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AN ADDRESS.*

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FOR my presence here and the permission to address you, I am indebted to the kind invitation of your faculty. They have prompted me to speak to you, my fellow students, of medical education in my early days, of my contemporaries, medical and lay, and some other subjects. Unfortunately, that theme demands that now and then I shall have casually to mention myself, not as a co-operator, it is true, but as an interested looker-on, when great things happened and good and great men worked for the realization of what you in these days are harvesting as a spontaneous and legitimate heritage.

Indeed, I have lived under the eyes of and with great men and during the very development of modern medicine. The history of these times should be known to every student of medicine and of social science, for truly as we cannot comprehend any country without the knowledge of its origin and the circumstances in which it grew, and of the men who thought and fought for it, so there is no way of understanding and appreciating modern medicine without a fair acquaintance with its annals.

What you are expected to learn in four years is a part of the results of previous labors performed during hundreds, ay, thousands of years by legions of men of industry, honor, and sometimes genius. What any single generation of men has created, however, should be considered an episode only. Part of such an episode I shall, at the suggestion of the great and good men assembled on this platform, recall to your mind as belonging to our common history.

I began the study of medicine only fifty-eight years ago. Now, you have often noticed that in a clear atmosphere a distant height separated from you by ever so many extensive ridges and deep valleys that your weary feet have measured ever so often, seems to you near by, almost within reach. Thus that early time appears to me, looking backward these six decades replete with the exertions of persevering men working in the same direction, for the same ends, in different ways it is true, in laboratories and clinics, all in behalf of the welfare—individual and collective—of mankind.

* Introductory to the course of study delivered before the Medical School of McGill University, Montreal, Sept. 19, 1905.

I studied medicine in the three universities of Greifswald, Goettingen, and Bonn from 1847-51; vegetated in Prussian prisons until 1853, and tried to practise medicine in Manchester, England. But Old England and I did not get on very well with one another—at least I did not—and since the end of 1853 I have enjoyed the always generous hospitality of my second and kinder motherland, the United States of America. That is all there is of *me*.

Some of you may be interested, however, in learning why any young man should study in three universities, in place of one, as is the custom with us. Part of the German universities date from the Middle Ages—those of Prague (1347), Vienna (1365), Heidelberg (1346), Cologne (1388), Erfurt (1392), both of the latter now extinct, from the fourteenth century. The more recent ones have readily adapted themselves to the inherited customs. The search of adventure, the eagerness to see distant or foreign parts, or the reputation of a famous teacher would draw hosts of young men away from their firesides and neighborhoods. A personal instance of that I may be permitted to mention. When I left the “Gymnasium” I knew the world from books—that is, not at all. A few miles adjoining my village and my college town formed my actual horizon. So I selected a university on account of its distance from my home. Even in that respect, however, I could not satisfy my longings to their fullest extent; for the two ends would not meet, that is, the fare between my village and Königsberg was excessive compared with my means.

Now, when I had been in Greifswald three semesters and had taken a bird's eye view of what medicine might imply, I felt the necessity of studying more chemistry, and pathological anatomy. You wonder, you men of the twentieth century, what I may mean. Now, at that time there was no Adami at Greifswald. There were, alongside of Vienna where Rokitansky taught, only two places in all Germany in which pathological anatomy could be learned. One of them was Würzburg, there was Virchow; the other was Goettingen, there was Frerichs. So to Goettingen I went in search of pathological anatomy. My notes of that year and my clumsy drawings I still esteem very highly. At the same time I looked for the advantages of chemical laboratory work under Wiggers and Woehler. You see, I have already mentioned to you names that will never disappear from the history of medicine. In Goettingen I remained a year only, on account of the inferiority of its clinical instruction.

Our senior professor of clinical medicine, for instance, was never satisfied until he tortured out of every patient the admission that some time or other he had taken a drink of cold water. A “cold drink” was his universal etiology. In that respect he was worse than even

Cotton Mather, who, according to William Sydney Thayer's interesting paper in this September number of the Bulletin of Johns Hopkins Hospital, knew all about hell—for other people—and witches and something of medicine, and preached: "Never take water, or anything else, cold, when you are hot with labor. There is death in the pot."

It is true Wilhelm Baum had come from Greifswald to take the chair of surgery, but I wanted modern methods of clinical diagnosis, such as Friedrich Nasse was teaching, guided by the French and the new Vienna School. So I went for my last three semesters to Bonn. This custom of changing universities had and has the disadvantage of precluding devotedness on the part of students to their alma mater and substituting, if anything at all, the attachment to a revered and famous teacher. Besides, in Germany, all the universities are government institutions. There are no medical schools unconnected with a big state university, and there was and is no personal, no heartfelt interdependence between the student and his intellectual mother. But for Germany this interchange of universities may have had a good political influence, though it was counteracted by the ambitions, greeds and jealous tyrannies of the hundreds of principalities finally overthrown by the first real Napoleon a century ago, and of the thirty-eight territorially or mentally and morally inferior countries of my time. Even to-day, you know, they have not yet consolidated into a united Germany, and never will until Germany will be a republic. Young men would congregate in a university from all parts of Germany and could not help being influenced by diversified intercourse. I have no doubt that in spite of the demoralizing influences of the absolutistic governments, the concourse of young men belonging to distant parts of the country must have exerted, when the time matured, a unifying effect.

Let me now speak of medicine as it was in Germany a very few years before I commenced its study. Stieglitz, an old and learned practitioner, expressed himself in 1840 as follows: "German medicine has sunk so low and is so emasculated as to require any sort of shaking up. Whatever gives it a new direction will be wholesome, though new errors or possibilities may result therefrom." And Paulus, a professor of theology at Heidelberg, is quoted by Kussmaul as having stated that the philosophy of Schelling, so prevalent during almost half a century, was dangerous to medicine; its influence was "tragic," it amounted to "legerdemain;" medicine was injured by speculations evolved at the desk, and German medicine was inferior to that of France on account of its bad method.

This bad method is characterized in a few words. Like Plato of old, the Germans of several centuries, down to 1850, constructed their

theories without a material basis; facts were disregarded or explained away, *a priori* new systems were constructed out of sheer imagination or on the strength of insufficient or distorted knowledge. One wanton system would follow another; not in Germany alone, however. Thus Van Helmont, Sylvius, iatromechanism with Paracelsus as its principal prophet, Fr. Hoffman, Stahl, the Solidarists, the Humoralists, John Brown, Rasori and his contrastimulus, animal magnetism, nature-philosophy, Hahnemann, Rademacher, Broussais and Bouillaud, all had to be outlived and overcome.

The actual progress of medicine began when the influence of mere theorizing was broken. Gradually the sterile nature-philosophy of Schelling and the equally unprofitable dialectic contortions of Hegel ceased to draw minds into the abysses of speculation, and German text-books and monographs were no longer all written in hopelessly unintelligible language. The first part of the nineteenth century, however, belongs to France, its latter half only to Germany. That is why the terms "French medicine," and "German medicine," are unduly prominent in medical terminology. It is only now that we begin to speak of medicine without any regard to nationality. It has become international, cosmopolitan. The fraternization of mankind seems to grow its first roots in science; that, at least, has no Russia of its own to exterminate, or to revolutionize.

I am fortunate in having studied during an active period. Let me report to you what happened in those very few years, and congratulate you upon the wealth of scientific conquests laid at your feet without your co-operation. By so doing, I may impress upon your minds the necessity of paying attention to the constantly increasing results of the work of this very year, of your year, of every year.

In 1847, my first medical year, Hermann von Helmholtz (1821-1894), published his address on the preservation of force; ether anaesthesia was used in obstetrical practice by Hammer of St. Louis (1818-78), in dentistry by Delabarre (1819-1878), of Paris; Justus von Liebig (1803-1873) published his researches on meat; prismatic glasses were employed by Kreke and Franz Cornelis Donders (1818-1889) the great Dutch ophthalmologist; ether and afterwards chloroform were introduced into Scotch obstetrics by James Young Simpson (1811-70), of Edinburgh. The scapula was removed by Sir Wm. Ferguson (1808-77); Faradization was recommended by Duchenne (1806-75) in that form of paralysis which has long been known by his name. Unstriped muscular fibres were described by Rudolph Koelliker (born 1817); Semmelweiss (1818-1865) discovered at the autopsy of Professor Kollerschka (1803-1847), who died March 13, 1847, of sepsis contracted during an autopsy, the same lesions that were found in puerperal

fever. He also found that in the wards of puerperal women which were visited by the students who worked in the dissecting rooms, a larger percentage would die than in those accessible to the midwives only. They did not dissect. He reduced the mortality, by merely obliging the students to wash in calcium chlorid before entering the sick wards, by more than two-thirds. He learned from clinical observation what Lister learned from Pasteur. He established the contagious character of puerperal fever, like Oliver Wendell Holmes, who in 1843 wrote his immortal paper in the *New England Medical Monthly*. They shared a similar fate, with great differences, it is true. Holmes was, on account of his observations, ridiculed by Hodge and Meigs, the obstetrical sages of Philadelphia, until Hodge and Meigs found themselves alone with their prejudices and ignorant obstinacy,—and enjoyed smilingly the admiration and veneration of the English-speaking world for fifty years afterwards. Semmelweiss was persecuted by Braun and Scanzoni, and, I am sorry to say, also by my friend Spaeth, who would not admit that their lack of methods had killed thousands of women and newly-born, and was driven out of Vienna and angered into a lunatic asylum. Posterity had to come to the rescue. As a rule, the benefactors of mankind have been crucified or starved; all is considered corrected by a monument.

1848. Crusell (1810-58) expounded the indications of galvanocaustics, mainly in strictures, carcinomata, and ulcerations (Bull. Phys. Math. de l'Acad. Imper. des science De St. Petersburg). He claimed chemical effects only, denying the vital action of galvanism.

The quantitative analysis of urea was taught by Robert Wilhelm Bunsen (1811-1899), the same who afterwards, in co-operation with Kirchhoff, founded spectral analysis.

Per Hendrik Malmsten (1811-1883), discovered the trichophyton tonsurans (*Hygiea* VII) and *Balantidium coli*.

1849. J. Arnott (1794-1885), taught the employment of cold for the purpose of procuring anæsthesia.

Claude Bernard (1813-78) performed his "piquere" of the fourth ventricle and caused diabetes.

Pollender, a veterinarian, discovered bacilli in the blood of animals infected with anthrax, preceding Brauell (1855), and Davaine and Robert Koch (1876). (*Ferd. Cohn Beitr. Zur Phys. d. Pflanzen.*)

Jos. C. Hutchinson (1827-87) invented the spirometer.

Charles D. Meigs (1792-1869) found thrombosis in veins to be one of the causes of death in puerperal women.

Marion Sims (1813-83) cured a vesico-vaginal fistula.

In 1850 another American, William Detmold 1808-1895), of New York, opened an abscess in the cranial cavity and was roundly abused

for claiming an impossible thing as an American swindler, in as high-toned a German magazine as the sixth volume of Virchow's Archiv.

The velocity of nerve irritation was measured by Helmholtz.

J. Walker proved the infectious character of secondary syphilis.

In 1851 Helmholtz invented the ophthalmoscope and studied the duration and course of the induced current.

Virchow discovered the sheath of the cerebral vessels.

Bernard explained the vasomotor function of the sympathetic nerve.

Romberg (1795-1873) published his studies on *Tabes dorsalis*.

All this happened while I was a student.

You recognize in my fragmentary enumeration facts of crucial import.

Very soon after my graduation, in 1851, however, I was no longer in a position to follow the rapid current of events. So when after years I returned to the world I learned that within two years Helmholtz had measured accommodation, Cohn proved the vegetable nature of bacteria, Schroeder demonstrated the bacterial nature of fermentation, Pravaz invented subcutaneous injection, Bernard recognized the liver as the glycogenic organ, Vierordt constructed his sphygmograph, Wagner and Meissner discovered the tactile corpuscles, Küchenmeister the connection of the taenia with the scolex found in pork, Bigelow performed the first resection of the neck of the femur, John Hughes Bennet coined the term leucocythaemia, and Moleschott had written his "Circle of Life" (*Kreislauf des Lebens*), for a long time the bible of Materialists. One of the most important discoveries was that of Funke (1852) and Lehmann (1853) who proved hemoglobin to be a crystallizable unit capable both of binding and of eliminating oxygen.

Thus I found the world was progressing. Medicine had contrived to throw off the fetters of transcendentalism and had embarked irrevocably in its development as a part of biology with only one goal—to seek truth wherever it was, and with one ideal purpose—the benefaction it could bestow on mankind by curing or preventing disease.

There is a trinity of doctrines which have redeemed medicine and made it part of biology; 1st, *Experimental Physiology*. It was founded by the French, mainly Magendie, Flourens, Bernard, Fourget and Paul Broca. England furnished Charles Bell, Marshall Hall, and William Bowman; and Germany, Johannes Müller. 2nd, *Clinical Diagnosis based on Pathological Anatomy*, as developed by the Vienna school. It is represented by Rokitansky and Skoda. 3rd, *Experimental Pathology*, which found its spokesmen in Virchow and Traube, of Berlin. That is why the names of Paris, Vienna, and Berlin are immortal in our science and art. I say, *science and art*. What I want you always to remember

is that science and art should never be separated in the consciousness of a medical student and practitioner. Our science is biological; our art is therapeutic, that means preventive, dietetic, pharmacal, surgical, obstetrical; our profession exists for the purpose of therapy. The translation of "therapy" in its most comprehensive meaning, is service, service to the individual or the commonwealth. Cicero tells us: "*nisi utile est quod faciamus stalta est gloria*"—unless there is some good in what we are doing the glory of it is sterile; and Benjamin Franklin seems to have translated it in the words, homely but impressive: "What signifies philosophy that does not apply to some use?"

The permanent regeneration of modern medicine originated in German Austria and in Germany about the fifth decade of the nineteenth century; that is the very period of European political and, in part, social revolutions. A philosopher would find ample opportunities to demonstrate the equable and cotemporaneous growth of diverse historical evolutions. Some of the men who participated in or directed the work, both political and scientific—though in years I was an immature boy—were at that time, or afterwards, my comrades, or friends, or teachers. Personal relations I had none, however, to Rokitansky and Skoda.

Carl Rokitansky (1804-1878) began his revolution of pathological anatomy in 1836 with a paper on intestinal obstruction. (*Medic. Jahrb. des K. K. Oesterr. Staats*). He published the first part of his special pathological anatomy in 1841, and his general pathology in 1846. I wish you would study particulars in any great historical description of our science. You will then understand why pathological anatomy of the human body, as he taught it in all its stages of formation and retrogression—of hyperaemia, exudation, new-formation, and disintegration—was a revelation to the medical minds of the nation, and soon afterwards of the globe.

But even he was one-sided and human. He never could divest himself entirely of the influences of his bringing-up. Humoral pathology possessed him sufficiently to make him create the theory of crases (blood mixtures) which induced him, and still more his followers, to believe in a croupous crisis, which was subdivided into an A, β , γ class—an albuminous, apthous, exanthematous, and a puerperal crisis. His Colleague, Engel, fought him; it took a Virchow however to annihilate him, and never was Rokitansky greater than when he acknowledged his defeat by the young giant of Berlin.

Joseph Skoda (1805-81) published an essay on pericarditis in 1834, his first paper on percussion in 1836, and his monograph on percussion and auscultation in 1839. In his studies and methods he followed the great Frenchman, Laennec. It is true he adopt-

ed the ontological character of Laennec's reasoning, even crases were adopted under the influence of Laennec and Rokitansky, but both Rokitansky and Skoda cut loose from the verbose ignorance and supercilious stolidity of German medicine. Helm, the obstetrician, Kolletschka, the pathologist, Schuh the surgeon, and Hebra, the dermatologist, were eager followers and co-operators. Thus you may well imagine that Vienna became the Mecca both of Germans and of foreigners.

Meanwhile criticism was not idle.

One of the involuntary jokers, a Dr. Phillipps, of Berlin, that had not yet been wakened up by Virchow, made himself ridiculous by trying in 1845 to ridicule Skoda's work of 1839, and in the same year a Dr. Krüger-Hansen, in "Praktische Fragmente" annihilated auscultation in the following way. Listen :

1 A chaste maiden would not submit to uncover her bosom to the inspection of a young Aesculapius who is a stranger to her or who may not enjoy the best reputation.

2. If auscultation were necessary, deaf practitioners who all wish to continue their practice would be badly off.

3. It is impossible to express or to systematize by language, inadequate as it is, the sounds and murmurs inside the chest. Literally, he says, "Any scientist is hereby challenged to express in words the song or the din of birds."

4. It is only a hiding of practical ignorance "for the practitioner to apply his ear and to look learned as if sitting on the Delphian tripod."

5. Only such as have weakened eyes and ears should aid them by spectacles and stethoscopes.

6. "How great would be the expenditure for patients living in the country if it were necessary to call a doctor even for one's servants in order to establish an indication by means of a stethoscope."

7. But "if one would send such an instrument into the country and ask for a report, how would an uncouth workman who is used to the flail only manage the thing, and what sort of nonsense would be his report?"

8. Auscultating doctors cannot prove that more and speedier recoveries result from the treatment; "if they mean to prove the correctness of their diagnosis, they must first have their patient on the autopsy table."

Remember that was only 60 years ago, twenty-five years after Laennec's publication, six years after Skoda's book appeared, and only two years before I began the study of medicine.

Still the awakening was rapid. In 1841 Wunderlich, with whose name you are familiar, as that of the popularizer of clinical thermometry

in his journal and afterwards in his book of 1868, wrote a pamphlet on French medicine and the young Vienna school, and its fertilizing and reforming effect; influential new journals were started by him and Roser, by Henle and Pfeuffer, by the faculty of the University of Prague, and one for pathological anatomy by Florian Heller (1813-1871). Good text-books made their appearance, such as Hoeffle's "The Microscope at the Sick Bed," and Gaal and Heller's "Clinical and Chemical Diagnosis."

Meanwhile, what became of therapy? Rokitansky's, the anatomist's occasional therapeutic suggestions could not possibly mean much; Skoda, who directed the clinical hospital, made a number of poorly managed experiments with drugs which convinced him, whose attention was taken up with diagnosis, that therapeutics was a hopeless problem. The Vienna nihilism had no more outspoken prophet, however, than Joseph Dietl (1804-78), professor in Krakow. Says he, as late as 1851: "Our practical work does not compare with the amount of our knowledge. Our ancestors laid much stress on the success of their treatment of the sick; we, however, on the result of our investigations. Our tendency is purely scientific. The physician should be judged by the extent of his knowledge and not by the number of his cures. It is the investigator, not the healer, that is to be appreciated in the physician. As long as medicine is art it will not be science. As long as there are successful physicians, so long are there no scientific physicians. Our power is in knowledge, not in deeds."

Indeed, there were hosts of medical men who never thought of their diseased patients, but only of the ontologic "disease," and looked upon the doctors who wished to save their patients as weak characters and mediocrities.

The upshot of all this was that the patient who you may think in your innocent minds had the pardonable wish to get well, had nothing to do but—

- 1st. To be percussed and auscultated by Skoda;
- 2nd. To be autopsied by Rokitansky;
- 3rd. To see to it that the diagnosis and the result of the autopsy agreed. This, however, he could not conveniently do, though he was permitted to be present.

And another result was that the public was compelled to apply to homoeopaths, dealers in animal magnetism, water-cures, masseurs, gymnastics, or to Johann Gottfried Rademacher (1772-1849) who about the same time elaborated a system taken from Paracelsus by which all diseases were classified according to whether they were curable by sodium nitrate, or by iron, or by copper. That is, all diseases were subsumed under the three heads: saltpetre diseases, iron diseases, and

copper diseases. His big book was published between 1842 and 1849.

All these either misguided or downright quackish men held out some hope to the suffering and offered some more attractive proposition than merely the autopsy table of the scientist. But the time was greater than they, and the wheel of history moved rapidly.

One of the few men who knew his mind and that of medicine, and had his hand on the pulse of mankind, was Oppolzer.* In his inaugural address at Leipzig (1848) he expressed himself in the following words: "Those are greatly mistaken who believe that a modern physician is he who examines a patient most carefully, auscultates and percusses, and is satisfied when the autopsy corresponds with his diagnosis. Such a medical man does not comprehend that the most sublime aim of all medical service is the healing of the sick." I remember the time quite well. It was during my third semester in Greifswald, when the German revolution of 1848 spread over the land like a wildfire, burning in the hearts of many of us; unfortunately, however, unable to burn the tottering thrones. The magazine containing Oppolzer's address had just arrived, an older fellow-student jumped on a table, waved the paper, and cried out: "Here is another revolution, a real declaration of independence. Hurrah for the revolution in medicine!" Never before had any man united, like Oppolzer, science and practice, never was diagnosis made anatomical, or therapy based on indications as by him. Gradually even the patients became dissatisfied unless they were examined and their cases diagnosticated. Luckily for them they are of the same mind at present.

