment.

In all cases, especially those of long standing, insomnia is often a most stubborn symptom, but uniformly yields where no brain lesion is present. A treatment administered just before retiring is most apt to induce refreshing sleep.

The wave current applied directly over the eyes or temple will relieve disagreeable eye symptoms, and over the larynx an aphonia of nervous origin.

The sexual functions require no special treatment, but restored confidence, and the general treatment.

Ovarian, uterine, or the pelvic congestions should receive proper local treatment with the wave current. Hysteria and other symptoms of neurasthenia may be promptly cured by the general and local treatment, as indicated.

The occupation neuroses occur as a rule in neurasthenics and must have the general as well as the local treatment. When treated early, these cases uniformly yield to the proper technique.

There is no nervous disorder more common to-day and no curable affection which has so often taxed professional skill, as neurasthenia; and we are sure that there is no known therapeutic means which so well meets the demands as static electricity. The results of administration are charming to those who have followed other plans of treatment. The improvement is marked after the first few treatments, and the result generally satisfactory.—*The Post Graduate*.

SOCIETY REPORTS.

TORONTO CLINICAL SOCIETY.

Stated meeting, January 2nd, 1901. The president, Dr. W. H. B. Aikins, occupied the chair.

AMPUTATION AT SHOULDER JOINT.

Dr. A. Primrose presented this patient and recited the history of the case. A man of thirty-five years last fall while crossing Queen St. was run down by street car, but the motorman did not notice that there was some object under the car until he noticed that something obstructed the wheels. While searching for the obstruction, an arm was brought from the curb, and then the man was found between the front wheels. The arm had been taken off above the insertion of the deltoid and the tissues were completely cut through. The wheel of the motor had served as an excellent angiotribe, because he had not lost a teaspoonful of blood. When seen by Dr. Primrose at the Emergency Hospital, the arm or rather stump was a mass of pulpified tissue, the humerus being broken into three pieces. The upper fragment was fractured into the shoulder joint. The condition of the skin was interesting. There had evidently been an evulsive force, a tubular portion of skin being found in the arm completely separated from the soft tissues. The axillary artery was tied high up, and having done that, cut the nerves as high as possible, and then dissected out the upper fragment of the humerus from the shoulder joint. The patient made a good recovery. There was a small drainage tube in for a few days.

EX-OPHTHALMIC GOITRE, WITH REPORT OF TWO CASES.

Dr. W. B. Thistle reviewed the causes of this disease, and then reported two cases. The first occurred in a man aged 24 years and the second in a woman aged 34 years. The woman consulted him for weakness and nervousness; had for some time slight enlargement of the neck, which had recently increased. She was a tall thin woman, married, having two children. Temperature was slightly elevated; pulse in the neighborhood of 120; prominent eye-balls. For some time had noticed palpitation, and had experienced fear and a sense of nervousness. The gland was punctured and a dark brown fluid drawn off. A solution of perchloride of iron was injected. Recovery was complete in this case. The second case gave a history of having had Grave's disease some six years ago. Recovery was complete at that time. When admitted to the hospital this time the patient showed every symptom of the disease. He had lost forty pounds. Temperature elevated slightly. Pulse varied from 130 to 160; no murmurs. Had several attacks of syncope; also troubled with attacks of diarrhoea. The treatment was rest in bed with iodide of potash and belladonna. There was very little general improve-

ment. The tumor which was present in this case was operated on by Dr. Peters, who removed it as well as a portion of the gland. The patient is now quite well.

FOREIGN BODY IN THE EYE WITH SKIAGRAPH.

Dr. G. Stirling Ryerson reported this case and exhibited the skiagraph. It is very seldom that we have a foreign body in the eye that it is necessary to take a skiagraph of. This was the case of a man doing work and it was supposed that a portion of the chisel broke off and struck the eye . . . It was not certain that the portion of steel was in the eye or not ; and it was a very important question to decide whether the eye should be removed or not. The injury of the eye was not visible through the ophthalmoscope. The skiagraph was entirely successful, and showed where the body was, and also showed its comparative size and shape to some degree. Immediately after the skiagraph was taken the eye was removed ; and it was found that a large portion of steel was firmly embedded in the eye and lying somewhat to the inner side of the optic nerve.

MISCELLANEOUS.

DON'TS IN CONNECTION WITH HEART DISEASE.—Don't feel called upon to give digitalis as soon as you hear a murmur over the heart. Study and treat the patient, not the murmur.

Don't conclude that every murmur means disease of the heart.

Don't forget that the pulse and general appearance of the patient often tell more than auscultation.

Don't neglect to note the character of the pulse when you feel it. Possibly you may look at the tongue to satisfy the patient; feel the pulse to instruct yourself.

Don't think that every systolic murmur at the apex indicates mitral regurgitation; every systolic murmur at the aortic interspace, aortic stenosis. The former may be trivial; the latter may be due to atheroma of the arch of the aorta.

Don't say that every sudden death is due to heart disease.

Don't forget that the most serious diseases of the heart may occasion no murmur. A bad muscle is worse than a leaky valve.

Don't examine the heart through heavy clothing.