To account for my selecting Göttingen as my second university, I spoke of my search after chemistry and pathological anatomy. Friedrich Woehler (1800-82) was a teacher in the Technical school in Berlin before he became a professor in Göttingen. It was in Berlin that in 1828 by atomic transposition he found urea to be identical with ammonium cyanate, and thereby became the founder of organic chemistry and the originator of an interminable number of discoveries. As I worked under him several months in succession, I once took the liberty to ask him whether he thought he would some day be able to construct more organic matter out of anorganic substances, for evidently he had proven there was no boundary line between the organic and the anorganic world. The big bright eyes and the wrinkled face of the little man smiled and he said: "Give me time, just wait and ask me again Christmas day—in the year 2000." He did not wait long enough, but still he saw a small part of his teaching put into practice by his pupil Fr. Hoffman, the discoverer of anilin dyes and other coal tar products which are now utilized in industry and in medicine.

* (From Prague he was called to Leipzig in 1848, thence in 1850 to Vienna, where he died in 1871.)

Theodor Frerichs (1819-85) was one of the most many-sided medical scholars I have known. He was at that time an adjunct professor—what in Germany they call an “extraordinary”—and appointed to teach pathological anatomy. Being a thorough chemist, he also delivered courses in which chemistry and pathological anatomy were treated in their relation to clinical medicine. In those young years of his, he performed his epoch-making labors for Wagner’s Handbook of Physiology. He was a man of few words all his lifetime, deliberate, every word with a meaning and a purpose, both when he talked and when he wrote. Our first conversation was as follows: “New student, which semester?” “Fourth.” “Where from?” “Greifswald.” “What are you looking for in Göttingen?” “Pathological anatomy.” “Nothing else?” “Whatever is going, but there is no pathological anatomy in Greifswald.” “All right, the laboratory will be open for you all day.” “What about Sundays?” “Did you have Sundays in Greifswald?” He became professor and director of the clinic in Kiel, in Breslau, and in Berlin. We know him best by his remarkable contributions to the Handbook, by his “Bright’s Disease of the Kidneys,” (1851) his “Klinik of the Diseases of the Liver,” (1858), and his writings on uraemia, on diabetes (1884), and his discovery of leucin and tyrosin in the urine of the yellow atrophy of the liver.

In Göttingen, however, I found more than I had looked for.

Hermann Lotze (1817-1881) must have had a great influence on the youthful minds of those who listened to him during his long professorship. I attended his lectures in the winter following the German revolution of 1848, and was fully prepared to accept anything revolutionary in the field of science. Moreover, he gave the lie to those who claim that an eloquent lecturer is rarely an efficient teacher. He was both; the sickly looking man warmed your heart while he added to your mental stores. I was fully prepared to appreciate him, for the prerevolutionary time had made me acquainted with the materialistic tendency of many parts of philosophical literature. The iatro-mechanic school of the renaissance—that of Paracelsus, Helmont, and Sylvius—looked upon the human body as a purely physical organism; with René Descartes (Cartesius) (1596-1650) I was somewhat familiar, and La Mettrie’s “L’homme machine” (1709-51), the product of encyclopedistic France, had been my gospel. Thus it happened that I was greatly struck with Lotze who both in his book on “General Pathology and Therapy Considered as Mechanical Natural Sciences,” (1842, 2nd edition, 1848) and in his lectures taught the presence of a mechanical legality of all organic and anorganic life. Still he would happily clothe these views with his inborn idealism and look for connections with the principles enunciated by Spinoza and by Leibnitz, which many years

later he published in the three volumes of his famous "Mikrokosmos," (1856-64). Thus his materialism was of an idealistic and refined sort. Altogether I warn you not to scoff at materialism as pulpits do and not to consider it a system or a dogma, but a principle only which may be evolved out of the great modern discoveries in chemistry, physics and physiology. According to their results, we know of no force or function which is independent of matter. For the naturalist, the separation between function and organ does not exist. We have no dealings with those who will force orthodox religious disputes into our studies and laboratories. For theology and science may travel their separate roads, and toil in their special fields. They do not necessarily exclude or always antagonize one another. Indeed, in the German Association of Naturalists and Physicians at Innsbruck, in 1869, I met Carl Vogt, the iconoclast, and a number of Catholic priests who were proficient entomologists and botanists, working at the same table. It is from that point of view that Huxley declares "atheism untenable. When we know nothing, we can neither affirm nor deny with propriety." That is why he invented the appropriate term "agnosticism" and "agnostic." The question how much we or our successors may know about the intricate question of the existence of a mind or soul independent of the brain and body, or one that is absolutely connected with, or rather dependent on organic anatomy, are moot questions we may safely leave to posterity to answer. Indeed, the world is filled with many more problems half solved or unsolved, and every new truth opens a vista of things unknown. Surely when a physiologist like Emil du Bois Reymond in his discussion on such topics declared before his peers of the great meeting of Leipzig in 1872, "ignorabimus"—we shall not know—"and here are the boundaries of the knowledge of nature," it looked like theological boldness coupled with senile indolence. At all events, modern psychology is not afraid of studying with biologic methods the questions connected with the organs of thinking. Psychophysics is part of psychology. Gustav Theodor Fechner (1801-1887) of Leipzig should be considered its founder, but Wilhelm Wundt born 1832) is now recognized as the most exact investigator of cerebral—so-called mental—functions, and the recognized head of the laboratory school of psychologists all over the world. They do no longer fear to apply their intellect to the *study* of their intellect. They are not even afraid of attacking problems left untouched by Julius Robert von Mayer (1814-1878), the author of the theory of the preservation of force. This theory, or rather this "law of the preservation of force," which is generally recognized, has become indispensable for biological research. It has finally annihilated the vitalistic theory, that is, the assumption of a special vital force; and has proven the sufficiency of chemistry

and physics for the purpose of explaining the phenomena of biology and pathology. Thus, on his lines, Robert Mayer has accomplished as much as Charles Darwin in his great books of 1859, 1868, 1871, and 1872 for biology, history, and archaeology. Robert Mayer's name will be immortal on account of what he has achieved, and should not suffer because there are things he left undone, and truths he left unuttered. In regard to the latter he is slightly guilty, perhaps. Indeed, I was present when, in 1869, he delivered an address "On the Necessary Consequences and Inconsistencies of the Mechanical Theory of Heat," in which, possibly overawed by many attacks by the always militant clergy, he postulated that in the world of intellect the laws of the preservation of forces were not necessarily so valid as in the physical organism. Verily, he was a queer example of greatness and mediocrity. He was a medical officer in the Dutch navy, and later a practitioner in a small German town. Under the equator he noticed the altered metabolism of the sailors and the change in the color of the blood during venesection. That was enough to awaken his interest and to lead to results as great as the gravitation theory of Isaac Newton, which is attributed to the falling apple. But he was an indifferent writer. His first publication of 1842 was hardly noticed, only that of 1845, under the title "Organic Motion in its Connection with Metabolism," (*Die Organische Bewegung in ihrem Zusammenhang mit dem Stoffwechsel*) made his name and his theory famous. I found his utterances halting and unimpressive, both in private conversation and in public, and he did not improve even in his fights for priority.

Nearest to him in line and in the results of his thinking came James Prescott Soule (1818-1889) of Salford E, who delivered in the Section for Mathematics and Physics of the British Medical Association, 1843, an address "On the Calorific Effects of Magneto-electricity and the Mechanical Value of Heat," and Hermann von Helmholtz (1821-94). The latter's address on "The Preservation of Force," was delivered, 1847, before the Physical Society of Berlin. Both Mayer and Helmholtz must be credited with the elaboration and the final acceptance by the world of the great teaching. It is true that what they taught had been imagined or even asserted before. Titus Lucretius Carus said nearly 2,000 years ago: "New things will always arise from the disintegration of others." Mariotte has the following. "La nature ne fait rien de rien, et la nature ne se perd point." Leibnitz formulated the doctrine of the preservation of force mathematically in 1686; the Marquise du Chatelet expressed cognate views 1742; and Lavoisier taught the indestructibility of matter. But the world had after all to wait for Mayer and Helmholtz before previous suggestions were generally welcomed and adopted. In connection with all this you might learn one

* Cf. Julius Pagel *Gesch. d. Medicin*, Berlin, 1898.

thing, my young friends, you should not forget. You need not be attached to a big laboratory or live in a town counting its inhabitants by millions to become famous and a benefactor to mankind. Robert Mayer was a physician in a small town in South Germany, like McDowell and Marion Sims in America.

Conrad Martin Johann Langenbeck (1776-1851) was professor of anatomy, surgery, and ophthalmology. He extirpated the uterus several times and improved the technique of amputations, of ligatures, of lithotomy, of cataract, and pupil operations. Of all these clinical feats I saw specimens in his clinic. It must strike you that there are men alive to-day who antedate antisepsis and asepsis, and you wonder at the kind of results obtained by men who worked in the anatomical and the surgical theatre the same day, and every day of their lives. What at those times you could have seen all over the world, however, I participated in myself. For when I was professor of the diseases of children in the New York Medical College, 1860-64, my surgical colleague was John Murray Carnochan (1817-1887). I admired him much on account both of his learning and his dexterity. In one respect only we disagreed. I saw a great many cases of diphtheritic croup forty-five years ago and performed many tracheotomies. It was nearly thirty years before the era of intubation. Once, in a faculty meeting, he inquired: "Does Jacobi not cut too many throats?" Still, he was a great surgeon, indeed, who ligated (1851) the femoral artery for elephantiasis, excised (1850) the second branch of the trifacial nerve centrally from Meckel's ganglion, resected the ulna (1853), wrote on hip joint luxation, on lithotomy and lithotripsy, and on congenital luxations (1850). Carnochan dissected the dead body and operated on the living in the same amphitheatre, on the same table, in the same purple gown, on the very same day.

Now, to return. When I arrived in Göttingen, September, 1848, only fifty-seven years ago, the story was told of an English surgeon who was a guest of Langenbeck's. A femur was to be amputated, the patient on the table; Langenbeck took the knife and the Englishman his spectacles to adjust them. When he was ready to look on, the thigh was in the basket. Rapidity, at that time, stood as high as safety at present, indeed, rapidity was demanded for safety. Remember, however, there are those at present who assert that safety would be greater to-day also if the temptation of losing time over anaesthetising and operating—mainly the former—were not so great, and the respect for myocardial degeneration and for the jeopardy of the splanchnic nerve not quite so small.

As it was my object to make you acquainted with really great men only, whose memory should be gratefully preserved by all who are

interested in the progressive history of medicine, I turn to my final semesters which I passed at Bonn.

Friedrich Nasse was more than a kind, humane, and pious physician and teacher; he was one of the few—indeed, the first—German clinician who introduced the findings of Laennec and Skoda into German medical instruction. You see how fortunate I was. Born in 1778, he could never, it is true, divest himself entirely of the influence of Schelling's so-called "nature-philosophy" and of Messmer's animal magnetism. Indeed, in 1850, while I worked in his clinic, he wanted me to go to Holland to magnetize a hysterical young lady. She had to get along, however, without my ministrations. For many years he had been intimately connected with Ennemoser, who explained the relations of Adam and Eve to be founded on animal magnetism, and taught the method of magnetizing the trees in the field and the child within the maternal womb. As I have mentioned, the first forty years of the eighteenth century were the period of the greatest humiliation of German medicine. Most of its literature was steeped in gross obscurantism and its teaching and language were mostly unintelligible. In spite of all this, Nasse, who was first a practitioner in a small city before in 1818 he became professor in Bonn, recommended the use of the thermometer in scarlet fever as early as 1811,—it was introduced and popularized by Wunderlich half a century later—published experiments on the processes of elimination in connection with the changes of the blood caused by respiration, in 1816, and on combustion and respiration in 1846, on regeneration of nerves and occasional restitution of their functions in 1839, and many essays on the physical causes of mental diseases.

To us he was a paramount blessing in this way: Until the middle of the nineteenth century the diagnoses were mostly symptomatic. For instance, it was generally claimed that "gastricismus"—perhaps you would call it dyspepsia now—would change into gastric fever, endo-, peri-, and myo-carditis were simply carditis; and, cyanosis, fever, dropsy, jaundice, diarrhoea, apoplexy, and paralysis were recognized as full-fledged and scientific diagnoses. Indeed, we have not altogether worked away from this self-satisfied indefiniteness; for our successors will have to correct us for still making the diagnoses of rheumatism, of myasthenia, of neurasthenia, and of epilepsy, and for coupling with the names of writers a disease or a complex of symptoms,—from Friedreich or Addison, Basedow or Graves, even to Banti — and for believing that we have thus furnished the quintessence of sound and scientific diagnoses.

Nasse taught us to avoid such names and such symptomatic diagnoses. They were permitted as denominations for a class or complex of symptoms, but he insisted upon the finding of anatomical causes; that is why nobody was a more regular attendant on autopsies than our revered teacher. But his principal merit was the early adoption of auscultation and percussion as taught by Laennec. Indeed, the great Frenchman credited him with being one of the few Germans who introduced the new discovery into his country. For hours daily, during the three semesters I was in Bonn, he drilled us personally in percussion and auscultation. With the exception of Krukenberg, in Halle, he was, between 1830 and 1840, the only public teacher of clinical medicine who treated it as a part of natural science. He died in 1851. I was one of the last two of his young men whom he graduated.

The clinical advantages we had in Bonn were probably superior to those enjoyed in any other university; for the professor of surgery and of obstetrics imitated the example given by Nasse. As the medical school was but small, our relations to the professors and the patients in the hospital—which contained about eighty beds—became quite close. Large classes cannot enjoy such advantages. The amphitheatre teaching in Berlin, Vienna, New York, Philadelphia, and other large cities, afford but insufficient opportunities. That is why so many small practical classes have to be formed there, under assistants and adjuncts. A moderate number of patients thoroughly studied outweigh by far a large number of cases counted, but slurred. A hundred students driven along by a hundred bedsides, unable to examine personally, unable perhaps to see, will develop into a hundred doctors who will have to attain their knowledge from a future practice, or a cemetery of their own. They may learn at the expense of their patients, or make the same mistakes a hundred times. One hundred mistakes are then called experience. The facilities I had and the methods I learned at Bonn more than half a century ago are still superior to those of almost all our present American medical schools, and were the models I introduced into my teaching when I became connected with American institutions. Not only did I for the first time in America specialize the teaching of the diseases of children, but the first real, active bedside-instruction was exhibited under the very roof of the New York Medical College, with which I was connected from 1860 to 1864, at the expense of the enthusiastic faculty and some of our friends. In that year, 1864, the College closed its doors.

Karl Wilhelm Wutzer (1789-1858) was professor of surgery and ophthalmology. He wrote on anatomical and ophthalmological subjects, hernia, tenotomy, ligatures, and injuries of the skull. Before he knew anything about Marion Sims' efforts and achievements, much less of

those of Mettauer's, whose history Ben. Johnson has lately written with a loving hand for the American Medical Association, he operated for vesico vaginal fistula, with more or less favorable results. When I assisted him in 1850, chloroform had been introduced and facilitated the operation which, the instruments being clumsy and the methods defective, lasted many hours sometimes and had to be repeated. Jobert de Lamballe was in Europe his only example to follow. Wutzer was, like Fournier and Erb after him,—perhaps even more so than they—a great believer in the ubiquity of syphilis. With twinkling eyes he would look up to us suggesting that “everybody is a little syphilitic.”

Moritz Ernst Neumann lectured on general pathology. He had written a big book on the subject in six volumes. But he was a religious and kind-hearted gentleman; that is why he did not expect us to read them.

They were not all of that turn of mind. The professor of *materia medica*, Christian Heinrich Bischoff, having threatened me and promised himself to “pluck” me, forced me to spite him, and to learn by heart his formidably old-fashioned and unintelligible text-book. Two factors came to my aid. At that time I had a good memory, even for incomprehensible things; and secondly, the examination took place in the presence of the whole faculty, who knew of the disturbed diplomatic relations between the professor and the student.

Another more illustrious man—a fellow-student and a real friend—whose name should not be forgotten in the history of medicine, was Carl Otto Weber (1827-1867). He passed his whole student life in Bonn, and was by far the most accomplished man in a wide circle,—a good anatomist, clinician, botanist, mineralogist, and musician. He died very young, 1867, while Professor of Surgery in Heidelberg. There he succeeded Gustav Simon (1824-76), whose name should be familiar to all of us on account of his priority in extirpation of the kidney. Carl Otto Weber wrote authoritatively on diseases of the tissues, of the skin, connective tissue, blood and lymph vessels, nerves, the face, on enchondroma, epithelioma, and the diseases of the joints. He died a medical martyr. Performing tracheotomy on a croup child, he prevented suffocation by sucking out the trachea filled with blood and diphtheritic membrane. He saved the child, he destroyed himself, and with himself the hopes of the medical world.

Foremost among the good and great men whose friendship and assistance I enjoyed at that time and ever since, was Dr. Hermann Weber, now Sir Hermann Weber. He was Nasse's chief of clinic and entrusted with the principal hospital work and the out-door practice amongst the poor. Under his guidance I had a good deal of

practical work. At another occasion I have reported the case of an old man of 78 years whom I had thus to treat in 1850, for his bilateral pneumonia. At that time the internal treatment of pneumonia consisted mainly in the administration of large doses of tartar emetic. Venesections were still made frequently; after a while they were unduly neglected and abandoned, so that now-a-days you sometimes find a practitioner who does not know how to perform one without the fear of cutting into the brachial artery. So I made two venesections, attended him all the way through, and still he got entirely well. The case may teach you two things: 1st, that even a seriously ill man of 78 need not be despaired of; 2nd, that you are, however, under no obligations to be ignorant, or to make serious mistakes, fashionable or not. Dr. Weber emigrated to London in 1851. He advised me of that step in the last letter I received from anybody for several years during which the Prussians were mistaking me for a political star of dangerous magnitude, and dragged me from one of their dungeons to another. After years I met him in London as a house physician in a hospital. Then he embarked in a successful consultation practice, became a much respected and admired authority in subjects connected with climatology, mineral springs, and tuberculosis, was knighted, and practices successfully what he preaches. His address, published only two years ago, "On the Means for the Prolongation of Life" contains the teachings which have made him a joyful and youthful gentleman at present of eighty-two years. He is the only medical friend of those distant years still left to me. If he will promise to continue the genial youthfulness of his heart and brain, I hope he will survive me a generation. If, however, he would insist upon it, I should not object to keeping him company.

I hope, gentlemen, that many of you, like him, will go into general practice. It is true there is more reputation in narrowing one's self down in a specialty, but remember, for a few only; more money for some; a narrow horizon nearly amounting to actual blindness for almost all. If there be any here preparing to embark in a specialty immediately after graduating, I sympathize with them, for they condemn themselves to carry blinders all their lives, and to lead the lives of medical hermits. Whoever expects to be great in a specialty should arrive at its portals through the gates of general practice. Whoever, at once, without ample and wide clinical experience, limits his field of vision to the nasal, or rectal, or laryngeal cavity, deserves and acquires all the darkness of the gloomy region of his choice. And whoever is among those who like to misunderstand and to censure Jacobi for hating specialism and disapproving of specialists, are merely enjoying their misapprehension.

I am certain I shall not be misunderstood here. No science or art can improve without specialistic work. Great investigators must concentrate their efforts to find new facts for us; many of them have become benefactors only by becoming unselfish martyrs. What I object to is the flippancy of young practitioners which tempts them to look upon the human organism as a mechanism whose parts they may separate and treat like the wheel in an engine. On the other hand, I admit that our personal attitude to the question of practical specialism may become just a trifle strained and look over done. I will give you my personal experience.

Fifty years ago it was my greatest ambition, and the aim worked out for myself and dimly seen in my mind's eye, to live long enough to develop the study and the teaching of the physiology and the diseases of infancy and childhood to such an extent as to be mentioned among the pediatricists of America, or perhaps even of the world. I knew my Seneca and remembered "*Patet omnibus veritas, nondum est occupata*"—truth is open to all, it is not occupied." In a long life views and aims may change, however, or at least be modified. I have become more sensitive, I believe, certainly I do not like to be called names, least of all "specialist." When I got out of my intellectual teens, that is, when I grew up to be fifty or sixty, or seventy-five for that matter, I lost my taste, if ever I had it, for being labeled with a trade mark, like the German *Kinderarzt*, or *Frauenarzt*, or *Nervenarzt*, or what not, displayed on their shingles. A hundred times strangers would call at my office and ask: We understand you are a children's specialist, and I would say: Specialist? No such thing, if I am not good enough as a doctor, go somewhere else. And somewhere else they would go—sometimes to my own public college clinic.