Don't give positive opinions after one examination.—*Philadelphia Medical Journal.*

ACUPUNCTURE IN LUMBAGO.—In lumbago and similar myalgias, Sir James Grant inserts 12 or 14 small (No. 8) fine needles into the muscle through the skin for about one-half or three quarters of an inch. He places them about the same distance apart, and leaves them in for one or two minutes. Although before puncture the painful muscles may be hard and tense, they soon relax and become soft, pliable, and painless. The patients, although previously disabled on account of the pain, can walk about freely when the needles are removed. After their removal the skin is sponged, and friction applied with a rough towel.—*Montreal Medical Journal.*

TREATMENT OF BOILS.—Against boils a celebrated dermatologist recommends the following mixture to be painted over the part three times daily:

Ichthyol,	} aa	5i
Ether,		
Alcohol, diluted,		

In a few hours the inflammation subsides, and in three or four days the furunculi dry up and disappear. When, after a certain lapse of time, there subsists still indurations of the teguments, 1 per cent. of chrysarbin is added to the above solution.—*Paris Cor. Med. Press and Circular*

TREATMENT OF SCIATICA.—Ghetti (*Gazz. degli Osped.*, September 23rd, 1900) in two obstinate cases of sciatica, of many years' duration, has tried with complete success injection of salophen. An aqueous alkaline solution was made, of which each 10 c cm. contained 1 gram of salophen. This was injected into the gluteal muscles every other day. After the sixth injection the pain was materially lessened, and had practically gone after the eleventh. The patients were kept in bed until the fifteenth injection. Thirty injections were given in all, after which the patients, feeling quite well, wished to leave the hospital. They were seen fourteen months later, and had remained quite free from pain for the whole of the time. Salophen is supposed to split up into salicylic acid (of which it contains 51 per cent.) and acetylparamidophenol, when taken into the body.—*B. M. J.*

HYSTERICAL ANKLE CLONUS.—There is a widespread belief amongst medical men that when they meet with a case presenting a well-marked ankle clonus that case is necessarily one of organic disease of the spinal cord. This is, however, not the case; pronounced clonus being occasionally met with in purely functional cases, or even in healthy individuals who have been confined to bed in the horizontal position for a considerable time. This is well seen, for instance, in the case of patients suffering from fractures which oblige them to remain in a recumbent position. What I believe to be an important point of distinction between a clonus due to pyramidal tract degeneration and one due to purely functional causes, is the fact that whilst in the former the clonus can be elicited by simply supporting the foot at right angles with one hand and striking the tendo achilles with the edge of the other; in the latter it is necessary to sharply flex the ankle upon the leg in the ordinary way of eliciting a clonus.

With regard to this subject of functional ankle clonus, Angel Money has an interesting little article (*Australasian Medical Gazette*, August 20th, 1900) in which he lays down a good working rule: "I would say that if an ankle clonus of unvarying intensity, obtained by passive dorsal flexion, lasts thirty seconds, and can be got at any hour of the day and night, over a period of seven days, the presence of organic disease of the pyramidal tracts may be diagnosed with certainty."

He also touches upon the subject of what is known as "Babinski's Sign." In eliciting the plantar reflex the toes are, in a healthy individual, flexed upon the sole of the foot—the reflex is of the flexor type. Occasionally, however, one finds that instead of being thus flexed, the toes are extended in the response—the reflex is of the extensor type. The extension of the toes instead of flexion, is very strong evidence of organic disease of the cord. Money, however, states that "in one case of severe epilepsy of undoubted idiopathic kind, and in two of uræmic convulsions, he has noted a slight but distinct extensor reaction a few hours after the paroxysm had passed away.—*Med. Times and Hospital Gazette.*"

HOW TO CURE A COLD.—First, stop eating. The system is overloaded with impurities, and they must be eliminated. Fast until these

poisons can be disposed of in a natural manner. Take long walks, drawing in many deep, full breaths; exercise every muscle of the body, that the circulation may be quickened and every part of the body thoroughly cleansed by this accelerated circulation. Bathe at least once a day, rubbing the surface of the body briskly all over for five or ten minutes.

After missing from two to three meals, if a ravenous appetite is acquired, it is of course desirable to indulge the appetite, but in moderation. Under no circumstances should the stomach be gorged, and those foods which are unwholesome or but moderately nutritious should be avoided.—*Medical Press.*

NORMAL SALT SOLUTION IN DISEASE. — John R. Haynes, in the *Southern California Practitioner* for October, tells us of some of the good effects of normal salt solution in disease. Some physicians add other salines to the normal salt solution, but he believes the plain salt to be best in the proportion of 6 drachms of sterilized salt to one gallon of sterilized water at a temperature of 110 to 120 F. This solution acts as a direct tonic to the sympathetic nerve centres and to the muscles of the blood vessels as well as to the heart itself. It has also a direct germicidal action upon the bacilli in the blood and washes out the toxins and urea from the tissues and the blood. The apparatus is simple: a sterile fountain syringe with a thermometer embedded in its walls, four feet of hose connected securely with a large hypodermic or small aspirating needle. Two to four quarts can be used subcutaneously, but intravenous it should not be more than one pint at the time. The temperature should never be less than 110 F. The great value of this solution has been demonstrated in anemia, cholera, diabetic coma, dysentery, eclampsia, anesthesia shock, gastro enteritis, hemorrhage, peritonitis, pneumonia, poisoning, sepsis, septicemia, syncope, typhoid fever and uremia.—*Charlotte Med. Journal.*

ETIOLOGY AND NATURE OF PUERPERAL FEVER.—From the August 14th number of *La Semaine Gynecologique* we reproduce an abstract of the paper by MENGE and RRONIG, read before the recent International Medical Congress.

Puerperal fever is a term which embraces all microbial infection of puerperal wounds. It is not absolutely necessary for a rise of temperature to be present.