A specimen of what has often been called a specialist was Carl Gerhardt (1833-1902), since 1871, when I met him first, my friend until he died three years ago. He published, 1861 and after, several editions of a wonderfully learned, at the same time practical and concise, textbook on the diseases of children. He was the editor of the great manual of diseases of children which appeared in seven volumes, 1877, and during a course of nearly twenty years, and placed pediatrics in Germany on a sound footing. Thus he was the predecessor of Keating in America and Grancher and Comby in France. If anybody could be called a specialist in the diseases of children, his was the claim. But he was the general clinician in Jena, in Würzburg where he succeeded Bamberger, and in Berlin in the chair vacated by the death of Frerichs. He wrote on the location of the diaphragm, the diseases of the pleura, and of the larynx, on croup, and many other subjects. One of the best books on auscultation and percussion in any language is his. He

was perhaps the most expert laryngologist of Germany, and was the first to diagnosticate, while its extermination was still possible, the cancer in the larynx of the unfortunate and Mackenzie-ridden Crown Prince of Germany. He was a perfect chemist; the iron chlorid test of glycosuria is named for him, not by him—for he had the righteous simplicity characteristic of a really great man—and was none of the strenuous gasometers replete with pompousness, promises, and inconsistencies we may meet in science and in politics. He was a physician looking for the ends of medicine, which are the cure and prevention of disease. The recommendation of sodium borate for adiposity—gentler and less dangerous than the much abused thyroid preparations—is among his last publications. Facing the preface of my "Therapeutics of Infancy and Childhood" there is this dictum of Gerhardt's: "Healing is a fruit that grows on the tree of knowledge. No rational therapy without diagnosis. Examine, then judge, then help." He was the ideal scientific physician. It is true, gentlemen, there is perhaps nobody here who will ever be a Gerhardt, but there is no one who should be without the highest ideal. Ideals are not for those only whose heads tower above ours, and the very soles of whose feet seem to walk over the clouds, but for all of us who take pride in admiring great examples and try to follow them.

The same year (1902) which deprived the world and me of Gerhardt, removed three other great physicians. Adolph Kussmaul, I never met personally; Hugo von Ziemssen I knew when a student in Greifswald and met from time to time in later life. Perhaps he is most widely known by his editorship of a great cyclopaedia, viz., that which preceded those of Eulenburg and of Nothnagel. A still more important achievement of his is the powerful aid he gave to the regeneration of the Munich University and its change from what was a clergy-ridden and mediaeval prison of the intellect into a modern school of thought, and science and art. So, if Gerhardt was the benefactor of clinical medicine in all its special branches, entitled by his accomplishments to the place of a specialist in each, Ziemssen, while being a great teacher and original writer, added to these merits the delivery of a great institution from the fetters of ultra montanism.

The grandest, however, of all the gigantic intellects, and at the same time a humanitarian of a world-wide horizon, was Robert Virchow. We have all lost in him a friend, for he was a friend and benefactor of mankind. His is a new era, that era created mainly by him. You know of his hundreds of epoch-making writings, of his tumors, his cellular pathology, and his *Archiv*, which has reached its one hundred and eightieth volume. In the history of our profession, ay, in that of mankind, there is no man in whom a vast intellect was

blended with a warm heart to the same degree. There never was so great a statesman in our ranks. At the age of twenty-eight years the Prussian Government sent him to Upper Silesia to study the petechial typhus which was devastating the country. In his report he pictured its nosology and pathological anatomy as it had never been done before, but also its etiology, viz,—the governmental neglect of the inhabitants which extended over centuries, their poverty, ignorance, filth; the moral and intellectual tyranny of the Catholic hierarchy, the economic subjugation both by the Prussian bureaucracy and by the effete feudalism. He urged medication and sanitation, but more eagerly social reforms, culture, liberty and comfort, unlimited democracy, education in public schools, agricultural institutions, care and education of the numerous orphans, building of roads, and the general recognition of the fact that, as he expressed himself, "our century is the beginning of a new social era." What happened? Was he applauded? Decorated? Rewarded? In accordance with Prussian methods, he was deprived of most of his public positions. Then in the first number of a new journal he said: "The physicians are the natural attorneys of the poor, and the social problems should largely be solved by them," and in the last: "The medical reform we contemplated was to be a reform of science and of society." With this early programme he filled his rich life. Whatever concerned men, present and past, that he studied and revealed, the sick, the dead, man both historical and prehistorical, man as a social animal, in the municipium, in the state, on the globe. Modern anthropology has no more fertile contributor and founder; and archaeology was greatly benefited by his studies and travels. The contemporaneous human bee-hives of the whole world roused his warmest interest. He addressed hundreds of popular meetings, edited a thousand popular essays, looked after the sanitation of schools and civic and military hospitals, made Berlin a healthy city, and in parliament aided the liberal movement in Germany. There never was a man who more than he deserved the hatred of a few scoffers,—amongst them of the coarse, brow-beating Bismarck—and the admiration of his native land and all mankind.

This greatest of all pathologists, archaeologists, anthropologists, was a statesman in this also—that he recognized and proclaimed the aims of medicine to be scientific healing. It may not be generally known that for a long time he directed a ward in the Charité hôpital. His handbook on pathology and therapeutics, written by himself and a small number of select men, 1854-1862, contains in its volumes everything that was known half a century ago, and much more that was new, and much that will stand for all times. He was the biological seer, knowing all and predicting more. His like we shall not see again,

perhaps need not see again, because men endowed with high talents will do enough when building on his foundations. If there be any thing I am proudest of in my comparatively humble life it is the honor of his friendship which I enjoyed his last twenty years.

Amongst those whose personal acquaintance I enjoyed, was Billroth, the great and original surgeon, at the same time an educator of high rank, and a popular member and leader of musical and classical society. Amongst my reminiscences, I treasure the following: In one of the instructive reports of his clinic a third of a century ago—it was that of Zurich, long before he was called to Vienna—he spoke of tracheotomy in children as being to him the most formidable of all operations. He was upset by the struggles of the child that suffered not only from the strangling croup, but from its fears and pain, and anguish and agony. Evidently he never used chloroform in this operation. Indeed, some authors were of the opinion, resulting from nothing but lack of experience, that anaesthetics increased the orthopnoea and anguish. I wrote to him about my own experience with chloroform, and that I feared the final termination but not the operation. A few years after I met him at a Congress. He laughingly said: “Thank you so much. I am no longer afraid.” I replied: “That is what people say of you anyhow.” A good handshake was my reward.

I shall still mention Nothnagel, who died lately, much younger than I, and a warm friend—one of the born knights. His position in the world of medical letters you are intimate with. What you may not know is that all the reactionaries, all the obscurantists, and the whole rabble of antisemitic millions in the Austrian monarchy honored him with their hatred and spiteful persecution. As there was sunlight in his head, so there was warmth in his heart; that glowed for all that were down, all that were oppressed, rich and poor, without regard to color, race, or previous conditions of servitude.

Gentlemen I have kept you long, but I like to talk to the young. If, however, you are of the opinion of Cicero, who said that old age makes loquacious, “senectus loquax,” please remember that I had to wait seventy-five years before I had this opportunity. Therefore you can afford to give me another minute for a few aphoristic conclusions that may be drawn from my kaleidoscopic review of past times. You have seen that great times make great men, but men contribute to making history. That of medicine extends over thousands of years, but never attained actual scientific progress until it was studied as part of biology and founded on facts either clinically observed or based on experimentation. From our time on the teaching of Hippocrates will always be correct, “Whoever looks for a new road or believes he has found a new scheme is either a deceiver or deceived.”

The few men I have presented to you in brief sketches, dear to me for more reasons than one, should be so to you because they made part of our common records. Their labors, their very existence, mean an active advance for medicine. They deserve our gratitude, and they teach us modesty, for there may not be many amongst us whose achievements will reach theirs. You will have noticed that much valuable work has been done long, long ago. If you will study history you will acquire a proper regard for our ancestors. If their writings were properly scrutinized and remembered there would be no such deluge of ephemeral rediscoveries of facts that your fathers knew or even learned from a previous generation. By examining the past you will save yourself much repetition and labor, and will improve your opportunities for real original work. For what the dead, or we the old, could not accomplish is a debt that you and your contemporaries should be anxious to pay. If you get into the habit of earnest scientific work you will never be older than the questionable forty or sixty, and there is at no time a metaphorical chloroform for you. But remember three thousand years old Hesiod said: "The immortal gods planted sweat before virtue; the path leading to the heights is long and steep." Also remember our good and great, and genial William Osler's master-word, which is "Work."

Most of the men of whom I have spoken to you were more than medical men only. The mere tradesman in the profession is a "medical man"; the gentleman in the profession is more, he becomes a physician—but he only. In the lowliest practice there is many a case that "no medicine will cure, but the medicus." You may be ever so learned, and yet an inefficient doctor. We doctors of the United States and the government of the United States knew everything about typhoid and dysentery and their prevention, but Chickamauga and Montauk killed ever so many hundreds of young fellow creatures and made thousands of life-long invalids. Up to the the so-called Spanish-American War to each two men killed or mortally wounded in battle ten would die of disease, and according to Louis L. Seaman in the Japanese army one, in the army of the United States, twenty-eight.* So-called civilized government can be as ruthless and savage as nature herself in her cruelest moods. That will always be so until the physician is accorded the controlling place in society demanded for him by the sages of all ages—Socrates, Kant, and Gladstone. Yours is the duty to work for that blissful future. While being citizens in the profession, be citizens in the community, in the state. You should be pathologists and therapists to the individual patient, you should, like Oppolzer, be the practical humanitarians. Still therapy, you understand, is not drug therapy

*American Newspapers of October 9th publish the following official returns of the casualties of the Japanese army throughout the war: Killed, 46,180; died from wounds, 10,970; died from disease, 15,300. Total deaths, 72,450.

only; but prevention and sanitation, and diet. But do not forget that the misanthropic disbelief in drug medication is the result of ignorance or indolence only. I never knew a surgeon to disbelieve in his knife when he knew its virtues and applications. I never knew a drug to do harm when not misused, or accomplish aught but good when its property was understood and the indication for its administration correct. The knowledge of your case and your drug, and the sympathy with the sick, will give you courage and patience; it is ignorance or callousness only that causes cowardice or negligence.

Read your Hippocrates, my young friends. He tells you that the art of medicine leads to piety towards the gods and to love of man. "Where love of your art, there is love of mankind." Combine science and art and humanitarianism in private and public life. If you do so, you will be the good, and blessed, and great physician and citizen. We may not be counted among the immortals, neither you nor I, but the good we do is not mortal, for there is no force but is preserved, and no active life is spent in vain. You are young, and young your ideals. The best men whose pictures I have shown you preserved their young ideals to their dying hours. Thus their lives exhibit examples of singleness, harmony, and power. They were apostles of medicine who carried our gospel to their successors. All their great heritage is ours, is yours. By the science of art and medicine much is given us; and from us, from you, much will be demanded.

VAGINAL FISTULA.*

By J. O. TODD, M.D., Winnipeg, Man.

IT is a curious fact that a condition, productive of such a distressing train of symptoms as attend fistulous openings into the vagina, should have written history, dating only from the end of the 16th century, when Ambroise Paré records his efforts towards relieving suffering womanhood in this dire state.

Previous to the epoch of Paré, only obscure and scattered allusions appear in medical writings upon this truly dreadful accident. Following Paré (1570), there is a hiatus of about 100 years before attention is given by medical writers to the subject; but from this time on accounts of determined efforts are found, and the energies and ingenuity of such men as Roonhuysen of Amsterdam, Voelter, Dessault, Naegele, Lallemand, Roux, Jobert, Wützer and, notably, Gosset, of England, and Metzler, of Prague, are engaged upon its solution.

*Paper read before Winnipeg Medical Society.

Strangely enough, though some of these men had partly and two of them completely, solved the problem, no enduring influence of their work remained; and from 1834, Gosset's and Metzler's day, to 1855, the period of Sims of America and Simon of Germany, little or no relief was given to women thus afflicted.

1839 finds such a distinguished and bold surgeon as Velpeau writing thus disconsolately, "to abrade the borders of an opening when we do not know where to grasp them; to shut it up by means of a needle and thread when we have no point apparently to secure them; to act upon a movable partition placed between two cavities hidden from our sight and upon which we can scarcely find any purchase; seems to be calculated to have no other result than to cause unnecessary suffering to the patient."

In the month of June 1845, J. Marion Sims had his first experience with a vesico-vaginal fistula, and this is what he says of it, I quote from his own account in his book. "The Story of my Life," "I went home and investigated the literature of the subject thoroughly." Next day he tells the owner of the slave girl having the fistula, "Mr. Westcott, Anarcha has an affection that unfits her for the duties of a servant, she will not die but she will never get well, and all you have to do is to take good care of her as long as she lives."

Two similar cases came to him in quick succession and are dispatched as incurable, and then comes his memorable experience with Mrs. Merrill, a sufferer from acute retroversion of the uterus, whom he relieves by vaginal pressure with the fingers the patient in the knee-chest position. His own words are so direct and interesting that I again give them, "I commenced by making strong efforts to push it (the uterus) back, and thus I turned my hand with palm upward and then downward and pushing with all my might, when all at once I could not feel the womb or the walls of the vagina, I could touch nothing at all and wondered what it all meant. It was as if I had put my two fingers into a hat and worked them all round without touching the substance of it. . . . Mrs. Merrill said, "Why doctor I am relieved." . . . My mission was ended, . . . she rather fell on her side—suddenly there was a loud explosion just as though there had been an escape of air from the bowel; she was extremely mortified and began to apologize and said, "I am so ashamed." I said, "That is not from the bowel but the vagina, and it has explained now what I did not understand before. I understand now what has relieved you, when I placed my fingers there the mouth of the vagina was so dilated that the air rushed in and extended the vagina to its fullest capacity by the natural pressure of fifty-five pounds to the square inch, and this conjoined with the position was the means."

His genius now flashes an application of the principle he has just discovered, and he at once sets out for his little hospital, "leaving twenty patients to wait," places Lucy, his last fistula case in the knee-chest position and introducing his bent pewter spoon, which he has bought on the way, he sees everything "as no man had ever seen before." For five years he continued his experiments upon his Anarcha, Betsy and Lucy, the catheter is requisitioned, the perforated shot idea comes to him in the dead of night, and he cannot resist waking his kind and sympathetic wife and telling her of this simple and beautiful method of tying the suture. His next operation on Lucy proves an absolute failure in spite of the simplicity and beauty of the perforated shot method of suturing and he then falls back upon the suture material and says, "I wonder if it is the kind of suture used." A further inspiration suggests to him the use of a metallic suture. Anarcha is subjected to her thirtieth operation in which speculum, catheter, perforated shot and silver wire play their successful parts. Lucy and Betsy are in turn cured of their fistulæ by similar methods, and in his own words again, "I realized the fact that at last my efforts had been blessed with success and that I had made, perhaps, one of the most important discoveries of the age for the relief of suffering humanity.

As a matter of fact he was not alone in his discovery, for Simon, of Germany, paralleled him in every step, and as we have noted in our survey of the history of the subject, Gosset, of London, and Metzler, of Germany, had long anticipated both; but for some strange reason the importance of their discoveries had not been impressed upon the medical world and nothing practical came of them; but Sims and Simon, each working on his own lines, succeeded in placing before the profession modes of procedure destined to be permanent.

To-day the modes of dealing with vaginal fistula may be listed as follows: Cauterization, now practically obsolete; Suture, after the fashion of Sims or Simon, a modification of this method has been executed by Dr. A. H. Ferguson of Chicago, who described his flap-splitting plan in the *British Medical Journal*, February 24th, 1894; and Elytroplasty, after the manner of Jobert—colpoklesis, or vaginal occlusion, of the various forms of vaginal fistulae.

I have had personal experience with the vesico-vaginal, vesico-urethro-vaginal and the recto-vaginal varieties. In three of these I employed Ferguson's split-flap suture, being fully successful, and one partially so. In one case, a bad one, I used a modification of Jobert's elytroplastic method with complete success. Cases 1 and 2 I have already reported in a paper by Dr. A. H. Ferguson on the operative treatment of vesico and rect-vaginal fistulae, in the *American Journal of Obstetrics*, 1895.

Case 1: Mrs. M., aet 41, multipara, last confined three months ago, when, in the absence of a regular physician, instruments were applied by an inexperienced man, resulting in multiple laceration of the cervix, nearly complete laceration of perineum, knife-like cut at the base and neck of the bladder, and the whole length of the urethra.

Present condition.—A very fleshy woman, healthy but for continuous escape of urine, inner side of thighs, nearly to knees, are raw from urinary leakage, vulva and vaginal outlet eroded, perineum deeply lacerated. In Sims position, whole length of urethra is laid open, margins of urethra being widely cicatrized, mucous membrane of bladder eroded, urinary secretion is pouring from vagina, the whole vagina is raw to the cervix uteri.

July 25th, 1901. Put patient to bed, ordering warm vaginal and vesical douching of boracic solution.

July 27th, 1901. Operated, position dorsal, hips elevated, vagina soaped, douched, rubbed out with ether, and washed thoroughly with bichloride (1-5000), bladder irrigated with boracic solution. Flaps split along the line of cicatrix by incision, starting to the left of the ruins of the meatus and extending around the tear into the base of the bladder to run back along the other side to right side of meatus. Urethral and vesical flap of mucous membrane dissected in towards the median line, vaginal flap lifted outwards, interrupted sutures of finest silk placed in vesical and urethral flaps, so as to invert edges into newly formed canal, deeply planted silkworm gut sutures passed through the vaginal flaps which thus bank up the sutured mucous membrane. A boracic stream played constantly on the field of work to wash away the accumulating urine. Boracic and iodoform were sprinkled liberally throughout the vagina and an abundance of sterilized gauze packing into the vagina to support the bladder which was ordered to be washed out every four hours.

July 29th. Forty hours after operation catheter removed, no dribbling, urinated voluntarily.

August 2nd. Still urinating voluntarily, no dribbling or leakage, three sutures removed.

August 6th. All sutures removed.

August 12th. Patient up.

August 16th. Repaired perineum.

Subsequent repeated reports of this case give her condition as most favorable. The urine can be retained for three of four hours.

Case 2. Mrs. D., aet 35, last child delivered by forceps eleven weeks ago, bowel movements have since largely passed per vaginam. On examination, a tear is found in the recto-vaginal wall, extending from just above the anus to a point two inches distant, faeces almost entirely coming through this large opening.

November 15th. After thorough preparation, the flap-splitting incision was carried completely around fistulous opening and the respective vaginal and rectal flaps dissected off, a buried running suture of fine silk inverted the rectal flaps, while deeply placed interrupted silk-worm gut sutures drew over the vaginal flap, leaving long ends in vagina. Gauze packing was placed in the rectum and vagina and bowels kept locked for five days when union was found complete, except for one of the lower sutures which from tension caused a small opening which was subsequently closed under cocaine.

Case 3. Mrs. A., aet 26, on August 10th 1903, was delivered by a physician, called in after thirty-six hours hard labor. An escape of urine from the vagina was noticed almost immediately. On examination, Nov., 18th, 1903, I found an irregular laceration of the bladder, extending from the internal opening of the urethra to the cervix uteri. There was a large amount of cicatricial tissue in which the cervical opening was almost indistinguishable, the fundus of bladder was prolapsed into the vagina, and both ureteral openings were seen pumping urine into the vagina. The bladder mucous membrane and the urine were normal, and there was considerable erosion down both flanks.

November 19th. Operated. So great was the loss of bladder wall and there existed so much cicatricial tissue that I could see no way of repair by any of the standard methods. I therefore, split the anterior half of the circumference of the tear, throwing inward a vesical, and outward a vaginal flap, the gap was then filled by a flap dissected from the front of the cervix and lateral walls of the vagina up to the ends of the anterior incision. A large number of silk worm gut sutures were passed through the vesical flaps in such a way as not to penetrate into the bladder, thus inverting the line of union into the bladder. As far as possible, the vaginal flaps were banked over this line and the rest of the raw surface left bare. The vagina was plugged with iodoform gauze and the bladder irrigated with boracic solution every four hours. The whole line of union closed by first intention, the only drawback being a small sinus in the angle between the uterus and bladder where some injury would seem to have been done to the intestine, as, for a few days, distinctly faecal material discharged. Fortunately, with careful attention it closed, and the patient left the hospital quite relieved of her distressing symptoms.

February 4th, 1904. A report from the patient states that she can hold her water for ten hours and there is no leaking.

Case 4. Mrs. K., aet 36, last labor seven months ago, was difficult and was attended by a midwife only, since then has had no control of her urine. She was in bed two months following delivery, and thinks instruments were used.

June 1st, 1903. Examined. Perineum intact, the whole anterior vaginal wall is a mass of cicatrix, no mark whatever being left to distinguish bladder from surrounding parts, the urethra and base of bladder are completely lost, the cervix is indistinguishable, and only the smallest probe can be passed into the uterus, the fundus of the bladder prolapses into the vagina.

June 16th, 1903. After several days of careful preparation, I attempted a repetition of the operation performed in Case 3, hoping to succeed so far as to lessen the continuous flow of urine, and its consequent irritation.

June 30th, 1903. All stitches removed, union complete, no leakage along the line of repair, but of course urine dribbles from the uncontrolled anterior opening.

July 6th, 1903. I attempted to form a partially new urethra by split-flapping for about an inch. This succeeded only partially, and our patient left the hospital improved considerably, but not being able to retain urine for longer than two hours.

ADDRESS ON OPHTHALMOLOGY.*

By J. W. STIRLING, M.B.

Lecturer on Ophthalmology, Medical Faculty, McGill University, Montreal.

MR. President and Gentlemen, I have to thank you for the honour you have done me in asking me to deliver the special address on Ophthalmology at this meeting of the Canadian Medical Association, and more especially do I appreciate it from the fact that this meeting is held in my native city. One cannot but feel a certain amount of diffidence in addressing such a large assembly of one's fellow workers in our noble profession, but I trust that what I have to tell you may both be of interest to you, and also of some assistance in the prosecution of your professional calling.

I must claim to a certain extent the indulgence of my fellow workers in Ophthalmology, who may be here, if I do not present them any thing very advanced. I would remind them of the fact that I am here to deliver an address to the profession as a whole, and that technical points which would be of interest to them might be far from interesting to the majority of my hearers. Yet what I have to say may not be lacking in interest for them. I have chosen as the subject matter of my paper a few salient points in the diagnosis and treatment of the more common diseases of the eye. My communication will be almost entirely based upon my own experience, drawn from the very large clinical material at my disposal in the Montreal General Hospital.

*Read at the Canadian Medical Association, Halifax, August 22-25, 1905.

Conjunctivitis is one of the commonest eye diseases which confronts both specialists and general practitioners during their career; yet, in no other ocular disease, has there been more room for advance both in the matter of diagnosis and of treatment. Happily, during the past few years great progress has been made in both these particulars and the results have been crowned with success. Looking back over my comparatively short career, well do I remember how, in the old hospital days in London, there was a routine treatment for conjunctivitis; the diagnosis was strictly limited by the nature of the secretion and condition of the conjunctiva, and the treatment consisted in the use, or I might rather say the abuse of various astringents. In some cases this treatment happily hit the mark, but in others the result was a failure or else a prolonged chronicity. With the promulgation of the germ theory, there was an opportunity for advance, yet but little was done in this direction in eye diseases for some years. Astringents were at this time dropped to a certain extent, and antiseptic lotions took their place; yet a varying amount of empiricism persisted and results were not always so successful as one could wish. During the past few years, however, great strides have been made by Koch, Weeks, Morax and Axenfeld: new germs have been discovered; their relationships to certain forms of ocular disease have been worked out; the conditions especially favoring their development have been studied; the symptoms they give rise to have been noted; and, lastly, what is of most importance to the clinician, appropriate remedies are being discovered. There is, however, much left to be done, as evidenced, for example, by the uncertainty which overhangs the germ of that scourge trachoma.

To start with, be it remembered, the conjunctival sac in the newborn is held to be free from bacteria, but immediately the infant has entered on its existence in this world, the conjunctiva is exposed to infection from the atmosphere or from the skin with which it is in immediate proximity at the edges of the lids. The organisms thereafter found in the eye vary greatly in their nature and pathogenicity. The malignancy depends a great deal upon the resisting power of the organism. It would appear that it is impossible to render the conjunctival sac absolutely sterile, since any bactericide sufficiently strong to effect this would exert a deleterious influence on the eye. The tears exert a certain bactericidal action which may be due to a mere dilution of the secretion, and this is seconded by the muscular action of the lids in winking which force the secretion into the tear sac, the drainage system of the eye, whence it escapes into the nose. One thing is certain—the tears are a bad culture medium for bacteria.

Another important factor in limiting the development of the bacteria in the eye is the temperature of the exposed eye ball. McGillivray, of

Dundee, has worked this out very carefully, and has shown that the surface temperature of the exposed cornea is about 18 degrees below that of the body temperature, whereas if the lids are kept closed, the conjunctival and corneal surface temperature soon rises thereby favouring the development of many bacteria. In addition to this, of course, the eye-lids being closed does away with the mechanical drainage function, to which I have just referred. A good example of this is frequently met with in cases of phlyctenular disease in which the eyes have been kept bandaged. This closure is invariably followed by a marked extension of the disease which can be readily checked by desistence from the use of compresses; and also, what amounts to the same thing, by the prevention of the child burrowing its head into pillows and cushions.

Of course, when operating on the eye we have to bandage it afterwards, but this is with the sole intention of getting a speedy union of the wound, and by this means preventing the possibility of a deep infection of the eye. As soon as firm union has taken place all closure of the lids should be abandoned.

In my clinic at the hospital all cases of conjunctivitis, tear-sac trouble, and ulcerative keratitis undergo a thorough bacteriological examination before treatment is undertaken. Invariably also a bacteriological examination of the secretion is made in all cases before operation. The invaluable nature of this examination must, of course, be self-evident to you, as a means of diagnosis, as a precautionary measure, as an indication for treatment. I may, perhaps, be allowed to describe the very simple process of making this examination, although, doubtless, the majority of you know it already.

This bacteriological examination, short of making cultures of the germs, is by no means difficult, and should not be beyond the power of any medical man. The little extra trouble that it entails upon the practitioner will be amply rewarded by the results obtained.

With a small platinum wire, sterilized in a spirit lamp's flame, a small amount of the secretion is removed from the conjunctival sac, and smeared over a glass slide. The great point in the smearing is to tease the secretion well out on the slide; a drop or two of gentian violet solution is dropped on the smear, after 25 seconds this is washed away with water; a few drops of Gram's iodine solution is dropped on, and left for about 15 seconds; it is washed off with alcohol until no more coloured matter is observed to come away; the specimen is then washed with water and a 5 per cent. solution of safranin is dropped on the specimens, and left for five seconds when it is washed off with water. This is a routine method for the ocular secretions.

As you all know, conjunctivitis has been classified according to the nature of its secretion or conjunctival changes, as catarrhal, mucopurulent, granular, and membranous types; but, since bacteriological investigations have been carried out, there is a strong likelihood that this will be changed. Similar clinical symptoms are caused by very different forms of bacteria, the treatment of which varies greatly according to the bacterial finding.

In the catarrhal type of conjunctivitis we recognise two main varieties, the acute and the chronic, the symptoms of which are too well known to you to need repetition. The vast majority of cases of the acute type has been found to be due to the presence of the Koch-Weeks bacillus, and in only a few cases have other germs been discovered. This form of bacillus, as a rule, attacks children and has even been found in the new born. As a rule, these bacilli can only be discovered during the first few days of the disease.

The bacilli lie between the leucocytes and also within the protoplasm. Sometimes they even extend into chains of two or three links side by side; they are decolourised by Gram's iodine; they have an incubation period of two or three days; and the second eye is generally infected two or three days after the first; they seem to penetrate into the superficial layers of the epithelium and not into the deeper tissues; they do not give rise to chronic conjunctivitis. The bacilli appear as very short fine rods, staining less deeply than the nuclei of the cells, the ends are rounded and also show a deeper polar stain.

The treatment of this form of conjunctivitis consists in the application of nitrate of silver, 2 per cent. solution, or the 3 per cent. solution, of largin.

Entirely distinct from this form is a chronic variety of catarrhal conjunctivitis affecting mainly the conjunctiva of the lids and especially well marked at the inner and outer canthi. This disease sometimes goes by the name of angular conjunctivitis, there is slight mucous secretion, the conjunctival papillæ are not swollen, the inner canthus and the lid margins are markedly red, in time the roots of the cilia become affected, as does also the tarsus, and the cilia then fall out and the lid margins curl inwards. It occurs at all ages but more especially in adults, and is most frequently met with during the months of June, July and August. Superficial infiltration of the cornea occurs and sometimes even severe purulent spreading ulcers are found which bear a marked similarity to the malignant ulcer serpens.

In 1896, Morax and Axenfeld both discovered a diplo-bacillus which, by a series of exhaustive investigations, they found to be the cause of this disease. The bacilli are large, 2μ by 1μ , and generally occur in pairs and chains; they are decolorised by Gram's method after

staining gentian violet. The disease is very infectious and the bacilli retain their virulence for a long time.

It has been found that solutions of sulphate of zinc have almost a specific action in the cure of this disease, and this may be freely applied even when ulcerations of the cornea arise. The zinc salt is used in a solution varying in strength from a half of 1 per cent. up to 2 per cent., the milder collyria being reserved for those cases exhibiting the greatest irritation. It has also been found that the solutions of the silver salts appear to be inert in the treatment of this condition. I might cite as an example of the action of this drug, even in severe ulcers, one case out of several which have lately come under my observation. The patient had developed an ulcer in the cornea, probably of traumatic origin, for which he had been treated at his home in the country near Montreal. He thought that his eye had been scratched very slightly with a twig, and did not pay much attention to it until it became very painful, when he sought advice from the family physician; and, treatment failing to check the condition, he came into my clinic at the General Hospital.

I found a large purulent ulcer of the serpiginous type. The condition was so typical that I immediately classed it as an ulcer due to pneumococcus infection and prescribed antiseptics and cauterization of the ulcer, thus you will notice departing from my rule of having a culture taken before starting treatment. The ulcer continued to spread rapidly, so that in 48 hours I felt there must be something lacking, either or both in diagnosis and treatment. Whereupon I had a culture taken; and, to my own surprise and that of the pathologist Dr. McKee, he found the Morax-Axenfeld diplobacillus. The treatment was immediately changed and the solutions of zinc sulphate substituted for the antiseptic lotions. The change within 24 hours was marked and the progress thereafter towards recovery was very rapid. I have cited this case in full in order to impress both the importance of the bacterial examination of these ocular conditions, and also its value as indicating the proper treatment.

The metallic salts break up in the conjunctival sac, and act by precipitating the albuminates which agglutinate the enzymes and active agents of the inflammation, the freed acid of the salt thereupon exerting its caustic action.

It is interesting to note that this bacillus maintains its virulence in cultures up to the seventh **generation**. The diplo-bacillus enters the eye either from the air in a dried or fluid form, or by actual contact; it has been found in the posterior chambers of the nose, whither it may have come from the eye by way of the tear duct. On the other hand there is a possibility of its spreading in the opposite direction from the

nose to the eye. This diplo-bacillus retains its activity and power of reproduction after being dried and surrounded by a sheath of mucous, which prevents it from really being absolutely dried up. The presence of this germ and its attendant inflammation have been frequently reported in Europe, and its occurrence has been noted a few times in the United States; but as far as I am aware its first definite appearance in Canada has been noted in my clinic at the General Hospital by Dr. S. H. McKee. The disease is by no means a new one, but the bacterial cause had not been traced until lately.

We have another type of conjunctivitis frequently associated with infiltrations of the cornea, which take on a malignant type, and develop the above mentioned serpiginous ulcer; later on it may be complicated by iritis. The conjunctiva is at first slightly rose red, this is rapidly followed by great swelling and even by the formation of a croupous membrane on the inner surface of the lid; the secretion is watery; and very frequently there are small hæmorrhages; it is especially found amongst young children and young adults; it occurs in epidemics; it is contagious. The germ is found to be a diplo-bacillus lanceolatus, or pneumococcus, as it is sometimes called; they are lanceolate in shape and tend to form short chains, which with some other points suggest a similarity to the streptococcus family. The treatment of this condition is active antiseptics, and the application of the galvano-cautery to the ulcer.

Of the purulent types of conjunctivitis that exist, that caused by the gonococcus is the one most frequently met with and most disastrous in its results; it is extremely contagious but the proportion of individuals suffering from gonorrhœa, who develop gonorrhœal conjunctivitis is comparatively small. This comparative freedom from ocular complications in gonorrhœa is very suggestive to any one having much to do with the disease. It would almost appear as if the gonorrhœa itself confers a certain degree of immunity. In addition the escape of the eye from this virulent infection must be partly due to the protection of the lids and the washing away of the secretion by the tears. It would appear as if the resisting power of the individual has a good deal to do with the severity of the disease, since in many cases which have come under my notice I have found that the proportion of gonococci present bears no definite relation to the severity of the disease. Many of the worst cases I have seen showed under the microscope but a few gonococci, whilst in others in which the disease ran what we might call a benign course, great quantities of gonococci were present. It is needless for me to speak about the characteristics of this well-known germ, but there is one point I wish to impress upon you and that is the fact that the gonococcus is capable of invading the intact corneal epithelium

whenever the pus is allowed to stagnate in the eye, hence the great importance in treatment of a very complete and frequent irrigation of the conjunctival sac.

I have found gonococci in the sac many days after the cessation of the discharge, which points to the necessity of continuing the treatment for some time after the apparent cure.

In this connection I wish to draw your attention to an interesting form of conjunctivitis, of gonorrhœal origin, but in which the infection is endogenous, and is frequently associated with iritis. The inflammation as a rule occurs about the period of the appearance of the joint complication of gonorrhœa. As you know the gonococci are carried by the blood stream to the joints and there set up inflammation, and the same type of inflammation may occur in the eyes. It is an irritable form of conjunctivitis; the secretion is watery and has a tendency to chronicity and to relapses. No gonococci are found in the secretions of the eye although they may be present in the tissues; there is considerable pain and photophobia. The local treatment must be mild, and if there be any urethral trouble present it, of course, must be attended to. The iritis that occurs in these cases possesses also the same tendency to relapses, but I have found that this tendency diminishes greatly with the improvement of the urethral condition. This form of gonorrhœal eye trouble may be considered a sort of general toxœmia manifesting itself in some weak spots. In cases of gonorrhœal conjunctivitis we sometimes get a mixed infection, streptococci and pneumococci being present, and it would appear as though the presence of the streptococci favours an increased severity of the infection.

Membranous conjunctivitis is happily of rare occurrence, at any rate the true diphtheria type, in fact during my career in Montreal I have not come across a true case of this (although I have seen many cases of membranous conjunctivitis). A few I have seen on the continent of Europe. The severe cases of membranous conjunctivitis which I have met with were at first very suggestive of true diphtheria, but on close investigation they proved to be due either to that allied germ the bacillus xerosis or to staphylococci.

As being of interest in this connection I might cite a case of my own which I saw not very long ago. The patient was an infant about nine months old, and suddenly developed an intense inflammation in the right eye, a gray membrane formed over the palpebral conjunctiva which could be rubbed off, but left a gray surface beneath it; there was great swelling of the lids; a smear showed a bacillus which was at first considered to be the Klebs-Lœffler diphtheria bacillus. The culture, however, the next day showed this not to be the true Klebs-Lœffler,

but like the allied bacillus xerosis (of which I will have a word to say to you later on.) There were also staphylococci present. The treatment of this case was simple, the use of argyrol 20 per cent. strength, and mild boric acid lotions. Recovery took place in about three weeks. I will not detain you with any details in regard to the diphtheria-bacillus; but I wish to say a few words in connexion with that very puzzling type of germ the xerosis-bacillus which I found in the above case. This germ is found very frequently in the normal conjunctiva, so that it would appear there must be a predisposition on the part of the patient before it can exert any malign action. Little is known of its true nature and action; it is identical morphologically with the diphtheria-bacillus. It is stained by ordinary aniline dyes, and grows on the same culture media forming similar colonies. It is different from the diphtheria-bacillus in not producing an acid reaction in neutral peptone bouillon. Frankel regarded it as a non-virulent diphtheria bacillus which may become virulent when mixed with staphylococci; others regarded it as simply the non-virulent stage of the diphtheria-bacillus.

A year ago a case of that comparatively rare disease known as Parinaud's conjunctivitis was treated by me. The characteristics of the disease are the huge granulations which develop on the palpebral conjunctiva; these rapidly increase in size; there is also enlargement of the pre-auricular, infra-maxillary and cervical glands. There is a rising temperature, but the course of the disease which is not rapid tends gradually to complete resolution. An elaborate bacteriological examination and report was made by Dr. John McCrae, pathologist at that time to the General Hospital. Pure cultures of a bacillus resembling the Kelbs-Loeffler was found during 25 days of active treatment of the eye. This bacillus was not found in the other eye nor in the nose or throat. This bacillus gradually disappeared with the recovery of the eye. It would thus appear that, in this case we were dealing with either a virulent form of bacillus xerosis or else a less toxic than ordinary bacillus diphtheria. In some instances there is a tendency to form chains, that is, as it were, reverting to the streptococcus which I thought might be of interest and value to you. There is no doubt in regard to all these germs that whenever they develop a tendency to form chains, that is, as it were, reverting to the streptococcus type, there is a coincident increase of virulence.

In addition to all that I have told you, it is hardly necessary that I should insist upon your not losing sight of one great point, the fact that the eye is part of the whole bodily mechanism, and that in the local treatment of any eye condition one must not lose sight of the general constitutional state. It is a truism that if the general physical

condition is lowered there is a corresponding lowering of resistance to all forms of infection, and this holds true as much in eye lesions as in general constitutional disturbances. A close attention is demanded to general hygiene, fresh air and cleanliness, both local and general, and proper dieting.

The second portion of my address I desire to devote to a consideration of the functional light perception of the eye and to the diagnostic value of it. This is a symptom which is as a rule but scantily described in the text books, yet it is nevertheless one of much importance in the differential diagnosis of certain eye diseases.

What is of much importance is that the said eye diseases are generally of constitutional origin, or secondary to serious trouble elsewhere. Many a time I have wondered if it were not possible to discover some symptom which would be of value as a hint of intra-ocular trouble, in cases, in which from some reason or other an ophthalmoscopic examination cannot be made. To examine the eye thoroughly with the ophthalmoscope demands continued practice, and very few general practitioners are able to do this, hence it is under these conditions that a symptom roughly pointing to fundus trouble of the eye may be of use. As an example of the value of this, I may mention one case out of many which have come under my observation. The patient was referred to me by the family practitioner in order to have the refraction tested. The symptoms calling for this being headache and diminution of the visual acuteness. On proceeding to examine the patient I found that there was marked nephritic retinitis. This ocular condition is as you know associated with chronic varieties of nephritis in which the general symptoms are occasionally not very pronounced, hence failing an ophthalmoscopic examination of the eye the mistake might be considered possible. It is just in such cases as this that an examination of the light perception, even roughly made, would serve as an indication to the physician of a retinal change being the cause of the eye symptoms, and would call his attention to the desirability of a thorough physical examination.

1. In examining the light sense there are two points which call for consideration, the first being the minimum amount of illumination which will give rise to the sensation of light; and secondly the smallest difference between two degrees of illumination which it is possible for the patient to perceive. The simplest method of testing the minimum light perception is to diminish the illumination of our card of test types, until it just begins to affect our own visual acuity (taking for granted that our own eye is normal). We can then observe whether there is a corresponding or greater diminution in the visual acuity of the patient. In order to test the light difference we use what is known as Bjerrum's

or De-Wecker's photometric test types, which consist of Snellens types printed white on gray. The contrast between the letter and its back ground, as you will see, gradually diminish as we descend the board. There is a fraction marked at the end of each line, which will give you an approximate idea of the value of the light difference in any case. The result, of course, cannot be mathematically accurate, but can be approximately enough correct for practical purposes. The main difficulty in these tests is the variation of perceptive power of the retina, occasioned by the state of so-called adaption. For instance, an eye which has been in the dark for some time is extremely more sensitive to light than one that has been exposed to strong daylight. We can, however, compare our own light perception with that of the patients, presupposing our own eyes are in an approximately normal condition. The diminution of the light perception is mainly caused by a pathological change in the outer or pigmentary layer of the retina, which layer goes by the name of photochemical apparatus of the eye. Whilst a diminished value of the light difference perception is most marked in lesions affecting the optic nerve, in retinal and choroidal lesions the light minimum is greatly reduced as a rule, and the light difference is but very slightly affected, hence a diminution of the light perception pointing as it does to a lesion of the retina or subjacent choroid (which latter as you know is the nutritive supply for the outer layers of the retina) directs the attention to the possible cause of such a lesion. Now the main causes of the retinal conditions are certain toxæmic constitutional states, and your attention being drawn to this fact you would institute a thorough general examination of the patient. The nephritic type of retinitis is the most frequently met with, and as you know the prognosis is extremely grave, the patient's life rarely being prolonged 18 months after the eye lesions are demonstrated.

Next to this we have a diabetic type of retinitis in which we have the same failure of the light perception, but in which the prognosis is not nearly so grave; further, there are the syphilitic types, some of them associated with circumscribed exudations in the choroid and retina, which are characterized also by the distortion of objects looked at, due to the exudate forcing the cones of the retina apart, or by its contraction crowding them together. Another point in the diagnosis of these cases is that the perception of colours is changed, the appreciation of blue being first lost, and this is in marked contradistinction to the failure of vision due to true nerve lesions, in which green is the first colour to disappear. I may mention here as an interesting contrast to these conditions that in cases of hysterical amblyopia you will frequently find the vision is improved under diminished illumination. As to the diminution of the power of appreciation between various degrees of

illumination, this condition is most marked in cases of optic atrophy, and would be of value thus to you in the differential diagnosis between lesions purely affecting the retina and those of the optic nerve. I will not dilate here upon the visual field and its indications, but I think I have said enough to draw your attention to a simple differential diagnostic symptom which cannot but be of use to you.

2. We must not be in a hurry to consider all cases of headache and diminished vision as due to a refractive error.

3. In neurasthenic individuals there is a marked susceptibility to any peripheral irritation, so that a very slight error of refraction may give rise to marked symptoms, such as pain and headaches; while in the case of calm phlegmatic individuals a comparatively high error may cause little or no trouble. The same holds true, of course, in the well-known category of ocular muscular insufficiencies; for, given a slight error in any case there is a more determined and continuous effort to overcome it, with the production of a corresponding fatigue, whilst in high degrees of the same trouble, there being an utter inability to overcome it, the patient makes no attempt to do so and accordingly escapes the trials of asthenopia. I feel obliged in this connexion to speak rather strongly against the custom of allowing opticians to correct refractive errors. If there be any astigmatism present, which is likely in the majority of cases, the proper correction of it is virtually impossible without the use of mydriatics. Again, especially in cases of myopia of high degree, there are not infrequently marked retinal changes, which unless properly looked after tend to become worse and end in partial blindness. Many cases occur in which an apparent error of refraction is simply an indication of severe fundal and constitutional trouble, and one I may mention which having seen but the other day is comparatively fresh in my memory and is of interest for two reasons. This lady had been wearing lenses prescribed for her by an optician, which had been changed from time to time during the past year, until latterly marked myopia began to develop. On examining her eyes, I found the light perception greatly diminished; there were some fine opacities in the lens; there were also some fine retinal changes which had evidently been in existence for some time. Further examination of the urine revealed the presence of marked diabetes. This case is also interesting as an example of the value of the light sense test.