The pathogenic bacteria which can produce puerperal fever are as follows:

1. *Streptococcus pyogenes puerperalis.*
2. *Staphylococcus pyogenes aureus.*
3. *Gonococcus Neisser.*
4. *Bacterium coli communis.*
5. *Bacillus diphtheriæ.*
6. *Diplococcus pneumoniae.*
7. Certain miscellaneous anaerobic bacteria.

Puerperal infection may be heterogenic or autogenic.

By autogenic infection we understand that saprophytes, which were pre-existent in the tissues before labor, have become pathogenic; while in heterogenic infection the germs have been introduced from without.

In gonorrhoeal puerperal fever a pre-existent gonorrhoea of urethra, vagina, or cervix is the source of infection.

The first six bacteria enumerated are never saprophytic in the secretions of the vagina, so that autogenic infection must come from the anaerobic bacteria mentioned in the classification. This autogenic infection can hardly proceed from the tubes or uterus, but should originate in vagina or vulva.

Heterogenic infection is much more important as compared with the other type. Factors which play a prominent role in heterogenic infection are the virulence of the germs, the disposition of the infected individual, and also the number of germs. We know very little about these factors, but it appears to be certain that germs which have existed as saprophytes for a long time are less virulent than those which come from infected tissues.

Metastasis from local infection of the genitals occurs most commonly in connection with infection of the endometrium and placental site; more rarely from the cervix; most infrequently from infected wounds of the vagina and perineum.

Most cases of streptococcus infection of the endometrium are self-limited and recover of themselves; yet this germ has the greatest tendency of any bacterium to go beyond the primary focus.

Pestalozza also read a paper on the same subject before the Congress. During the quinquennium just expired, in which about 4,000 women were confined at the maternity; only 33 required isolation in the special ward provided for these cases, and of this number 30 recovered. No prophylactic vaginal injections were employed nor post-partum douching. On the other hand, 168 women confined at their homes had to be transferred to the septic wards and 23 succumbed to sepsis.

These good results of intramural confinements are explained by the simple precautions of disinfecting the external genitals and sterilizing all objects introduced within the vagina.

Vaginal disinfection before labor should be done only for cause—a gonorrhoea for example.

Putrid intoxication as distinguished from sepsis should be guarded against by preventing premature rupture of the membranes; by immediate suture of any vulvar, vaginal, or cervical wound; by judiciously aiding labor while not meddling. All these measures that prevent the persistence of membranous and placental shreds *in utero*.

On no account should any vaginal or uterine douche be resorted to after delivery.

If infection has occurred we must search at once for the point of entry which, we must bear in mind, may be multiple.

The streptococcus is the only germ yet found by Pestalozza in puerperal peritonitis or in metastatic foci. Staphylococci were found only in abscess of the uterine wall after cervical abortion.

Doleris, in a third paper, states that the anaerobic bacteria which

give rise to autogenic auto-intoxication comprise the *b. sepsis communis*, the *b. prutridus*, and certain others which are not yet fully determined. These germs are chiefly associated with placental retention.

Association of several forms of bacteria conduces more than certainly to infection.

Autogenic infection has recently received a special interpretation, which is, that there are no saprophytes in the utero vaginal secretions; all germs are pathogenic at all times.—*Obstetrics*.

ICHTHYOL is recommended by Dr. T. G. Lusk (*Post-Graduate*, xv., p. 1007) of the New York Post-Graduate Medical School and Hospital, for relieving the pain and preventing the rupture of vesicles in cases of *herpes zoster costalis*. An astringent, antiseptic drying preparation suitable for the purpose may be made as follows, says the author :

Ichthyol	2 fl. dr.
Magnesium carbonate.....	2 dr.
Zinc oxide	2 dr.
Water	to make 4 fl. oz.

This mixture should be sopped on and a binder applied to prevent rupture from friction. A 5 per cent. ichthyol collodion may also be used with advantage.—*Pediatrics*.

EFFECT OF SMOKING ON THE COMMUNITY.—Mr. Max Breitung (*Deut. Med. Zeit.*) says that most of the ailments attributed to smoking are due to the simultaneous excessive use of alcohol. Light and medium cigars are rarely harmful. The regular use of from twenty to thirty cigarettes daily cannot be without an evil effect upon the smoker. Cigarettes and cigars should not be sold to minors. Slight deafness and dimness of vision may be attributed to smoking, while the "tobacco heart" and chronic inflammation of the respiratory passages are due to excessive cigarette smoking. Moderate smoking of light and medium cigars and a moderate use of alcohol are advised.

PROPOSED METHOD OF MEASURING TASTE.—MM. Toulouse and Vaschide suggest measuring gustatory acuteness by dropping on the tongue titrated solutions of sodium chloride, saccharine, bromide of quinine, citric acid. They recommend to start with solutions so diluted as not to produce any perceptible taste, and to progressively concentrate them up to the limit of perception; the temperature of the liquids must invariably be 38° C., and from two to five minutes must intervene between tests—*Prog. Medical, Pr. Med. Jour.*

TREATMENT OF CONSTIPATION IN INFANTS.—It is better not to give much starchy food to children inclined to constipation. Meat juice and broth are valuable. Fruits, such as oranges, baked apples, stewed prunes, and ripe peaches are desirable aids.

Suppositories are valuable when only a slight stimulation of the

rectum seems to be necessary in order to begin the movement and induce a habit; and the oiled cone of paper is effective in some cases. When this is not sufficiently active, a soap suppository may be used, but this should not be continued too frequently.