In the words of Hilton Fagge, diabetes being a derangement of the chemical labour of nutrition, you can readily understand how the eye must suffer. The retinal affection in its earliest stages evidencing itself by the alteration of the light sense, and the myopia being as a rule due to the opacities of the lens altering its refractive power.

Astigmatism in its many forms is without doubt the cause of both local and systemic disturbances; bearing this in mind and recognising the fact that only accurate correction is of any value it must be self evident to you that no optician is competent to perform this work. In the words of Maitland Ramsey you have to remember that the eye is not only in the body but of the body.

EIGHTEEN CONSECUTIVE CASES OF OPERATION FOR PERFORATED GASTRIC ULCER.

By F. M. CAIRD, F.R.C.S., Ed., Surgeon, Royal Infirmary, Edinburgh.

ADDRESSING, as I have the honor to do, a body of brother practitioners, I have sought to find a subject of general interest to all. I, therefore, direct your attention to personal experiences of a consecutive series of eighteen cases of perforated gastric ulcer; and, in doing so, ask pardon for inflicting upon you so much that is well known and common place.

We are ignorant of the direct cause of gastric ulcer. The ulcer may pursue a symptomless course and there may be perfect health until the disastrous rupture into the peritoneal cavity takes place, and even then the diagnosis may be obscure. As a rule, however, there are very definite indications which lead us to a correct conclusion. A history of indigestion can nearly always be obtained, either of recent date and comparatively mild, or prolonged and intermittent. The dyspepsia is associated with pain after food and with vomiting, which often gives relief. The more classic evidences of gastric ulcer, haematemesis and melæna, are usually lacking. Perforation may occur at any time and under any circumstance, and is favored by muscular strain. Sudden intense pain, referred to the umbilical region gives warning of the perforation. The patient becomes faint and collapsed, has to lie down and generally vomits. As a rule, the passage of flatus ceases and symptoms simulating those of obstruction may arise. Occasionally there is movement of the bowels.

The initial condition of shock varies in degree and prolongation. Generalized abdominal pain is felt; the abdomen becomes board like and rigid, no longer participating in the respiratory wave. The most useful indication of danger is found in the shabby, rapidly quickening, pulse. Respiration increases and the temperature has a tendency to rise. On palpation, the abdominal wall is hyperæsthetic, and marked local tenderness is evinced in the epigastric region and above the pubis. There may be diminished liver dulness. Rectal examination sometimes reveals tenderness, but there is rarely bulging in the Pouch of Douglas.

*Read at the meeting of the Canadian Medical Association, Halifax, August 22-25, 1905.

There is not any difficulty or pain experienced during micturition. Careful notes should be taken when the patient is first seen. On re-examination it may be found that the liver dulness has entirely disappeared, more especially is this noticed after the patient has been lifted or moved. The general symptoms tend to become aggravated and merge into those of general peritonitis.

Perforation of gastric ulcer, acute appendicitis, acute pancreatitis and the rupture of carcinomatous ulcers of the intestine may mimic each other. Influenzal gastric pains and the gastric colic associated with adhesions have occasionally led the surgeon astray.

A small exploratory incision may be required to clear up a diagnosis in doubtful cases. The salient features which determine operation are the sudden onset of painful symptoms, the previous history of gastric ailment, the localised epigastric and supra pubic tenderness, along with the abdominal rigidity and change in the extent of the liver dulness. To this we may add the progressive frequency of the pulse rate.

Perforations leading to acute symptoms occur mainly on the anterior aspect of the stomach where there is less chance of adhesion to neighbouring structures. They are most frequent towards the lesser curvature and the pylorus. There may be more than one perforation. The ulcer varies in type from the characteristic small, sharply cut, terraced form, with comparatively healthy surroundings, to the large ragged rent in the midst of a chronic indurated perigastritis with oedematous serosa.

It would appear that, as the acrid acid stomach contents escape into the peritoneal cavity, the whole serous membrane reacts; and a rapid effusion of an alkaline nature takes place, which neutralises the acid secretion. The greater portion of the fluid found at operations is due to this source. Blue litmus paper acquires a deeper tint by contact with it and is not reddened till close to or at the margin of the perforation. The fluid abounds in greatest quantity in the vicinity of the rupture under the diaphragm. It accumulates markedly in the Pouch of Douglas and is there associated with the characteristic supra pubic and rectal tenderness. In posterior perforations it may be encysted in the lesser omental sac. The more dependent portions of the collections become rapidly purulent.

In perforated gastric ulcer we are already confronted with septic infection. We cannot therefore avail ourselves of the measures introduced by Mikulicz, the injection of nucleinic acid to create a prophylactic leucocytosis. As yet, the method recently applied by the genius of Bier, in treating successfully acute and septic inflammation by means of local congestion, is not available

Our treatment at present consists in performing laparotomy which enables us to prevent the further escape of gastric content. It allows us not only to get rid of what has already escaped, but in addition, to cleanse the peritoneum by careful washing out. It enables us to close the rent and to establish free drainage.

To do all this a general anæsthetic is required. When once the nature of the case is established, it is wise to get free access by an extensive incision. We are guided in our search for the aperture by the lymph in its vicinity, by the nature of the escaping fluid, and the direction, from which it wells. On identification the ulcer may be plugged with iodoform gauze, and we at once thoroughly wash out the abdominal cavity with sterilized salt solution. A counter opening should be made above the pubis and the glass nozzle of a douche introduced while the ulcer is being closed. Excision of the ulcer is not to be recommended. It means loss of time and loss of blood without corresponding gain.

Where there is much perigastritis, with unyielding or friable tissue, a series of interrupted Lembert sutures (silk) may be introduced at some little distance from the margin of the ulcer and tightened up *en masse*. Over these a second series may be required. Occasionally, a preliminary stitch or two may be used to transfix the whole thickness of the ulcer and so diminish its size. A trace of iodoform may be rubbed in to favour plastic repair. If a gastro-jejunostomy be required, it is now performed. The flushing out should be completed by douching every peritoneal recess till the saline returns perfectly clear. Finally, the abdominal wound is closed. We have always left a large Keith's tube in the Pouch of Douglas, and have generally drained the site of perforation with a Mikulicz tampon and drainage tube.

The head of the patient's bed should be raised about six inches in order to favour the gravitation of any discharge from the dangerous absorptive region of the diaphragm towards the less susceptible Pouch of Douglas.

Recovery is frequently uneventful. The chief factor affecting the issue is the nature of the organisms liberated within the peritoneal cavity and the power of tissue resistance to the toxins evolved. Fortunately, we do not meet with organisms of excessive virulence within the stomach and, when there is no stagnation or fermentation of the gastric contents, the highly acid nature of the gastric secretion which we so frequently meet in such cases, inhibits the growth of most microbes. An additional source of sepsis may be due to the damage inflicted by the gastric extravasation on the visceral peritoneum, permitting the passage of intestinal organisms. Hence the value of a speedy recognition of the serious nature of the lesion and the success which is likely to crown an early operation.

Naturally the size and position of the perforation, the date and nature of the last meal, and the amount of material which escapes into the peritoneum are obviously of moment.

The chief prognostic is the pulse. A rate of 120 is to be feared, 130 and over to be dreaded. Temperature is of less value. The course after operation may be full of anxiety, requiring the exercise of extreme watchfulness and care. The pronounced thirst, due to the loss of fluid by the peritoneal effusion, may be allayed by rectal salines administered every four hours. The urine should be carefully examined and morphine given as indicated. If the pulse fail in strength and fulness, and increase in rate, intravenous saline transfusion is most beneficial. One litre may be given and when improvement is maintained thereafter for a couple of hours, even if there be a subsequent flagging of the pulse, transfusion may be freely repeated with every prospect of success.

Vomiting, if severe, persistent, or accompanied by haematemesis, is best combatted by gastric lavage. There were eighteen cases, thirteen females and five males. The patients varied in age, most being between 20 and 30 years, the extremes being 12½ and 71.

Three to twenty hours had elapsed between perforation and operation in fourteen cases, of whom eight recovered and six died. Between twenty-one and thirty hours there were three cases, two recovering, one dying, one case recovered fifty hours after rupture.

The rapidity of the pulse, as a prognostic, is emphasised when we observe that in five of the fatal cases the pulse was over 130 before operation. We lost, however, one where the pulse was only 112, but the patient was 71 years old.

There were seven deaths in all, four females and three males. It was impossible to save case 9 whose omentum was already gangrenous, or case 16 with uraemia due to advanced congenital cystic disease of the kidneys.

It will be seen that the mortality is not excessive, and that an early diagnosis may do much to render operation for gastric ulcer highly successful. There is no reason why the judicious county practitioner should not act in emergencies and, by a comparatively simple operation not in itself dangerous, save lives that otherwise might incur still greater risk were they sent to a distant hospital.

Some points in regard to history, leucocytosis, micro-organisms and after complications may be ascertained from the accompanying table. The plates serve to illustrate the appearance and position of the perforations. It would ill become us in this section to meet without paying our tribute of reverence to the memory of the late Professor Mikulicz Radecki, of Breslau.

In Mikulicz the alert glance, so full of sunshine, the deft, dainty yet powerful hand, proclaimed the artist. His wondrously versatile scientific work, his earnest quest of truth, his whole life history breathed forth the catholic spirit of a true humanity.

A pupil of Billroth, a follower of the principles laid down by Lister, he was the pioneer and perfecter of aseptic methods.

Carried off in the day of his strength by that disease, cancer in the stomach, the fell ravages of which he had himself done so much to mitigate, he has left an enduring fame as a great surgeon.

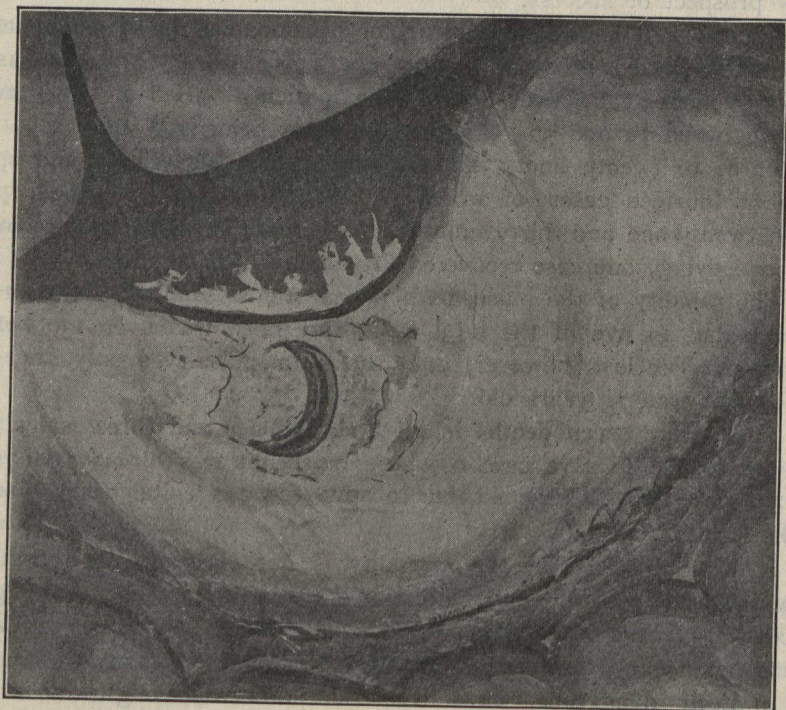


Fig. I. Illustrating Case 3.

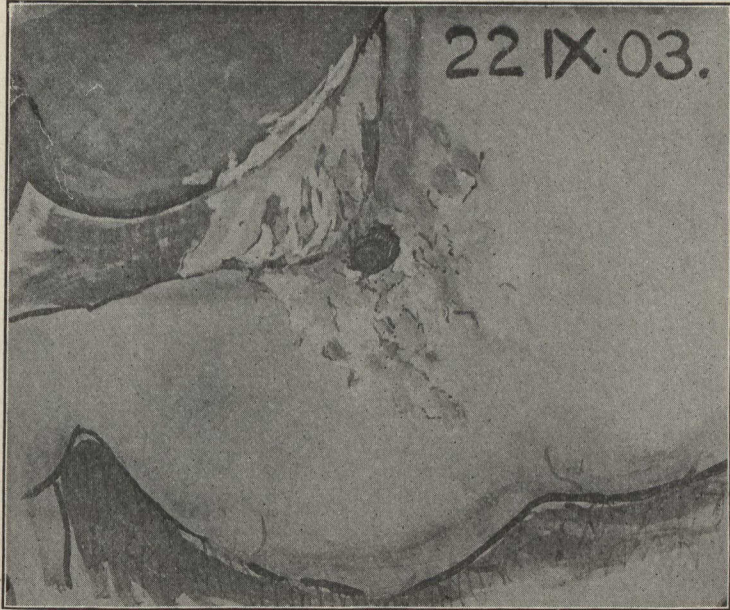


Fig. II. Illustrating Case 4.

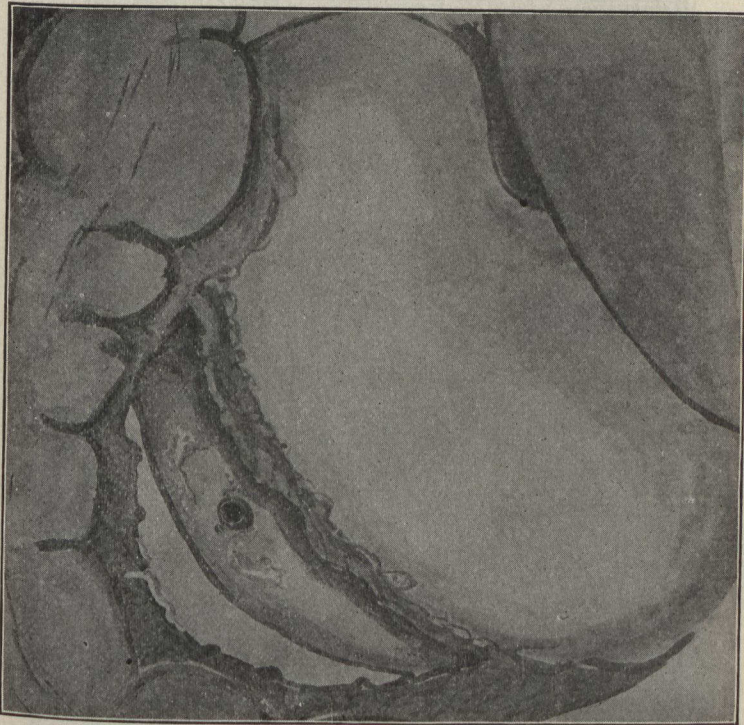


Fig. III. Illustrating Case 7.

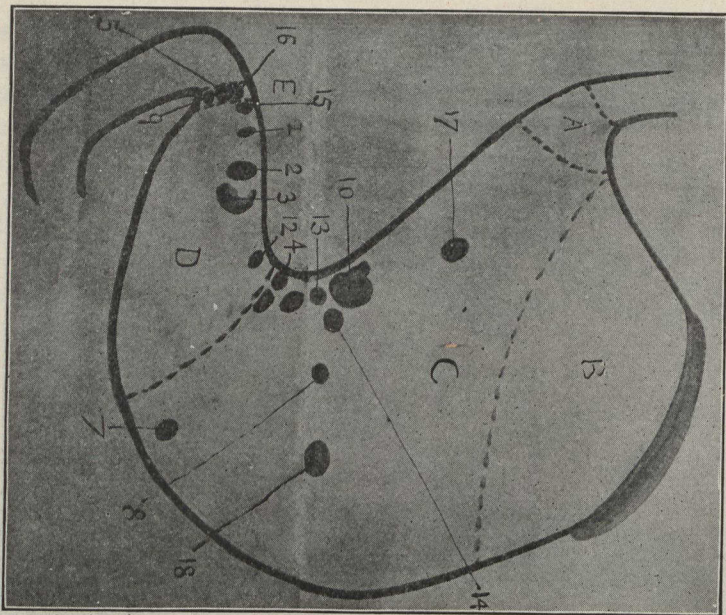


Fig. IV. Illustrating Case 13.

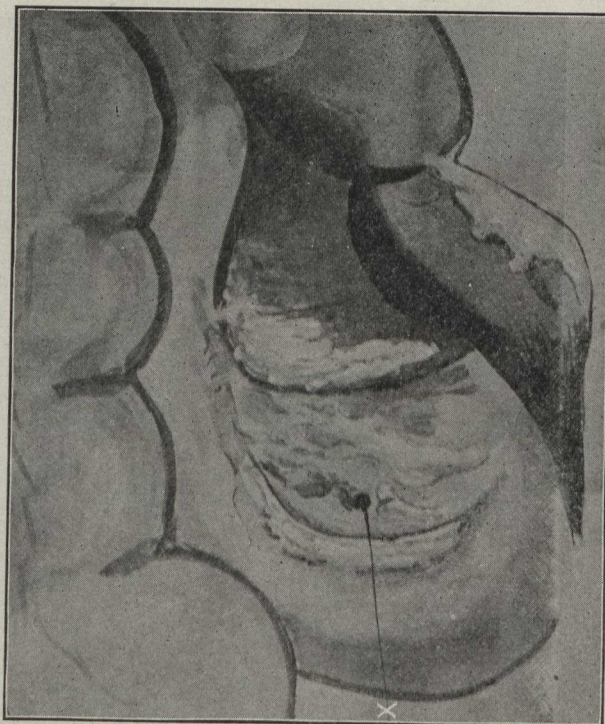


Fig. V. Illustrating Case 14b.

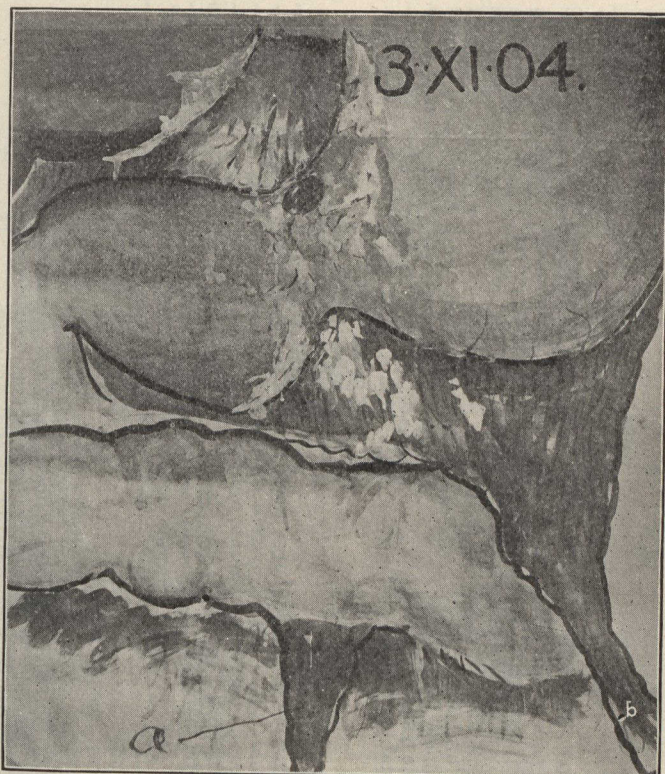


Fig. VI. Illustrating Case 14.

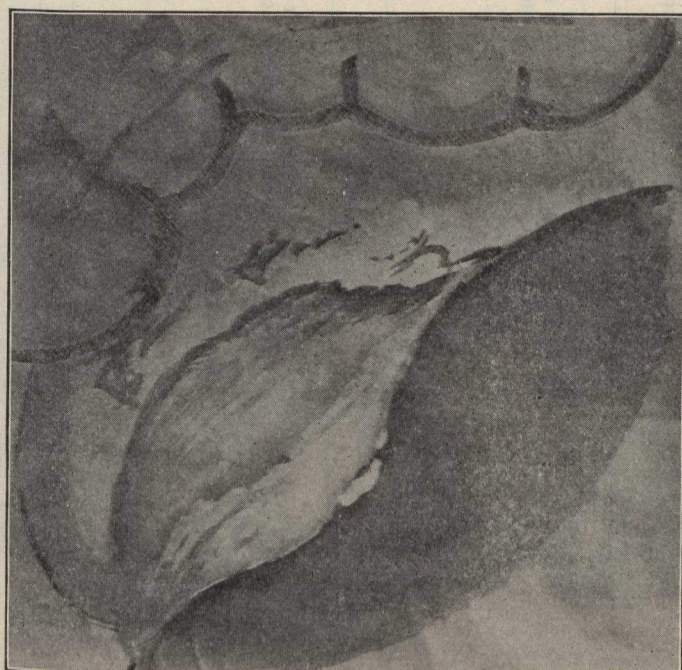


Fig. VII. Illustrating Case 14a.

Name, age, occupation, date of operation, event.	Previous history.	Onset.	Provisional treatment.	Condition prior to operation.	Local condition.	Operation.	Aftercourse.
1 Mr. W. L., 21; cabinet maker; 16-xii-'01; 26 hours; recovered.	Indigestion, several years; pain across stomach for 3 weeks.	Sudden, two hours after hearty breakfast; severe pain causing him to fall down; vomited shortly after and later twice or thrice.	Opium by mouth and morphine.	P. 100; T. 100.8; R. 26; pain and tenderness over recti, especially tender above and to right of umbilicus; liver dullness less; quite gone within an hour; rectal tenderness.	Small ulcer, anterior near pylorus; perigastric clear fluid and lymph.	C H Cl ₃ ; upper part of abdomen dried out; pelvis washed out; drainage.	Good recovery.
2 Miss A. G., 23; domestic servant; 14-x-'02; 50 hours; recovered.	Two years ago pain after food and anaemia; well since.	Sudden pain at left costal margin, left shoulder and axilla, when lifting a couple of pails; had to lie down; vomited once; blackish fluid.	Whiskey poultices.	P. 125; T. 99; R. 26; tumid abdomen; general tenderness; maximum at left costal margin.	Large ulcer near pylorus on posterior wall.	Ditto.	Ditto.
3 Miss L. T., 22; domestic servant; 21-iv-'03; 24 hours; recovered.	Five years indigestion; hypogastric pain for 3 days.	Sudden .....	.....	P. 126; T. 100.6; R. 30; general acute tenderness; no liver dulness.	Large ulcer on anterior wall near pylorus and lesser curvature; much clear fluid lymph and potato.	Whole peritoneal cavity dried out; drainage.	Ditto.

<p>4 Miss M. Y., 21; Three years dyspepsia; hæmatemesis at New Year; passed blood by rectum from 17th to 20th Sept.</p>	<p>Sudden violent pain and vomiting action of bowels this morning.</p>	<p>Morphine, P. 128; T. 100.6; R. 24; great abdominal pain, felt also in chest and shoulders; rigid abdomen, general tenderness pronounced above umbilicus; liver dullness much diminished.</p>	<p>Small round ulcer, anterior near lesser curvature, 5 inches from pylorus, slight tendency to hour glass contraction.</p>	<p>Ditto.</p>	<p>Ditto; symptoms again came on; fresh rupture 3-xi-'04; see case II.</p>
<p>5 Mrs. W., 37; 25-xi-'03; 17 hours; died.</p>	<p>Sudden pain and collapse.</p>	<p>.....</p>	<p>Large ulcer, anterior aspect of pylorus.</p>	<p>Laparotomy with cocaine and adrenalin; CHCl₃ in small amount; posterior gastrojejunostomy since pylorus was narrowed after suture of ulcer: ditto.</p>	<p>Improved somewhat, then had to be transfused; died twelve hours after operation; sectio; roughening of diaphragmatic pleura; no leakage at sutures.</p>
<p>6 Miss McE., 25; 31-i-'04; 18 hours; died.</p>	<p>Sudden, severe pain.</p>	<p>.....</p>	<p>Small perforation, anterior, near lesser curvature.</p>	<p>CHCl₃: whole peritoneal cavity washed out; drainage.</p>	<p>Did well till following afternoon, when pulse rose, coffee ground vomiting came on; pelvis washed out; result negative; died 18 hrs after operation.</p>
<p>7 Miss N. B., 25; domestic servant; 20-ii-'04; 10 hours; recovers.</p>	<p>Awakened by sudden epigastric pain & bilious vomiting; bowels have acted once.</p>	<p>.....</p>	<p>Small ulcer, posterior, near greater curvature; lesser sac distended with fluid; no fluid in general cavity.</p>	<p>Ditto.</p>	<p>Sickness and hæmatemesis next day; stomach washed out; vomiting ceased; transfusion necessary at night; good recovery.</p>

Name, age, occupation, date of operation, event.	Previous history.	Onset.	Provisional treatment.	Condition prior to operation.	Local Condition.	Operation.	Aftercourse.
8 Mrs. H.; 40; 13-iv-'04; 6 hours; died.	Pain after food and vomiting for some time.	Sudden epigastric pain and collapse.	.....	P. 140; T. 100.8; R. 40; abdomen rigid and exceptionally tender.	Small ulcer, anterior aspect cardiac end midway between the curvature.	Ditto.	Transfused at intervals of 4 to 6 hours; she held her ground for 24 hours and then sank, 32 hours after operating; septicæmia: general peritonitis.
9 Mr. M. Y.; 48; labourer; 26-x-'04; 24 hrs.; died.	Eight years indigestion: pain and vomiting after food; in temperate; a daughter died of perforated gastric ulcer.	Sudden vomiting of and passage of black matter at stool; acute epigastric pain.	.....	P. 132; T. 97; R. 30; fixed abdomen, tender, especially over pubis; no liver dullness.	Small clean cut ulcer near posterior aspect of pylorus; coffee groundlike fluid in peritoneum; gangrenous omentum.	Distended stomach, emptied with trocar and canula; removal of gangrenous patches. Ditto.	Transfused after operation; broncho-pneumonia; purulent sputum; rise of temperature; death on 7th day.
10 Miss Y.; 27; 18-x-'04; 17 hours; recovered.	Has been under treatment for gastric neuroalgia; pain after food.	Sudden epigastric pain and vomiting.	.....	P. 120; T. 100; liver dullness diminished.	Small ulcer near lesser curvature and pylorus.	Ditto.	Good recovery.
11 Miss M. Y.; 22; housemaid; 3-xi-'04; 19 hrs.; recovered.	See former history, case 4; good health since operation; for perforation;	Severe abdominal pain & vomiting.	.....	P. 104; T. 98.4; R. 24; at 11 a.m.; did not look ill; slight abdominal pain and tenderness; abdomi-	Ulcer near old site; marked hour glass contraction; many omental adhe-	Ditto.	Good recovery.

<p>quite recently pain after food and vomiting.</p>	<p>12 Miss B. K.; 21; 19-xii-'04; 48 hours; died.</p>	<p>Epigastric pain after meals, shooting to back and shoulders, followed by vomiting of un- digested food; 18 months dura- tion; better for a year, worse for last 12 months.</p>	<p>Severe epigas- tric pain and vomiting.</p>	<p>.....</p>	<p>.....</p>	<p>nal respiration; liver dullness normal; at 3.30 p.m., P. 110, T. 101, R. 28; liver dullness gone.</p>	<p>sions and bands. Posterior gastro- jejunostomy.</p>	<p>Good recovery.</p>
<p>13 Miss H., 34; 17-i-'05; 9 hours; recov- ered.</p>	<p>Two years ago had for two months pain af- ter food; good health since; 14 days ago slight return of pain.</p>	<p>Sudden severe epigastric pain.</p>	<p>.....</p>	<p>.....</p>	<p>P. 100; T. 100; R. 28; anxious expression, rather rigid abdo- men; pain in hypo- gastric and left hy- pochondriac re- gions; maximum tenderness between umbilicus and ensi- form cartilage and above pubis; liver dullness gone.</p>	<p>Small ulcer near lesser curvature toward cardiac end; cedema- tous extra peri- toneal tissue.</p>	<p>Ditto.</p>	
<p>14 Master A. P., 12½; 15-ii-'05; 12 hours; re- covered.</p>	<p>Pain after food for last twelve days and slight cold.</p>	<p>Felt very ill; no great ten- derness; vom- ited, but pass- ed a quiet night.</p>	<p>Hot fomenta- tions.</p>	<p>.....</p>	<p>P. 130; T. 101-2; tender abdomen; no liver dullness.</p>	<p>Small pinched out; near mid- dle of lesser cur- vature.</p>	<p>Ditto.</p>	

Signs of right basal pneumonia on 3rd day; on 8th day both lungs affected; P. 126; T. 103; R. 48; after an anxious time, got well; oxy-
gen inhalation.

Name, age, occupation, date of operation, event.	Previous history.	Onset.	Provisional treatment.	Condition prior to operation.	Local condition.	Operation.	Aftercourse.
15 Mr. T. W., 71; dairyman, 14 iv.'05; 9 hours; died.	Three years ago an attack of vomiting, pain and constipation; one year ago a second; was an umbilical and double inguinal hernia.	Sudden sickness and vomiting of reddish material.	Opium.	P.112; T.98; R.36; Tenderness above and below umbilicus; liver dulness diminished.	Posterior aspect of pylorus; large ulcer; gas fluid and gastric contents in quantity.	Ditto.	Died 8 hours after operation; septic peritonitis; suturing intact.
16 Mr. J. F., 32; labourer, 5-v.'05; 18 hours; died.	Intemperate; no date.	Sudden abdominal pain; distension.	.....	P.136; T.98; R.40; patient had a peculiar dazed look; was not clear headed; had dusky complexion.	Ulcer on anterior aspect of pylorus; much fluid; pure culture colon; bacillus.	Ditto.	Rapid sinking; symptoms of uraemia; bladder empty; septic; advanced congenital cystic disease of both kidneys; cysts in pancreas and mesentery; hypostatic congestion over lung; peritonitis
17 Miss C.K., 35; 3-vi-'05; 13 hours; died.	For last 14 years intermittent attacks of sharp pain after meals in epigastrium and between the	Sudden epigastric pain and vomiting	.....	P.120; T.99; R.26; abdominal tenderness; liver dulness less.	Ulcer anterior aspect cardiac portion 2½ inches from lesser curvature culture from near		Left sided pleurisy; aspirated 10th June; Fraenkel's pneumococcus; improvement; empyaemia followed;

<p>18 Mrs. C., 29 ; 29-vii-'05 ; 14 hours ; recovered.</p>	<p>For several years pain after food ; relieved by next meal ; well since March.</p>	<p>Sudden sharp shooting pain in epigastric and umbilical regions and down left upper arm ; it passed off completely but returned worse in six hours.</p>	<p>.....</p>	<p>P.140 ; T.100 ; R.24 ; pinched look ; knees drawn up ; tense painful abdomen ; most tender in left hypochondriac and iliac regions ; liver dulness normal ; leucocytosis 8,000.</p>	<p>rupture gave many colonies of streptococcus pyogenes and a few of staphylococcus aureus ; from the pouch of Douglas ; pure culture staphylococcus pyogenes.</p>	<p>Ditto.</p>	<p>reaction of bile streptopyogenes ; still draining ; abdomen dull.</p>
<p>18 Mrs. C., 29 ; 29-vii-'05 ; 14 hours ; recovered.</p>	<p>Sudden sharp shooting pain in epigastric and umbilical regions and down left upper arm ; it passed off completely but returned worse in six hours.</p>	<p>Sudden sharp shooting pain in epigastric and umbilical regions and down left upper arm ; it passed off completely but returned worse in six hours.</p>	<p>.....</p>	<p>P.140 ; T.100 ; R.24 ; pinched look ; knees drawn up ; tense painful abdomen ; most tender in left hypochondriac and iliac regions ; liver dulness normal ; leucocytosis 8,000.</p>	<p>rupture gave many colonies of streptococcus pyogenes and a few of staphylococcus aureus ; from the pouch of Douglas ; pure culture staphylococcus pyogenes.</p>	<p>Ditto.</p>	<p>reaction of bile streptopyogenes ; still draining ; abdomen dull.</p>

QUEBEC MEDICAL NEWS

Conducted by MALCOLM MacKAY, B.A., M.D., Windsor Mills.

The first regular meeting of the Montreal Medico-chirurgical Society for the session 1905-6 was held on Oct. 6th in the Society's Rooms. It took the form of a smoking concert at which the retiring President presented his annual report. The new officers were elected as follows: President, Dr. F. R. England; Vice-President, Dr. F. G. Finley; Treasurer, Dr. Alf. T. Bazin; Secretary, Dr. A. H. Gordon; Trustees, Dr. Jas. Perrigo, Dr. Jas. Bell, and Dr. H. S. Birkett.

At the annual meeting of the District of St. Francis Medical Society, the following officers were elected: President, Dr. W. Lanmy; 1st Vice-President, Dr. Ledoux; 2nd Vice-President, Dr. Edgar; Sec. Treas., Dr. E. S. Williams; Asst. Sec. Treas., Dr. Gadbois; Council Dr. Smith, Dr. Fregean, and Dr. Pelletier; Programme Committee, Dr. Byers and Ledoux. No papers were read, the regular programme being set aside for the business meeting, but cases in practice were reported by Drs. Edgar, Smith and Williams. The question of holding meetings outside Sherbrooke was introduced by Dr. Edgar and it was decided that such a change would be beneficial to the Society. Dr. Edgar also extended an invitation to the Society to meet at North Hatley some time during the coming year.

At the last meeting of management of the Montreal Tuberculosis League, Dr. Hamilton White was appointed to the medical staff of the dispensary.

Short reports were received from the publication committee, the ladies' committee and the dispensary. The first dealt with the lectures which had been given to some of the trades unions and literary societies. This work is being continued and more lectures are being planned, among others a lecture before the Grand Trunk Railway Institute by Dr. Adami, on November 16th. The ladies' committee reported on the work of the relief during the past summer and hoped greatly to increase this department of the work during the winter.

During the four summer months, 66 new cases have been placed on the books. Seven of these have been sent to the Home for Incurables, five have been sent to their own homes, and five incipient cases sent to Sanatoria.

The following is the inspector's work for August and September: Visits to patients, August, 356; September, 348. Disinfections of houses after death or removal, August, 56; September, 59. Sanitary conditions distributed August, 1,780; September, 1,860. Leaflets and pamphlets distributed, August 630; September, 480.

Dr. Laberge, Medical Health Officer for Montreal, has completed his annual report for last year. In the introduction it is contended that by the adoption of the custom of forming the city death rate without eliminating the illegitimates and prematurely born, the city shows a much higher death rate than it should; and, in consequence, Montreal does not stand as high in the list as it would otherwise.

Including the mortality amongst the prematurely born and the illegitimates, the death rate is 23.39 per 1,000 population. Excluding deaths among prematurely born the rate is 22.48, and excluding the illegitimates alone it is 20.08.

The mean birth rate for the seventeen years, up to and including 1903, was 38.92 per 1,000.

The French-Canadian birth rate was 49.08; other Catholics, 24.87; Protestants, 23.41. The total number of births in 1904 gave a rate of 35.96. The French-Canadian rate was 44.72; other Catholics, 22.87; Protestants, 22.04.

The excess of births over deaths was 3,709; French-Canadian, 3,072; other Catholics, 113; Protestants, 524. The total birth rate this year was .12 less than in 1903, but the French-Canadian rate was 1.06 higher. That of other Catholics was 7.82 lower, and of Protestants 1.52 higher. Comparing Montreal's 35.96 per 1,000 birth rate with other cities, we find Toronto, 24.2; New York, 28.9; Buenos Ayres, 34.1; Paris, 19.5; Breslau, 31.8; Prague, 23.2; Venice, 26.5; St. Petersburg, 29.7.

The marriage rate for 1904 was 10.21 per 1,000, or .5 higher than in 1903. French-Canadians, 10.44 per 1,000, .31 lower than 1903; other Catholics, 8.48, or .13 higher than 1903; Protestants, 10.67, or .33 higher than 1903.

At the quarterly meeting of the Montreal General Hospital the following points were brought before the public. The expenditures of \$23,858 during the quarter means an increase of \$4,882 over the income, and of \$1,807 over the corresponding term last year. Last quarter the expenditure was \$25,644, an increase of \$1,719 over the same quarter last year; and, although within the income for the same period of time, is beyond the present means of the hospital. The rich and generous were asked to make donations to this most worthy object. The endowment fund has been increasing very slowly and, as yet, only amounts to \$79,500, whereas it had been hoped that \$250,000 would have been raised by this time. A fund of this nature should amount to half a million or a million before the governors can feel easy about the future of the hospital.

Dr. Craik was asked to say something upon the growth of the hospital since he was first connected with it, over half a century ago. He

said that there were at that time but two resident medical officers in the hospital, and eight or ten untrained nurses. The patients numbered eighty or ninety. The work was done remarkably well, considering the circumstances, and the death rate but little greater than at present, though of course such a variety of cases was not seen in the wards. He mentioned the cholera epidemic in 1854, when hundreds of patients died in the hospital, and all the nurses and orderlies deserted. The two house men, Dr. Ault and himself, had to do all the work from the time they carried the patient in, till the time they carried his body out, for death was not an unusual termination. Such care, however, was taken in the treatment of the disease that not a single patient or servant went down with cholera during the epidemic which lasted from June to October.

Dr. Patch, acting Superintendent, reported 803 patients treated to a conclusion; 55 deaths of which 28 occurred within three days of admission. Making the general mortality rate 3.34. The aggregate number of hospital days was 20,674; average per patient 25.6. In the outdoor department there were 10,850 consultations, and the ambulance responded to 434 calls.

During the quarter eight nurses passed examinations, receiving their diplomas and medals.

The medical board, which now controls the outdoor department, has appointed the following for the staff visiting of this department: Physicians, Drs. Gordon, Gillies, C. P. Howard; Surgeons, Drs. Von Eberts, Bazin, Pennoyer, and Peters. With the death of Dr. Buller, Montreal loses her most eminent specialist, and Canada the man of all those resident among us whose name has been most familiar to European physicians.

Dr. Buller has long been recognised as the last court of appeal in Canada for disease of the eye—if he could do nothing nothing could be done. We have eminent specialists in the profession, but few who impress one with such capacity in emergencies as did Dr. Buller. He was never at a loss, and, when most hardly pressed, shone most brilliantly. His manner was brusque, as a rule; but the students gathered many a lesson of gentleness when he handled a little child in his outdoor clinic, and his house man at the hospital saw through the rough mask long before the term was completed.

He was a well of knowledge, and he could teach a combination as useful as it is rare. He could not impart his experience, his touch, nor his genius, but he could show a student how to look, and how to see what he was looking at; further, he could, in a few words, convey great lessons, and in a short series of lectures emphasize what a general practitioner should know of ophthalmology; what he should do; and,

perhaps more important, what he should not do. His former students preserve his "notes" as being the most short, complete, and up-to-date treatise on ophthalmology and otology extant. What a treat to hear him thunder on "that dastardly crime" ophthalmia neonatorum, or the equally heinous sin of mistaking a glaucoma for a conjunctivitis.

The "gross ignorance" of the ordinary student upon the subject of ophthalmology was so dwelt upon, and illustrated so graphically, that one doubts whether any student who passed through his hands will ever be guilty of the "crimes" he so vehemently deplored.

The medical society will miss his presence; for whenever he made a contribution it was something particularly worth while, as he never presented a medical paper unless it was of the best. "The toxic effect of wood alcohol upon the optic nerve," was the last question he discussed before the profession of Montreal, and the widespread publication of his investigations is well known to everyone. He was not a prolific writer, but everything he did write was intensely practical.

Dr. Buller was the fourth son of the late Mr. Chas. Buller, of Campbellford, Ont. He was born in 1844, and was educated at Peterborough High School and Victoria College Cobourg, where he graduated in 1869. He then went to England and Germany, devoting most of his time to the specialty which later claimed his whole attention. He worked long and faithfully and had a splendid all round training, serving as an assistant surgeon in North Germany, during part of the Franco-Prussian war. While at Berlin he studied under Helmholtz and Gräfe, and was interne at the Gräfe--Ewers Ophthalmic Hospital. He returned to England in 1872, and became a member of the Royal College of Physicians and Surgeons, and senior house surgeon in the Royal London Ophthalmic Hospital. In 1876, he commenced practice in Montreal, holding the position of ophthalmic and aural surgeon to the Montreal General Hospital for seventeen years, resigning to take the same position in the Royal Victoria. He was professor of ophthalmology and otology at McGill University from 1883 until his death, was a past president of the Montreal Medico-chirurgical Society, and member of the American Ophthalmology Society as well as that of Great Britain.

CURRENT CANADIAN MEDICAL LITERATURE.

The Canadian Practitioner, October, 1905.

STAPHYLOCOCCIC INFECTION OF THE TONSIL SIMULATING A CHANCRE.

It has been observed by several writers that certain sores on the tonsils closely resemble a chancre. Dr. D. W. Montgomery, of San Francisco, reports a case where the diagnosis was difficult, the disease of the tonsil being due to staphylococcic infection. Patient travelling in a pullman car. On rising, he looked at his throat in the mirror and noticed a yellowish sore on the left tonsil. He saw two physicians who diagnosed either syphilis or epithelioma. Dr. Montgomery saw him a few days later, when the sore had the appearance of a chancre. There was a circular crateriform ulcer, or what appeared to be an ulcer, the size of a nickel on the left tonsil. The floor of the ulcer had a yellow covering, and its edges were rounded and raised. There was a small extension downwards, and the anterior pillar of the fauces was bulged forward, smooth and deep red. On palpation it was only fairly hard. It was not painful, but the patient expectorated a good deal. There was an enlarged lymphatic nodule behind the ramus of the jaw. This nodule was tender, and there was some discomfort on the left side of the neck. The left epitrochlear lymphatic nodule was enlarged, but soft. No tubercle or diphtheria bacilli were found. The only microorganism found was the staphylococcus. The patient was in good health.