Where the feces are hard and dry, I can see no objection to the daily use of small enemata of salt water, or soap and water, or, better still, olive oil. I have found benefit from the use of massage upon the course of the colon, the operation being performed in the direction the contents of the gut should take. I have not relied upon this procedure to the exclusion of other measures.

Medicinal agents are very unreliable in the treatment of chronic constipation in infants and young children, but the temptation is very great to give repeated doses of some active cathartic, that an immediate result may be seen. This does no good and is a very bad practice. An occasional dose of calomel is beneficial when the stools are white, dry, and offensive. Nux vomica, to improve the muscular walls of the intestines, is proper.

The best results are obtained by the most careful attention to diet, exercise, and being much in the open air, avoidance of living in superheated apartments, massage, regularity of time for the evacuation, and the squatting posture at the time of defecation without the intervention of chair or seat. This latter, of course, is only available in older children. —Dr. G. W. COOK, *American Journal of Obstetrics*.

THE TREATMENT OF WHOOPING COUGH. — Godshaw (*Medical Progress*, August, 1899) laments the fact that notwithstanding persistent study and experimentation we do not possess any reliable means for cutting short an attack of whooping-cough. The best treatment will do no more than palliate symptoms and diminish the frequency and severity of the paroxysms of coughing. This, however, is very beneficial and frequently essential, especially during the night. An opiate, when carefully selected will yield the desired results without doing harm probably better than any other drug. Papine is the best and should be given in doses of 5 to 10 drops to an infant one year old. Older patients will require proportionately larger doses. The object should always be to lessen coughing that the child may be able to sleep, and not to produce sleep. Some physicians rely chiefly upon antispasmodics—belladonna, bromides, asafetida, etc., but these frequently fail. The inhalation treatment has not proven as satisfactory as was at first hoped. The inhalation of steam is valuable to facilitate expectoration. Careful nursing to avoid complications, and the judicious use of papine will do much to lengthen the interval between fits of coughing even during the daytime, and thus husband the little patient's strength. —*Medical News*.

NOTE ON THYROID EXTRACT IN CRETINISM.—J. H. Musser (*International Medical Magazine*, November, 1900) contributes the following notes on the therapy of thyroid extract in cretinism.

Thyroid extract is of value in cases which may be classed as border-

land cases of cretinism—that is, some features of each case were those of a cretin, but many were lacking, so that it was not a fully developed cretin.

Thomas G——, a child of four, was plump and rotund, but flabby. He seemed vigorous physically. His growth was stunted. His countenance was heavy and abject, his lips thick, his mouth open, and his tongue often partially protruding. No other characteristics about the face. His abdomen was large. He was not apt in learning; he was unclean in his habits. He could not be taught to urinate and defecate properly. He was a rapid, gluttonous eater. He was more irresponsible to questions than normal, and was dull of understanding. He did not understand the reproof of his parents. He could not be trained.

Thyroid extract in one to three-grain doses was given each day. Rapid improvement took place, and in fifteen months he was changed in physical appearance and mental acuteness.

Another, a girl aged nine, was backward mentally. She had thick lips and large, partially protruding tongue, with salivary dribbling. No other suggestions of cretinism in physical appearance of face or trunk. She was unable to read, and indeed to learn the letters. She did not have any memory apparently. In some things she was bright. She was trained with the greatest difficulty into habits of personal cleanliness. She was more peevish and fretful than a cretin, and more childish than idiotic. She improved with the administration of thyroid extract in tablet form, and also of the powder sprinkled on her food. She is now bright, intelligent, and physically robust.

Other cases of partial cretinism not even as far advanced as the above, could be cited, as that of a lad aged six, who was backward mentally, unclean in habits, and subject to violent fits of temper and attacks of causeless diarrhea. He presented no physical appearances of the cretin. He got well with the extract.

It is not necessary to refer to the use of thyroid extract in myxedema and in myxedematous states. Its value in obesity is well known. It is a powerful remedy, and must be used with caution. A daily dose or one every second day may be sufficient. Musser gives one-half to one grain to children, and five to ten grains to adults.—*Medical Age*.

For Neurasthenia.

Professor Lemoine (*Nord Medical*, November 15th) makes use of the following method, giving every two days a subcutaneous injection of from 30 to 75 grains of the following solution:

R Phosphate of sodium.....	45 grains;
Chloride of sodium.....	30 “
Boiled water.....	1,500 “

M.

This dose of the phosphate, though very weak, often acts with great apidity when thus administered. Depression is even replaced at times by exaltation.—*N. Y. Med. Journal*.

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EDITORIAL.

IMPURE BEER.

Many human ills and much misery has been charged to the consumption of alcoholic beverages, but the most imaginative advocate of total abstinence probably never dreamed of dangers so real as those that have recently in England been definitely traced to the use of beer contaminated with arsenic. These disclosures will probably have more deterrent effect on consumers of alcoholics than many lectures on temperance, at least until the purity of the beverage is definitely assured. A remarkable epidemic of peripheral neuritis with many deaths has been shown to be caused by the use of beer in the manufacture of which, on account of greater cheapness, glucose was used in place of barley malt and hops. An investigation of the matter by competent men, with analysis of all the materials used in the process of manufacture, has shown that the sulphuric acid used in making the glucose contained a large amount of arsenic,—as much as 1.4 per cent. by weight of arsenious acid—which substance was also found in smaller quantities in the glucose and in the

beer made from it. In the vicinity of Manchester about one thousand cases of poisoning from this cause have come under the observation of, or have been reported to, the medical health officer, Dr. Niven. The symptoms presented were usually those of indigestion, associated with nausea, vomiting, epigastric pain, sometimes diarrhoea, coryza and oedema of the eyelids, ulceration of the gums or fauces, paralysis, neuralgia or anaesthesia, loss of hair or nails, and various skin lesions such as pigmentation, bullous or erythematous eruptions, etc. All the persons affected were habitual, but by no means always immoderate beer drinkers.