There was the exposure to infection some time prior. He saw that same day two other physicians who independently thought the sore was of syphilitic origin. Dr. Montgomery met these two in the afternoon. It was decided to wait for other symptoms and the patient was prescribed a mouth wash of hydrogen peroxide and thirty drops of tincture perchloride of iron every three hours. By April 6th the sore was healed.

In March, 1905, just four years after the above attack, the patient returned with an affection in the same situation. There was a deep funnel-shaped crypt in the tonsil surrounded by a bulged out rim. In this crypt there was a dirty grey mass that simulated exactly the necrotic floor of the chancre. The lymphatic nodule behind the left angle of the jaw was a little enlarged as before. The case in a few days presented the same appearances as the former attack, and there remained no doubt as to their identity. Cultures made from the debris in the sore contained only staphylococci.

There is a reason to believe that the deep crypt in the tonsil became filled with a cheesy substance, which in turn became infected by staphylococci much as the sebaceous matter in a comedo is infected causing an acne. Fournier has called such cases lacunar or cavernous amygdalitis, and has drawn attention to the ease with which they may be mistaken for a chancre of the tonsil, or for an ulcerating gumma. Dr. Mendel calls this form of tonsillitis ulcerating chancriform amygdalitis. Drs. Mauriac, Diday, Rollet, and R. W. Taylor have stated the primary sore of syphilis may occur on the tonsil. Chancre of the tonsil may be mistaken for inflammation caused by staphylococci or streptococci, simple tonsillitis, tonsillitis in grip, diphtheria, mucous patch, angina gangrenosa, or epithelioma.

(We remember the case of a young woman who was infected with syphilis on the tonsil by a dentist's instrument, which had been used on an undoubted syphilitic just previously. Editor.)

Dominion Medical Monthly, September, 1905.

TWO CASES OF NEPHRO-LITHOTOMY.

Dr. Hadly Williams, of London, reported these cases at the meeting of the Ontario Medical Association last June. His main reason for so doing was to put in a plea for early operation in cases of stone in the kidney. One case in every three will die, if the patient be not relieved. If the operation be undertaken early in the disease it holds out good promise of success.

Dr. Williams calls attention to the fact that medical men sometimes diagnose these cases as lumbago, neuralgia, etc. He attaches main importance to the character of the pain and the urine. The utmost care must be taken in the matter of the diagnosis. Great care is required to exclude tubercular disease of the kidney. The x-rays cannot always be relied upon. In Dr. Williams' two cases the x-rays completely failed to throw any light upon the diagnosis. There was frequent micturition, especially during the day, pain in the loin affected by exercise and causing irritation of the stomach.

In the performance of the operation the kidney should be brought well out on the edge of the lumbar muscle. This enables the surgeon to make a more thorough examination, and small calculi are less likely to escape. The opening in the pelvis of the kidney from behind is associated with much less bleeding than cutting the substance of the kidney. The incision should be a clean cut, and large enough to permit of the ready removal of the stone without laceration, that the edges may be closed by a continuous Lembert suture. The haemorrhage from

the cut kidney is sometimes very great, although it is not always possible to avoid making an incision into it in cases of large or branched calculi. If the ureter be pervious, the careful suturing of the opening in the kidney or the pelvis, and the early removal of the tube will go a long way towards preventing the occurrence of a urinary fistula.

CUTANEOUS AFFECTIONS OBSERVED IN HYSTERICAL PATIENTS.

Dr. Graham Chambers of Toronto, read this paper at the meeting of the Ontario Medical Association. In hysteria there may be motor, vasomotor, sensory, trophic, or secretory disturbances. The skin, on account of its exposed position, offers a good means of studying these changes in function.

The cutaneous affections seen in hysteria, and due to the mental condition and functional disturbances of this disease are classified thus: 1, feigned eruptions; 2, sensory neuroses, as hyperaesthesia, dermatalgia, pruritus, paræsthesia, and anæsthesia; 3, vasomotor neuroses, as anaemias, asphyxia (Renaud's disease), gangrene, erythemas, urticaria, oedemas, purpura; 4, secretory neuroses, as hyperhydrosis, anyhyrosis, haematohydrosis, uridrosis; 5, trophoneuroses, namely, alopecia, atrophy and dystrophy of the nails; 6, motor neuroses, such as cutis anserina, etc.

In feigned eruptions the disease is of artificial origin to excite sympathy or avoid work. All forms of lesions that are possible to produce by the application of pigments or irritants to the skin have been observed. These are usually pigmented or erythematous patches, vesicles, blebs, or ulcers. Vesicular, bullous and ulcerative eruptions are usually situated on the trunk and extremities. They can generally be detected because they do not conform to any known disease of the skin. They are either asymmetrical or too symmetrical.

The vasomotor disturbances met with among hysterical patients are numerous and important. The lesion must be one which can be produced by functional disturbance, and all other causes than hysteria must be excluded. Among the anaemias may be mentioned the so-called dead fingers. The affected parts become white and numb, and in a short time resume their normal color. The condition is caused by a spasm of the arterioles and capillaries. In some instances the anaemic areas are not limited to the fingers, but may appear on the back of the hands, the face, etc. The white areas may be quite large and be surrounded by pigmented borders.

The hyperaemias or congestions of the skin met with in the hysterical may be active or passive. The active forms of hyperaemia are either a morbid blushing or a fugaceous erythema, which might be classified as erythema fugax of the books. This form of erythema is characterised by transient erythematous patches and occasionally by reddish papules appearing after emotional disturbances and also, though rarely, after exertion. These lesions are usually on the face or neck, but may extend to other parts of the body. The patients are hysterical, or suffer from exophthalmic goitre, traumatic neuroses, neurasthenia, or other forms of vasomotor disturbances.

Urticaria is disease that occurs in persons with a peculiar irritability of the nervous system. This susceptibility may run through several generations. Without this predisposition of the nervous system the usual exciting causes would fail to call forth the trouble. The hysterical state is usually found in persons who are subject to urticaria.

Oedemas of the skin may occur in the neurotic. They may be white, pink, red, or blue. In some instances the oedemas may be transient, in others assume a very chronic course. In Quincke's disease each lesion is transient, but as these come in successive crops, the disease may be quite chronic.

The Montreal Medical Journal, September, 1905.

CHORIONEPITHELIOMA.

The first article in the issue is by Dr. F. A. L. Lockhart on the above subject. It is a very exhaustive and valuable contribution to the literature of this subject.

He commences his paper by stating that the placenta is formed by the trophoblastic cells of the embryo penetrating into the maternal tissues, and so preparing that way for the villi to follow. These trophoblastic cells are found lying in the mucous membrane and muscular wall of the uterus. These cells, the syncytium and Langhan's cells, are found between the first and tenth week of pregnancy. They may persist throughout pregnancy and be found in the puerperal uterus. They may form a new growth, the deciduoma malignum of Sanger or, as it is now universally called, Chorionepithelioma. The growth is extremely malignant and follows conception or in connection with teratomata. It is marked by its appearance during the puerperal state, rapid growth, haemorrhages, metastases by the blood vessels, and the presence of cellular elements not found in any other tumor.

The disease has been recognized only for the past 14 years or so. Prior to that date cases were called carcinoma of the uterus. Sanger

considered the growth to be a sarcoma arising from the decidual membranes and gave it the name of deciduoma malignum. This view was held by most for a time, but Marchand advanced the opinion that it was an epithelioma of foetal origin. The disease may appear on very rare occasions in old women, in virgins and in males; but in all these cases there is the presence of teratomata. These instances prove that the disease may occur independently of pregnancy.

The growth is an irregular, diffuse, fungous mass implanted in the uterine wall by numerous prolongations which run between the muscular bundles. Sometimes the surface is ulcerated, rough and ragged with villous vegetations. At the diseased area the uterine wall may be almost eaten away. The tumor is sometimes pedunculated or nodules may lie beneath an unbroken mucous membrane. The tumor varies greatly in size, but rarely exceeds that of the foetal head. It is usually greyish in color with points of haemorrhage, but may be dark green or red. It is usually soft and friable, and never hard as in fibroids or in ordinary epithelioma. Secondary deposits take place early and frequently, and the metastases occur through the blood vessels. Secondary deposits appear most frequently in the lungs, and next in order in the vagina; but any organ in the body may be attacked.

According to Teacher the most typical elements are small well-defined cells with large vesicular nuclei closely packed together in masses without any connective tissue stroma between them, large multi-nucleated masses of protoplasm (plasmodia or syncytia) in which no definite cell boundaries are recognisable, and large mononucleated or multi-nucleated cells, some resembling decidual cells and others the multi-nucleated giant cells found in the decidua serotina. Sometimes these cells are in masses without stroma, while at other times they are invading and destroying the adjacent after the manner of a sarcoma. The syncytial cells are always present. They are not true cells, however, but ill-defined masses of protoplasm with one or more nuclei. They multiply by direct division and may be vacuolated. The syncytium forms the boundary of the growth and is seen at its periphery. There are no vessels with true walls in the growth which gets its nourishment from lacunae, the walls of which are composed of syncytial masses penetrating the uterine walls, between the muscular bundles and along and into the blood vessels. This explains the manner of spread of the disease.

The disease may come on gradually. The first warning may be a severe or fatal haemorrhage. Between the haemorrhages there is serous, a sero-sanguineous or smoky discharge of a foul odour. Pain is usually slight or absent, but there may be fever, chills, vomiting, cough, expectoration, haemoptysis, and nervous disturbances according to the loca-

tion and nature of the metastases. The os is dilated and soft and there is found in the womb cavity, or protruding through the os a soft mass resembling placenta. The pigmentation of the skin so usual in malignant disease has not been noticed in chorionepithelioma.

As to the etiology most cases occur during the period of sexual activity. It has been met with in girls under puberty and in women at 55 years of age. The average age for its appearance is 33 or 34. There is no longer any doubt as to the influence of the hydatid mole in causing a growth, as the epithelium of the chorionic villi is very active in such cases. In 262 cases of the series collected by Dr. Lockhart, there was the history moles in nearly 37 per cent., nearly 32 per cent. followed abortions, and 26 per cent. full time labors. The disease usually comes on within two or three months from the termination of the pregnancy. Cases are reported where several years elapsed. It may commence during pregnancy. Lutein cysts of the ovaries have been thought to have some connection with the disease, as the lutein cells may stimulate in some way the epithelium of the villi.

The prognosis is very grave. In Dr. Lockhart's total series of 277 cases the death rate was 52.85 per cent. after moles, 63.75 per cent. after abortions, and 54.32 per cent. after full term pregnancies. When the disease is not interfered with, death usually occurs in from a few weeks to a few months.

The treatment is preventive, palliative and curative. Much can be done to prevent the occurrence of the disease by careful attention to the condition of the uterus after pregnancy, especially after abortions or moles. Where the disease cannot be removed, the symptoms may be alleviated by judicious treatment to relieve pain, control the haemorrhages, keep the parts clean and maintain the strength of the patient. In all cases, seen early enough, the disease should be thoroughly removed by the excision of affected tissue and the entire uterus.

A table giving the record of collected cases closes the article.

POST DIPHTHERITIC PARALYSIS.

Aubrey T. Mussen, M.D., reports two cases of paralysis following diphtheria. In these cases there were the usual loss of motor and sensory nerve function, loss of the reflexes, and wasting of the muscles. The treatment consisted in galvanism for 15 to 30 minutes twice a week to keep up the tone of the muscles. When the nerves regenerated faradism was employed, and vibratory massage by means of an oscillator.

DIPLO-BACILLARY CONJUNCTIVITIS OF MORAX-AXENFELD.

Drs. Jno. Stirling and S. H. McKee report a case of conjunctivitis due to the special bacillus known as the Morax-Axenfeld diplo-bacillus. The diplo-bacillus was detected by Morax in 1896. He stated that with a pure culture of the bacillus he could set up a conjunctivitis. Axenfeld, of Marburg, reported in the same year 51 cases in which the same bacillus was found. Morax called the disease subacute conjunctivitis and Axenfeld named it chronic diplo-bacillary conjunctivitis. In America cases have been reported by Dr. Schweinitz, Beasy, Alt, and Gifford. Recently it has been observed in Montreal.

The appearance of the eyes in a case were as follows: Both eyes inflamed, edges of lids, especially at inner and outer canthi, showed marked reddening (blepharo-conjunctivitis), conjunctival sacs contained small quantity of greyish-yellow discharge, palpebrae and conjunctivæ were very injected, the superficial vessels prominent, while the slight involvement of bulbar conjunctiva made the contrast marked.

The bacillus is detected by the following method: Gentian violet, 25 seconds; washed with water; Gram's iodine solution, 15 seconds; washed with alcohol; washed with water; safranin 5 per cent. solution, 5 seconds; washed with water. The slide is examined and will be found to contain square-cornered, red-stained diplo-bacilli about 2 microns long and 1 micron wide.

The treatment which gives the best results, not only for the conjunctivitis, but also where the cornea is involved, is instillation of zinc sulphate one quarter to one per cent. The disease, if not properly treated, is very chronic.

The Maritime Medical News, September, 1905.

OBSTRUCTION OF THE OESOPHAGUS.

Dr. John Stewart, of Halifax, contributed the above papers to the Maritime Medical Association. The oesophagus exists for the purpose of propelling and conveying material from the pharynx to the stomach. Any interference with this function may be called obstruction. The length of the oesophagus from the cricoid cartilage to the opening in the diaphragm is nine inches; but the length of the passage from the incisor teeth to the diaphragm is sixteen inches.

The size, curvatures and anatomical relationships of the oesophagus are carefully pointed out as of importance to every one who has to deal with the oesophagus surgically. The muscular wall of the oesophagus consists of an inner circular, and an outer longitudinal layer. Except at the upper third which contains striated muscular tissue, the fibres

are of the non-striated variety. The action of the oesophagus is reflex and involuntary, the sensory nerves being sensory branches of the glossopharyngeal, the pharyngeal and the vagus, and the motor being motor branches of the vagus. The centre is in the medulla. If the oesophagus be divided, stimulation of the pharynx will cause peristalsis in the lower portion, whereas stimulation of the lower portion would not do so. When both vagi are divided there is spasm of the oesophagus, due to the uncontrolled action of the sympathetic ganglia in its walls.

Obstruction may be caused in three ways, within the luman, pressure from without, from changes in the wall. In the first class might be mentioned masses of food, foreign bodies, tumors, polypi, parasitic growths, diphtheritic membrane. In the second class there would be abscess of the neck or mediastinum, aneurism, enlarged glands, pouches of the pharynx or oesophagus, tumors in the mediastinum, exostoses of the vertebrae or sternum. In the third group would be spasmodic, cicatricial and malignant stricture, and dysphagia from dilatation or paralysis. There are instances in which several of the above factors may enter into the obstruction.

Among the symptoms of obstruction of the oesophagus one of the first and most important is dysphagia. This may come on gradually, or be sudden in its onset, or intermittent. Pain is not always present. It is often referred to the upper end of the sternum or episternal notch, though the obstruction may be at the lower end of the passage. Cough and dyspnoea are common, especially if a foreign body be in the oesophagus. When suffocation is threatened the foreign body is likely in the pharynx and pressing upon the larynx. When there is stenosis of the tube there is usually regurgitation of food, unaltered by the process of digestion. There may be the eructation of retained and decomposed material. When the obstruction has lasted for some time there is emaciation. It must be borne in mind that symptoms may be absent for some time, or may continue after the cause has been removed. Then, again, the symptoms may be intermittent. Auscultation from behind may detect some change in the deglutition wave. If regurgitated matter is alkaline it has not reached the stomach. The fluoroscope, x-rays and the sound may aid in clearing up the nature of the case. Great care must always be taken in using the sound.

Stricture is a common cause of obstruction. It is seldom congenital. Spasmodic stricture is met with in neurotic subjects. Drunkards are sometimes attacked with a form of dysphagia. Organic stricture may be caused by injury, caustics, cancer, syphilis, or tuberculosis. When dysphagia comes on after forty without history of injury or ulceration, it is almost certain to be malignant. There may be dilatation of the gullet from weakness in its walls.

The prognosis varies much. In spasmodic cases, the nervous conditions can usually be overcome. In non-malignant cases the prospect is often hopeful if dilatation be commenced early and carried on faithfully, especially on any indication of a return. In malignant stricture the outlook is hopeless.

The treatment varies with the cause. In the case of impaction by food or a small round body, it may be forced into the stomach. In the case of an irregular object the use of the probang may be contraindicated. Vomiting by means of apomorphia may expel it, but this treatment must be resorted to with care. Any attempt to remove an irregular body by means of forceps should be conducted with the utmost care, as much injury may be inflicted. When a foreign body cannot be removed an operation is necessary, and an opening should be made in the left side if the neck in front of the sterno-mastoid muscle. If the body be impacted at the lower end of the gullet it is necessary to reach it through an opening into the stomach.

An abscess in the neck should be opened, and, in the mediastinum, may be reached by trephining the sternum. When the oesophagus is seriously pressed by a tumor or aneurism, it may be well to place in it a Symonds' tube, which is made of gum-elastic, funnel-shaped at the upper end to fit the pharynx, and with a central opening below. It is introduced by means of a guide, and retained in position by two strings attached to the upper end, which are fastened to the outside.

If a patient has swallowed a corrosive the condition of the gullet should be watched and a tube passed to prevent a stricture forming. If there be an organic stricture an effort should be made to dilate it. When the contraction is extreme a small tube may be left in for a time. Filiform bougies may be necessary. Attempts should be continued until the oesophagus is dilated to its normal size. In some case an opening must be made into the stomach for the introduction of food. Sometimes this favors improvement in the stricture to such an extent that the opening in the stomach be allowed to close up. When the stomach is opened a strong string may be passed upwards into the mouth, by which a sawing motion is conducted and the stricture cut through.

The treatment of malignant stricture is very hopeless. A Symonds' tube may be borne for a time. Attempts have been made to remove the malignant disease, but the results are not encouraging. Gastrostomy may be required. No attempt should be made to dilate the stricture.

A CASE OF HODGKIN'S DISEASE.

Dr. Butler reports very fully an interesting case of lymphadenoma or Hodgkin's disease. The progress of the case and the differential

diagnosis are discussed at length. The diseases with which may be confused are acute adenitis, tubercular adenitis, sarcoma, spleno-medullary leukaemia, spleno-lymphatic leukaemia, and syphilis. Drug treatment proved of little value.

ECTOPIC GESTATION.

Dr. Murphy reports an interesting case. The patient was taken with an attack of pain on 10th January. These attacks were repeated a number of times till March 3rd when it became necessary to operate. The patient made a good recovery. The sac had ruptured. The tube and ovary were removed, and the abdominal cavity flushed out with normal saline.

SURGICAL DIAGNOSIS.

Dr. E. T. Gaudet, in a brief paper on the above topic, contends that it is better to be ignorant of the true diagnosis of a case than to wait until the diagnosis is quite clear and in the meantime have lost the opportunity for successful surgical treatment. A timely working diagnosis is of more value to the patient than a delayed one that is complete. Many of the conditions occurring in the abdominal cavity are of this character. No one can just say whether the trouble is an invagination, a volvulus, or bands. An opening will reveal the condition. A child is threatened with suffocation from acute laryngeal obstruction. It is much better to give a dose of antitoxine by mistake than to delay for a definite diagnosis and lose valuable time. This principle of operating early applies to tumors of the breast, appendicitis. It is better to cure a patient without a diagnosis than to bury him with one.

RADIATION IN CANCER.

J. J. Carbett, M.D., St. John, argues in his paper strongly in favor both of pre and post-operative use of x-rays and radium radiation in all cases of cancer. The treatment should be combined with the administration of some drug which causes fluorescence.

CURRENT MEDICAL LITERATURE

MEDICINE.

Under the charge of A. J. MACKENZIE, B.A., M.B., Toronto.

THE TREATMENT OF ACUTE NEPHRITIS IN CHILDHOOD.

From the article by Dr. Morse in the *International Clinics*, Vol. II., Fifteenth Series, we make the following extracts:—

The treatment of every diseased organ depends, apart from directly curative methods, on, first, measures which diminish the work the organ has to do; second, those which help it to do its work. In the case of the acutely inflamed kidney, we must depend almost entirely on the first method. This requires a study of the caloric needs and the metabolism of the child at this age, and on this point there are very few data, so that we must depend largely on a modification of those which have been determined for adults. In round numbers the caloric need in calories per kilo are as follows:—

4 years.....	75 calories, average weight 15 kilos.
8 years.....	60 calories, average weight 22 kilos.
12 years.....	50 calories, average weight 32 kilos.

The requirement diminishes as the age increases. The albumin need with the total calories will be:—

4 years.....	1,125 calories or 32 grams proteid.
8 years.....	1,325 calories or 36 grams proteid.
12 years.....	1,600 calories or 44 grams proteid.

The average amount of water required and the amount of urine passed:—

4 years	1,100 c.c. and 800 c.c. urine.
8 years	1,250 c.c. and 1,200 c.c. urine.
12 years	1,350 c.c. and 1,500 c.c. urine.