The satisfactory clearing up of the cause of this epidemic reflects much credit on Dr. Niven and his associates. It is a triumph for preventive medicine which will particularly appeal to the public mind. Already it is said to have greatly strengthened the agitation for pure beer in England—the advocates of which insist that beer be defined as a substance made from “barley malt, hops, yeast and water.” Beverages manufactured from other materials may be sold but not under the name of beer. As the greatest beer drinking country in the world, it is a matter of importance that the article supplied should be pure and wholesome.

THE WAR IN SOUTH AFRICA.

A recent statement by the British War Office shows the following mortality among officers and men engaged in the war against the Boers:

Killed in action or died of wounds, 404 officers and 4,070 men, or in the proportion of one officer to ten men. Died of disease, 163 officers and 6,566 men, or in the proportion of one officer to forty men. During the campaign 15,642 cases of typhoid fever occurred, with 3,625 deaths, or a mortality of over 23 per cent.

It would thus appear that while officers are exposed to greater danger from death in action, the men run a much greater risk from disease. This must be largely accounted for from the fact of the better hygienic surroundings of the officers lessening the incidence of the disease among them, and probably more favourable conditions for treatment and better care increasing their chances of recovery. A mortality of 23 per cent.—about three times as great as what obtains in civil hospitals under present methods of treatment—will appeal to most physicians as rather high. Recent wars have taught the lesson that the role of the physician and medical sanitary officer is much more important than that of the surgeon in looking after the welfare of the troops. The old “army surgeon,” who considered it his duty to lop off limbs, has passed away with the dawn of conservative aseptic surgery and preventive medicine. A number

consulting physicians with the British forces in South Africa would probably have been able to render services more valuable even than those rendered by the consulting surgeons sent out by the War Office

SHOULD BE REMEDIED.

“ Among the many curious discoveries made during the war, not the least interesting is that the War Office is unable to recognize any medical degree not obtained in this country. Surgeons of the highest standing in Canada, and holding commissions from Her Majesty in the militia, volunteered for service in South Africa, and a complete field hospital was offered by Canada, but in both cases the War Office refused to accept such service on the ground, forsooth, that it was “ contrary to the Medical Act of 1858,” to permit a colonially-trained surgeon to attend professionally to British troops. England was, therefore, required to find surgeons for the whole British army, colonial and home-born ! Such an Act as that referred to may have been very necessary 40 or 50 years ago, but a great advance has been made in medical education throughout the Empire, and especially in the self-governing colonies, since that date. An attempt is, therefore, to be made—or rather repeated, since the first steps were taken last session—to induce Parliament to amend the obsolete Act of 1858, so that properly-qualified medical men in the colonies may be admissible to serve the Empire in the naval, military and civil services of the Crown. There ought to be no difficulty in securing this alteration, unless the British medical profession offer strenuous opposition.”—*Naval and Military Record*.

Some of the statements made in the above are scarcely in full accordance with the facts of the case, as the various Canadian contingents were accompanied by their own medical officers, and Canadian graduates filled other medical posts during the war; whether they were technically eligible or not, we are not prepared to say. Certainly any legislation which places the medical branch of the colonial service at a disadvantage is unfair, and should be remedied. We are glad to see the cause of the medical profession championed from such a quarter.

HOSPITAL FOR SICK CHILDREN.

The debt on the Hospital for Sick Children has been reduced through recent contributions from those interested in the institution by over \$9,000, leaving a balance of some \$10,000 to be paid off.

An official statement recently issued shows the daily average of pat-

ients in the institution during the past year was 111½. During the 25 years of the hospital's existence, over 40,000 children have received treatment. During 1900 the total income was \$56,116, and the expenditure \$36,274, and at the present time the assets of the institution are estimated at \$215,180. Altogether the Hospital for Sick Children is one of the best equipped, best appointed, and best managed institutions of its kind in the world, and as such is deserving of the sympathy and most cordial support of the medical profession and the public of Toronto and the Province of Ontario. For its efficiency and its altogether satisfactory condition the credit is due, practically, to one man alone—J. Ross Robertson, Esq., the Chairman of the Board of Trustees. He has given freely of his own time, money and influence to this charity, which will stand for all time a monument to his public spirit and philanthropy. Montreal and other cities may have had larger donations to their hospitals from multi-millionaires, but for personal interest and devotion to the welfare of a deserving charity, no institution has ever received better service than the Hospital for Sick Children, Toronto. In season and out of season, through adversity and prosperity, Mr. Robertson has been a steadfast friend—a father in fact—to the institution. The matter of expense has never been allowed to stand in the way of anything that would increase the efficiency and usefulness of the Hospital for Sick Children. In the interests of the medical charities of our city, it is to be hoped that some others among our wealthy residents, may take an example by Mr Robertson's splendid munificence and zeal.

EDITORIAL NOTES.

Mrs. Eddy's Troublesome Tooth.

At the recent Protestant Episcopal Church Congress, Mr. W. A. Purrington, in the course of a criticism of Christian Science and its founder, Mrs. Eddy, remarked:

"She says there is no pain and disease, and that she can restore decaying bones to a healthy condition; yet she had her teeth extracted by Dr. Fletcher, of 77 North Main street, Concord, N. H., under the so-called painless method, by local anæsthesia, and she now wears artificial dentures made by him."

In *The Christian Science Sentinel* (December 6), Mrs. Eddy claims that this is an almost total misinterpretation of her position. She prints a statement from Dr. Fletcher saying that while Mrs. Eddy did have a "troublesome tooth extracted," it was not a carious tooth, neither was she in pain at the time. "She did request me to extract the tooth, allowing me to use my own painless method for extracting teeth, which I had recommended." Mrs. Eddy thus explains her metaphysical position in respect to surgery and other physical aids:

"Those familiar with my writings know that long ago I instructed Christian Scientists not to interfere with methods of surgery, but, if they should call a surgeon, to submit to his methods without discussion. Those who are unfamiliar with them, or misconstrue them, should hesitate to criticise without personal knowledge. The following is extracted from the Christian Science text-book, page 400, and has been published in said book since its first issue in 1875: 'Until the advancing age admits the efficacy and supremacy of Mind it is better to leave surgery and the adjustment of broken bones and dislocations to the fingers of a surgeon, while you confine yourself chiefly to mental reconstruction and the prevention of inflammation.' I have always instructed students in Christian Science to be wise and discreet, conforming, where conscience is not offended, to the usages of men. The practice of surgery is not introduced into Christian Science, whose rules and methods are based upon the examples of Jesus and His followers. Bishop Berkeley and I agree that all is Mind. Then, consistently with this premise, the conclusion is that if I employ a dental surgeon, and he believes that the extraction of a tooth is made easier by some application or means which he employs, and I object to the employment of this means, I have turned the dentist's mental protest against myself, he thinks I must suffer because

his method is interfered with. Therefore his mental force weighs against a painless operation, whereas it should be put into the same scale as mine, thus producing a painless operation as a logical result.

"Matter is but the objective state of mortal mind. It has only the substance and reality in our day-dreams that it has in our dreams by night. It is all the way the Adam-dream of mind in matter, which is mortal and God-condemned; it is not the spiritual fact of being. When this scientific classification is understood we shall have one Mind, one God, and we shall obey the commandment, 'Love thy neighbor as thyself.'" —*Literary Digest*.

No doubt this clear and scientific explanation of why she used a local anæsthetic, or why she had the tooth removed at all—since neither pain nor tooth have any existence—will appeal to and satisfy such minds as can believe her system. There is nothing except Mind, still Mrs. Eddy never neglects to collect the non-existent dollars which have made her a millionaire, nor to apply anæsthetics to relieve non-existent pain when she is the victim.

The surgeons will, no doubt, be glad to learn that she has no desire to interfere in their province. She surely places a limitation on Divine power as interpreted by Christian Scientists, if it is not applicable to surgery, but perhaps badly set fractures are too apparent for even the most devout and addle-pated of her followers to believe their non-existence.

A Woman's Hospital.

A meeting of those interested in the medical education of women was held in Toronto a short time ago, for the purpose of taking action looking towards the establishment of a hospital in the city, under the control of lady physicians. It is claimed that at present lady members of the profession are not accorded equal clinical advantages with men, and the proposed step is to obviate the difficulty. Toronto is certainly not suffering from any want of hospital accommodation at present, and the establishment of another institution will only further subdivide the scanty support now given to the various medical charities of the city, and will make keener the rivalry for patients among these institutions. This can not be in the interests of the city as a centre for medical education, nor of the medical profession as a whole. We hope the profession and the public will be spared the advent of another ill-supported, unnecessary, hospital in the city, clamoring for free patients, and attempting to pauperize the community. Let the women be given equal rights and fair play in existing institutions, but let us avoid the ever growing evil of the unnecessary multiplication of medical charities.

Doctors in Parliament.

Eighteen doctors have been elected members of the new Dominion parliament. Among the few conservatives who escaped the landslide in Quebec, we are gratified to see the name of Dr. Roddick. It would have been a distinct loss to the medical profession of Canada had he been defeated, especially when the efforts to establish a licensing board for the Dominion are within a measurable distance of success. Dr. Roddick has given much time and has shown energy and ability in overcoming the difficulties in the way of this scheme, and has rendered a public service in the interests of not only the medical profession, but the community at large, deserving the highest praise.

Trinity men who served in the War.

The following is a list of the graduates and undergraduates of Trinity Medical College who served in the war in South Africa, together with their rank and corps:—Lieutenant-Colonel G. Sterling Ryerson, M.D., A.M.S., Red Cross Commissioner; Major Fred. H. Brennan, M.D., A.M.S.; Captain Francis L. Vaux, R.A.M.C.; Lieut. L. E. Wentworth Irving, M.D., R.C.A.; Civil Surgeon H. S. Roberts, M.D., A.M.S.; Civil Surgeon John Percival Lea, M.D., A.M.S.; Civil Surgeon Ed. S. Worthington, M.D., A.M.S.; Howard G. Barrie, Y.M.C.A. Representative; Hospital Sergeant S. J. Farrel, M.D., R.C.D.; Hospital Corporal W. J. Macdonald, R.C.A.; Gunner W. T. Robertson, R.C.A.; Private A. H. Anderson, R.C.R.; Private W. M. Love, R.C.R. Can any Canadian College show a longer list?

Certificates Commending Drugs.

The University of Edinburgh have expressed disapproval of the granting of laudatory testimonials of drugs and proprietary remedies by their graduates; Formal disapproval of this practice from so high a quarter will, no doubt, have a salutary effect, and we may hope to see other institutions take similar action. It is quite too common an occurrence to see the names of well-known members of the profession appended to certificates used for advertising purposes.

PERSONAL.

Dr. Harold Anderson, of Ottawa, has been appointed Medical Quarantine Officer at Williamshead Station, B.C., to succeed Dr. Higgins.

Miss A. J. Scott, a graduate of the Toronto General Hospital Training School for Nurses, and for some years in charge of Dr. Temple's private hospital, has been appointed assistant lady superintendent of the Royal Victoria Hospital, Montreal.

Dr. J. H. Elliott, formerly superintendent of the Gravenhurst Sanitarium, has returned to his home in Bowmanville from the west coast of Africa. Dr. Elliott was one of the Medical commission sent out from the School of Tropical Medicine in Liverpool, to study the relationship of mosquitoes to malaria in the Congo.

Dr. Ivan Senkler, of Vancouver, son of the late Judge Senkler, of St. Catharines, was married on Dec. 20th to Miss Leila McKay, daughter of Donald McKay, Esq. of Toronto.

Dr. D. M. Anderson, formerly surgeon on R.M.S. Empress of India, has been appointed to a similar post on the transport Salmis. Dr. Colin Campbell succeeds him as surgeon on the Empress of India.

Dr. Dean and Dr. Stewart, formerly of the resident staff of the General Hospital, visited Toronto recently. Dr. Dean is practising at Fort William and Dr. Stewart has just returned from England.

Dr. Geo. M. Gould has resigned the editorship of the Philadelphia Medical Journal.

Dr. H. H. Alger, of Frankfort, and Dr. T. C. Carlaw, of Campbellford, both graduates in 1893 of Trinity, have recently taken unto themselves wives. THE LANCET tenders congratulations.

OBITUARY.

DR. RICHARD THORBURN.

A prominent member of the medical profession in Ontario, passed away on Dec. 10th, in the person of Dr. Richard Thorburn of Colborne. The deceased was a son of the late David Thorburn, at one time M. P. for Lincoln, and brother of Dr. James Thorburn, the well-known Toronto physician. He was born at Queenston in 1839. He received his medical education at Toronto University and Oxford, and after graduation began practice at Queenston, but removed to Colborne some fifteen years ago where he continued his professional work until shortly before his death

The deceased, who was widely known, was held in the highest esteem both for his personal qualities and as a physician.

Dr. David Nelles, who practiced for 18 years at Thornhill, Ontario, died at Grace Hospital, Dec. 23rd, 1900, at the age of 45 years. Dr. Nelles received a severe injury some two years ago, from which he never fully recovered

Dr. Fenwick, a well-known Kingston practitioner, died recently from septicaemia from being infected through paring a corn on the foot.

BOOK REVIEWS.

Operative Surgery. By Joseph D. Bryant, M.D., Vol. I, Third Edition, New York, D. Appleton & Co.

To those who have known Dr. Bryant as a teacher of surgery and as an operator of the largest experience and highest skill the announcement that a new edition of this work was in preparation would at once raise the expectation of a valuable addition to surgical literature.

In a rare degree the successive editions of this work have reflected the individuality of the operator, and every procedure advised has been subjected to clinical tests of the most searching kind.

There are surgeons not a few who can operate beautifully, but whose judgment regarding surgical matters is faulty to the last degree. There are surgical teachers who can reason admirably, but who simply cannot operate. Dr. Bryant is a close observer, a logical reasoner and a brilliant operator, and by virtue of this is exceptionally fitted for undertaking the preparation of a work on operative surgery.

Thoroughly up to date in every section, the work has in English at the present time only two competitors, these being, the comprehensive and excellent volume by Mr. Jacobson of London and the Manual of Surgical Treatment by Cheyne and Burchard, now in process of publication.

The work before us deals with operations generally, the surgery of the circulatory and nervous systems, operations on tendons, ligaments, muscles and bones, amputations, the treatment of deformities and plastic surgery.

No one in active surgical practice, or called upon to do surgery under emergencies, can possibly regret the purchase of this work, or fail to be benefited by a careful study of it. It goes without saying that a medical publication from the press of the Appleton Company would be a pleasure to the book-lover, and a credit to the firm which has given us within recent years so many sumptuous and beautifully illustrated medical publications.—N. A. P.

TAYLOR ON GENITO-URINARY AND VENEREAL DISEASES AND SYPHILLIS.

The Pathology and Treatment of Genito-Urinary and Venereal Diseases and Syphilis, By Robert W. Taylor, A.M., M.D., Clinical Professor of Venereal Diseases in the College of Physicians and Surgeons, New York. New (2nd) edition. In one very handsome octavo volume of 720 pages, with 135 engravings and 27 full-page plates in colors and monotone. Cloth, \$5.00, net; leather, \$6.00, net. Lea Brothers & Co., Publishers, Philadelphia and New York.

This work is so well and favorably known to the profession that an extended review is unnecessary. It represents the most advanced ideas and the soundest teaching on the subject with which it deals. The author has eliminated much useless material, descriptions of obsolete operations, tedious details of rare conditions and has presented a concise though sufficiently complete work dealing with all that is practically useful to the practitioner. Urinalysis, anatomy, bacteriology and other departments of the work now fully taken up in treatises devoted to them especially, are discussed briefly and only in so far as is necessary to make the work practically complete. The author has wisely devoted almost the entire space to matters not dealt with elsewhere and has thus avoided needless padding, and over-lapping of other works. Altogether the treatise is deserving of the most unqualified commendation.

PROGRESSIVE MEDICINE.

Editors: H. A. Hare, H. R. M. Landis. Lea Bros. & Co., Philadelphia and New York. Vol. IV, December, 1900.

This volume does rather more than preserve the standard set by preceding numbers. The contents alone should tempt any purchaser. Padding is absent and the condensed result of most modern views and methods are readily obtainable by the reader. Einhorn has a resumé of diseases of the digestive tract and allied organs, liver, pancreas, peritoneum. Bloodgood of Johns Hopkins, supplies a most helpful and stimulating series of papers on fractures, dislocations amputations, surgery of the extremities, and orthopedics, constituting perhaps the bulk of the volume, pages 91-222. The paper on surgery of joints and bones appeals strongly to the reviewer, particularly the resume given of orthopedics of rare origins.

Diseases of the kidneys are treated of in most modern fashion by Bradford of University College, London. Physiology, hygiene, genito-urinary diseases, and syphilis, are in the hands of Bracbaker, Baker, and Belfield respectively. The volume ends with a most useful "Practical Therapeutic Referendum" by Thornton of Jefferson College, in which all the modern serums and synthetic compounds of any notable value are dealt with sufficiently in *extenso* to make the article a valuable one for reference.—J. T. F.

SYP. HYPOPHOS. CO., FELLOWS

CONTAINS

The Essential Elements of the Animal Organization—
Potash and Lime;

The Oxidizing Elements—Iron and Manganese;

The Tonics—Quinine and Strychnine;

And the Vitalizing Constituent—Phosphorus; the whole combined in the form of a Syrup, with a slight alkaline reaction.

It differs in its effects from all Analogous Preparations: and it possesses the important properties of being pleasant to the taste, easily borne by the stomach, and harmless under prolonged use.

It has gained a Wide Reputation, particularly in the treatment of Pulmonary Tuberculosis, Chronic Bronchitis, and other affections of the respiratory organs. It has also been employed with much success in various nervous and debilitating diseases.

Its Curative Power is largely attributable to its stimulant, tonic and nutritive properties, by means of which the energy of the system is recruited.

Its Action is Prompt: It stimulates the appetite and the digestion; it promotes assimilation, and it enters directly into the circulation with the food products.

The prescribed dose produces a feeling of buoyancy and removes depression and melancholy; *hence the preparation is of great value in the treatment of nervous and mental affections.* From the fact, also, that it exerts a double tonic influence, and induces a healthy flow of secretions, its use is indicated in a wide range of diseases.

When prescribing the Syrup please write, "Syr. Hypophos. FELLOWS" As a further precaution it is advisable to order in original bottles.

FOR SALE BY ALL DRUGGISTS.

DAVIS & LAWRENCE CO., LIMITED

WHOLESALE AGENTS

MONTREAL

The 1901 issue of the *Physicians Visiting List* (Messrs. Blakiston, Son & Co.) is at hand.

The plan suggested for recording of visits is simple and useful; there is also space for engagements, addresses, cash account, etc. The early pages of the book are devoted to description of the metric system of weights and measures, tables of dosage, directions for comparing the different varieties of thermometers, and a table for working out the period of gestation.

The book is attractive both in appearance and utility.—H. C. P.

PUBLISHERS DEPARTMENT.

THE PREDATORY MOSQUITO.

Every physician who "keeps tab" on the advances and discoveries of medical science is now aware that there are two kinds of mosquitoes—the good and the bad. We presume, however, that some one will dispute this statement, and say of this insect as the average army officer says of the Indian, "There's no good mosquito but a dead mosquito." It's true that they all sting, but some of them add insult to injury by injecting the malarial virus into her unsuspecting victim. We say *her* because we believe the male mosquito is a better behaved insect than his spouse and does not "present his little bill" at inconvenient times.

These few remarks are not but prefatory to the announcement that THE PALISADE MFG. CO. has prepared and is now mailing to physicians an illustrated folder, showing in sepia the distinctive differences between *Culex* (the non-malarial) and *Anopheles* (the malarial) mosquito, with instructions as to how to detect the good insect from the bad. A copy will be mailed to any physician who has not as yet received one.

JOS. WESLEY MALONE, M.D., Blythedale, Pa., says: I am so well pleased with CELERINA that I cannot refrain from citing several cases of interest I prescribed it very frequently, and have never had it to fail yet. I used it in a case of cholera. The patient was a little girl, ten years old, suffering from an acute attack. The case had been given up by two physicians and was a very bad one. The usual remedies, phosphorus, arsenic, etc., had been used and had no great effect. I advised the attending physician, an old practitioner, and a good one, too, to try CELERINA. He did not take much to the idea, but after urging him he consented, and the first dose gave relief. From that time, the child got better, and in about four weeks was cured. It acted like a charm, and the old physician, who had never used it, was so well pleased, that I am sure he will try it again. I have prescribed it in nervous prostration and have yet to find it to fail. It is pleasant to take and produces no nauseating effects, as other remedies do when used for some time. I frequently prescribe it with ALETRIS CORDIAL, and it also goes well with Peacock's Bromides. I shall continue to prescribe it, and shall watch its merits closely.