The kidneys excrete certain substances with greater difficulty than others, among the more difficult being urea, creatinin, phosphates and, under certain conditions, water. Urea is chiefly derived from the proteids of food, therefore, meat is interdicted but the fact is frequently lost sight of that milk also contains a large amount of proteid, almost as much as it does of fat and sugar, therefore, a milk diet in the acute stage of nephritis is wasteful and harmful; to supply the minimum proteid requirement for a child of 8 years, 900 c.c. of milk is needed, but

to supply the caloric need, 1,850 are required, giving about twice the amount of proteid required and an excess of water to the amount of 375 c.c. By increasing the amount of cream in the milk we can increase its caloric value, and up to a certain amount this course is open to us, but to be digestible as a continuous diet an excess of water must be added, so that we are forced to look elsewhere to complete our diet in the condition of our patient, and we find that two slices of bread and an ounce of butter will give 375 calories, and four tablespoons of oatmeal and two teaspoonfuls of sugar are equal to more than 125 calories. As phosphoric acid is present in milk it is well to add a certain amount of prepared chalk to the diet in order to form the insoluble phosphate.

It is unwise to give much water in the early stage of the disease, as the kidney is in a state of acute engorgement and congestion and this will be increased by the effort to eliminate the water and the œdema will be increased. During convalescence water can be given freely as it will flush out the kidney and weaken the solutions of substances to be excreted.

Digitalis acts by raising the blood pressure and so is harmful in the acute condition as the pressure is already too high, later it may be indicated. Caffein stimulates the renal epithelium, but by its action on the vaso-motor centre causes a contraction of the arterioles of the kidney which may counteract its effect. There is not the same objection to the use of theobromin and diuretin. Cathartics and diuretics, especially the hot pack, are very useful in children.

THE USE OF SCOPOLAMIN AS A GENERAL ANESTHETIC.

In the article by Felix Terrier, M.D., of the Paris Faculty of Medicine, in Vol. II. of the *International Clinics*, we note the following:—

Scopolamin (C.H.NO.) was first extracted from the *Scopolia Japonica* plant by Schmidt in 1890 and was first used in Germany, from whence it was introduced into France in 1904. It consists in prismatic crystals that melt at 59 C., are soluble in water, alcohol and ether. It deteriorates very rapidly and should always be used perfectly freshly prepared; Merck's can be depended on for purity.

Physiologically it paralyses the inhibiting action of the pneumogastric, which causes slowing in breathing and acceleration of the cardiac rhythm, and vaso-dilatation with increased secretion of urine, saliva and perspiration, and mydriasis. On the brain its narcotic action produces irresistible sleep without dreams or delirium.

It was first used as a general anesthetic by Schneiderlin in 1900, but it was some time before it became accepted by others. Up to the present, reports have been published of 1,488 cases in which it has been used.

The method of administration is by hyperdermic injection in solution, and in conjunction with morphia, which is an antagonist in action and renders its use safer. The dose has been varied by different operators, but is generally about one-fiftieth of a grain, given in two or three divided doses combined with one quarter of a grain of morphia, the salt used by the writer is hydròbromate. The injections are made from two to four hours before operating, the last usually a short time before, and, in Dr. Terrier's experience, the method has been successful in 26 per cent. of cases without other anesthetic, and this agrees with published results. It produces a sound sleep, without dreams or delirium, usually within half an hour, and the second injection may be made without the knowledge of the patient, and is usually insensible to pain and cutaneous sensation, but can be awakened by shouting, as from a natural sleep. Where the anesthesia proves insufficient, chloroform may be given without the patient awaking and a smaller amount is required, the stage of struggling not being experienced. The patient, as a rule, sleeps on for some hours, and awakes without any recollection of what he has gone through and without nausea or pain, as the anesthesia continues up to 24 hours or more. There is no albumin in the urine after its use, it is attended by no injurious effects, and so can be tried or used in cachectic cases where other anesthetics are feared.

The drawbacks in its use are the uncertainty attending the anesthesia, the cutaneous vaso-dilatation which may be troublesome in some operations, and result in hematomata, and an obstinate tendency to contraction of the abdominal muscles, which contraindicates its use in operating in the coeliac cavity.

Twelve cases of deaths during the anesthesia, or after it, have been reported, but after a discussion of these the writer believes that no one of them could be charged to the drug used, though he claims that it is dangerous to follow it with ether.

SURGERY.

Under the charge of H. A. BEATTY, M.D., M.R.C.S., Eng.
Chief Surgeon Canadian Pacific Railway, Ontario Division ; Surgeon Toronto Western Hospital.

CANCER OF THE BREAST.

W. S. Handley, in his third Hunterian lecture (*Lancet*, April 22nd, 1905) discusses the origin of metastases of cancer of the breast found in the breast. There are few forms of carcinoma in which visceral deposits are more frequently found. Of 329 cases metastases occurred in 77 per cent. The great frequency of visceral metastases is mainly

owing to the extension of cancerous permeation along the five anastomoses, which piercing the parietes, connect the lymphatic plexus of the deep fascia with the subendothelial lymphatic plexuses of the pleura and peritoneum and with the mediastinal and portal glands. The dominant factor is the escape of cancer cells into the serous cavities. In conclusion, the author draws the following practical conclusions: If, when it transgresses the limits of the breast, cancer spreads primarily in the deep fascia, the main operative aim next, of course, to complete removal of the breast and of the axillary glands, should be the removal of as wide an area as possible of the deep fascia. And if the mode of fascial extension is by centrifugal continuous permeation, the area affected is roughly a circle and the area of fascia removed should also be circular with its centre at the point of origin of the original neoplasm. Hitherto, too much attention has been paid to the pectoral fascia and axillary glands, with consequent inadequate excision of the deep fascia in a downward direction over the upper part of the abdomen. In order to prevent epigastric invasion the usual incision should be prolonged downwards over the linea alba for about two inches, the flaps undermined, and the fascia excised as far down as two inches below the ensiform cartilage or even lower. This step does not increase the shock of the operation. Excision of the overlying skin and of the underlying muscle must be free, but need not be so extensive as that of the fascia. Removal of the deep fascia is carried out more thoroughly in England than elsewhere, but even there it is deficient in the direction of the epigastrium. Local and intrathoracic recurrence after the operation for cancer of the breast is becoming more and more infrequent, but purely abdominal recurrence is increasing in relative frequency. The author concludes by expressing the firm belief that a recognition of the danger of epigastric invasion and the adoption of precise means for its prevention will bring about a further appreciable reduction in the mortality from mammary carcinoma.

GASTROENTEROSTOMY AND PYLOROPLASTY.

In the *Annals of Surgery*, May, 1905, Cannon and Blake in summarizing their investigations observe that during digestion the cardiac end of the stomach slowly presses its contents to the pyloric end. At the latter end the food is churned about, mixed with gastric juice and then forced, as chyme, into the intestine. During this process the stomach is shortened along its greater curvature, the pylorus then being the lowest point. Pressure within the abdomen is atmospheric pressure at any part of the alimentary canal, and depends on the weight of the

overlying abdominal organs. If the canal is inactive the food is practically surrounded by water. The intragastric pressure is three or four times greater at the pyloric than at the cardiac end. Circulation of food from pylorus to duodenum and back to stomach through an anastomosis has often been observed without symptoms of the vicious circle, but such symptoms occur when there is a kink in the intestine distal to the anastomosis. Such kinks cannot be straightened by peristaltic activity. Food should be mixed with the secretions poured into the duodenum, thus neutralizing the acid chyme. Food which leaves the stomach by an artificial stoma is not mixed with these secretions. Jejunal ulcers following gastroenterostomy may be due to the presence of inorganic acid where it does not normally occur. An artificial stoma should, therefore, be as near the pylorus as possible, overeating should be avoided, and kinks should be prevented by attaching a narrow band of distal gut to the stomach for several centimetres beyond the stoma, favoring peristalsis. In pyloroplasty the objections to leaving the pylorus open are avoided. Too rapid exit of food through the pylorus is prevented by rhythmic segmentation of the food in the duodenum, replacing the functions of the pylorus, and tending to mix the food with the pancreatic juice and the bile.

LUMBAR PUNCTURE—A CEREBROSPINAL MANOMETER.

In *The Lancet*, April 22nd, 1905, F. C. Eve describes an apparatus by which the pressure of the cerebrospinal fluid can be measured when lumbar puncture is performed. Eve's conclusions are as follows:—

1. The therapeutic effect of lumbar puncture is of considerable value, and its effects are produced as follows: (a) excessive tension is reduced; (b) the brain is washed by fresh fluid secreted in place of that withdrawn; (c) a temporary cerebral hyperæmia is produced by the blood vessels dilating to take the room of the fluid withdrawn until a new supply is secreted, or conversely, a cerebral anæmia due to excessive intracranial pressure may be arrested; and, (d) a substantial change of cerebral environment is produced, of which nature may sometimes be able to take advantage. 2. Lumbar puncture has been performed about sixty times with the author's instrument without any bad effects. 3. Valuable diagnostic information is often afforded: (a) Pink fluid indicates cerebral hæmorrhage, fractured skull (with injury to the dura mater) or severe superficial cerebral laceration (with pia mater); (b) a faint "spider's web" clot after standing several hours points strongly to meningitis; (c) cytological, bacteriological, or inoculation experiments may give the diagnosis; and (d) occlusion of the cerebral

from the spinal cavities may be diagnosticated and this may localize a subtentorial tumor. 4. In apoplexy, lumbar puncture is conceivably justifiable when the pressure is very high, provided that the pressure is slowly reduced to half its value, not too soon after the occurrence of the hæmorrhage. But such treatment would certainly be dangerous without a manometer. 5. There may exist a disease of very high pressure in the cerebrospinal cavity analogous to glaucoma in the ocular cavity. 6. Lumbar puncture is said to be dangerous in cerebral tumor. 7. Very good results have followed the use of lumbar puncture in cases of fractured base, concussion, post-traumatic cerebral condition, very severe chorea, uræmic coma, optic neuritis, ataxia, and tuberculous meningitis.

GYNÆCOLOGY.

Under the charge of S. M. HAY, M.D., C.M., Gynæcologist Toronto Western Hospital; Consulting Surgeon Toronto Orthopedic Hospital.

THE MANAGEMENT OF UTERINE FIBROIDS.

In *Surgery, Gynecology and Obstetrics*, of September, Dr. B. B. Davis, of Omaha, Neb., says that the kaleidoscopic changes from medicine to electricity, oöphorectomy, hysterectomy, and myomectomy should have produced a feeling of uncertainty, is pardonable. He takes it for granted that every one has given up the Apostoli method, and, as for the so-called Tait or Hegar operation of removal of the ovaries, he thinks it uncertain and unsurgical, and, under the light of the present, unpardonable, as only a fraction of these tumors atrophy after the ovaries are removed, the growth of the larger portion of them being accelerated. The two previous methods being eliminated, the discussion is narrowed down to medical treatment and surgical operation (hysterectomy or myomectomy).

The drug which heads the list in popular favor, and perhaps in usefulness, is ergot. It is thought to check the growth of the myoma by contracting the vessels which feed it. The writer quotes Bishop as saying in regard to the use of ergot: "It would seem that the small good, if any, to be obtained from this drug is being purchased at an absurdly high rate; that, indeed, it is overwhelmed entirely by the definite harm done." He further quotes Meadows as saying: "I believe that drugs are utterly inert in promoting the removal of uterine fibroids." Many other similar quotations are given from equally good authorities.

Continuing, Dr. Davis says the logical treatment of any tumor is its complete removal. The technic has now become almost routine to

save one or both ovaries, remove the body of the uterus, and retain the cervix, covering it over with peritoneal flaps in such a way as to leave no raw surfaces to invite adhesions. By retaining the cervix a more normal relationship exists between the rectum, bladder and vagina. Again, the total removal of the uterus is a much more formidable operation, but is demanded when the fibroid grows very low down on the cervix.

One other procedure—myomectomy—or enucleating the fibroids from the uterus and suturing the remaining wound—may be performed with caution in well selected cases.

For the following reasons the doctor does not recommend vaginal hysterectomy:—

1. It necessitates the removal of the cervix.
2. It is impossible to practise satisfactorily the conservative method of enucleation by this route, and in many cases the choice of enucleation or supra-vaginal amputation is left until the abdomen is opened.
3. The conservation of one or both ovaries is much more intelligently carried out through an abdominal incision.
4. If the tumor be large, removal by the vaginal route is impracticable.

The positive indications for immediate operation are given as follows:—

1. Rapid growth of the tumor or tumors.
2. Very profuse menstruation or irregular hæmorrhages.
3. Sufficient size of the mass to make its retention a burden.
4. Pain of great enough intensity to interfere with sleep, or to necessitate the use of analgesics.
5. Impaction of a tumor in the pelvis.
6. Urinary symptoms from pressure on the bladder, or obstruction of the ureter, causing hydro-nephrosis.
7. Sufficient pressure on the rectum to interfere seriously with defecation.
8. Infection of the tumors or pyosalpinx.
9. Purulent discharge from the uterus.
10. Finally, if the patient's mind is greatly or seriously disturbed by the knowledge of the pressure of a tumor.

The writer further remarks that the risks of delay in operating for fibroids are so many, and the penalty, when severe complications arise, is often so heavy, that there is only one class of cases where he feels justified in definitely advising against operation. If he finds a fibroid causing no untoward symptoms in a woman nearing the menopause, or past it, and is positively convinced that the tumor is distinctly atrophying, he considers the indications definite for non-interference.

THE INDICATIONS FOR OPERATION IN FIBROIDS OF THE UTERUS.

Noble, *American Medicine*, September, 1904, is convinced that the teaching, concerning the complications and degenerations of fibroids, is faulty. He refers to his paper read in 1901 before the British Gynecological Society, and the series of cases reported by Cullingworth, Frederick, Scharlieb, and Hunner and McDonald. There are thus available 983 cases of fibroid tumors from which an analysis can be made, as to the nature of the degeneration and complications of these growths. The analysis is very long, and only the chief points in it can be here referred to. In 78 cases there was cystic degeneration of the ovaries; in 69, hyaline degeneration; in 67, necrosis of the tumor; in 47, ovarian cysts; in 46, salpingitis; in 58, hydro-salpinx; in 33, pyosalpinx; in 44, myxomatous degeneration; in 40, cystic degeneration; in 34, intra-ligamentous development of fibroids; in 29, cancer of the body of the uterus; in 22 sarcoma; in 12, cancer of the cervix of the uterus.

Cancer of the body is here relatively more frequent than of the neck. This is the opposite of what occurs in women without fibroid tumors, in whom cancer of the neck is four times as frequent as that of the body. The fibroid tumor must exert such an influence upon the nutrition of the uterus as to predispose it to the development of cancer of the body.

A consideration of this analysis should dispel the idea that fibroid tumors are benign growths, and that their chief danger consists in the fact that they sometimes cause hæmorrhage. The analysis shows that 16 per cent. would have died because of the degenerations in the tumors; that 18 per cent. would have died from the complications present; and a certain percentage would, undoubtedly, have died from intercurrent diseases, brought about by the chronic anæmia and by injurious pressure from the tumors upon the pelvic and abdominal organs. The statement that fibroid tumors disappear after the menopause is quite erroneous. Many grow more rapidly after than before the climacteric and they are at least as liable to degenerations and complications. Women with fibroids are sick women, suffering either from the fibroids or from various complications. The risk they run of losing their lives by not having the fibroids operated upon is greater than that of submitting themselves to operation, as at least a third of these 983 women would have died had they not been operated upon. A fibroid tumor should be removed just as an ovarian one, irrespective of the symptoms produced, because we know the life history of these growths, and that if left alone they will, in at least a third of the cases, produce a fatal result.

LARYNGOLOGY AND RHINOLOGY.

Under the charge of PERRY G. GOLDSMITH, M.D., Belleville, Fellow of the British Laryngological, Rhinological and Otolological Society.

DEATH FOLLOWING OPERATIONS ON THE NOSE AND THROAT.

Packard (*Laryngoscope*) has looked up the literature very thoroughly to find how often death follows operations on the nose and throat. He was surprised at the small number he was able to find. Chloroform has caused a number of deaths and he is strongly of the opinion that tonsils and adenoids are more safely removed without chloroform. No mention is made of bromoform or ethel chloride anaesthesia, which are now so frequently used in European hospitals. Instances are cited of fatal results following:—

1. Application of puchloride of iron for epistaxis. Death from meningitis.
2. Operation by external incision for removal of nasal polypi and orbital tumor. Death from purulent leptomeningitis.
3. Cauterization with galvano-cautery of the middle turbinate. Death from meningitis.
4. Frontal sinus probing and injection of lachrymal canal. Death from meningitis.
5. Removal of exostosis. Death from meningitis.
6. Curettement of nasal polypi.
7. Galvano-cauterization of middle turbinates followed by hemorrhage requiring tampon. Death in three days.
8. Galvano-cauterization for bony and membranous occlusion of the right nasal gossa. Death in six days after operation.
9. Curettement for chronic purulent rhinitis. Death in three days.
10. Removal of polypi by snare.—empyema of antrum of Highmore. Death eleven days after operation.

LARYNGEAL TUBERCULOSIS, ITS TREATMENT AND PROGNOSIS.

Harold Barwell, *Edin. Med. Jour.*, writes on this most important topic. He speaks of the disease as being very common. Kidd is quoted as stating that 50 per cent. of cases dying of phthisis show lesions of tuberculosis laryngitis in the post mortem room, and that the disease is clinically recognisable in 20 to 25 per cent. of consumptives. At Mount Vernon, where Barwell is laryngologist, among 1,541 cases recently in the hospital, 13.69 per cent., had tuberculosis laryngitis. All stages, however, of the disease are accepted there.

Barwell speaks of the generally hopeless prognosis given in these cases, but gives Herging credit for making the outlook much more promising.

The tuberculosis process shows itself in the larynx in four forms: infiltration, ulceration, tuberculoma and miliary tubercles. The disease has a tendency to attack the posterior parts of the larynx. The parts affected, in order of frequency, are the true cords, interarytenoid space, arytenoids, ventricular bands and epiglottis. Note is made of anaemic condition generally of tuberculosis patients, in whom the pallor of the laryngeal mucous membrane may be a part of the general anaemia, and not necessarily a diagnostic point. Again, a comparatively normal larynx may look very red and angry, because it has been greatly irritated from excessive coughing.

The aims of treatment are limited by the possibilities of the case, and are of three kinds: 1, to completely cure the patient; 2, to cure the laryngeal disease, or 3, merely to treat the symptoms and relieve the sufferings. The less disease is apparent in the lungs, the bolder and more energetic should the laryngeal treatment be. When there is but slight pulmonary disease, persistent local medication, combined with general treatment, will in many cases effect a cure; but, if no response to treatment takes place, little time should be lost to resorting to surgical measures. Cases with extensive laryngeal ulceration and in a fairly good state of health require active treatment in order to cure, if possible, the disease or, at least, to stay somewhat its progress, and lessen the liability to all those symptoms that make the later days of these patients so miserable.

The author does not believe that the open-air treatment can replace local measures. A warm and moist atmosphere is best for open-air treatment of laryngeal cases, foggy, rainy and dusky places are quite unsuitable. The presence of acute laryngitis is an absolute counter-indication to open-air treatment for the time. As to food, all irritants should be avoided, pepper and spices should not be taken, and alcohol only when well diluted. Tobacco is best avoided, but, in many cases, a small amount of cool tobacco seems to allay the restlessness its disease causes. Rest for the larynx is very important, especially in cases having cord lesions. Whispering is not as bad as speaking aloud but a slate and pencil, or the deaf and dumb alphabet are very much better.

Locally, treatment falls into three groups: palliative, combating the associated catarrh and secondary infection, while the third group directly attacks the tuberculosis disease. In the palliative treatment of dysphagia, cocaine may be employed. Eucaine is not so certain. A cocaine spray of a 5 per cent. solution, applied with the guidance of a mirror, will, for a time, give good results. Morphia hydrochloride is

also of value. It is best used before meals by means of an insufflator in doses of 1-16 gr. diluted with 2 grs. of starch. These drugs have, however, the very great disadvantage that they produce a marked loss of appetite, the results of which are disastrous to consumptive patients. Orthoform has equally good qualities and, further, is not toxic. It may be combined with various antiseptics, such as iodoform, amyloform or resorcin. Patients may insufflate 3 or 5 grains themselves, as required. Cough is best controlled by codeine and heroine, the latter in a mixture containing 1-12 gr. heroine to the drachm. Steam inhalations are of value, a very good one being friars' balsam. Intratracheal injections have been extensively used. An oily medium, such as liquid parafin, combined with naphthaline, 3 per cent., crolin, 2 per cent., izal, 2 per cent. and guiacol 2 per cent., employed separately or in combination.

Locally, pigments of various strengths are used. Cocaine is seldom required after the first few times. Lactic acid, 25 to 75 per cent., formalin, 5 to 7 per cent., are favorably mentioned. Barwell uses almost exclusively Lake's mixture, containing lactic acid, 50 per cent., formalin, 7 per cent., acid carbolic, 10 per cent.

Intratracheal, submucous injections are considered quite as heroic as surgical measures. For mild cases, such as slight infiltration of the cords, he sometimes uses iodine vasogen—a 10 per cent. solution of iodine in an oxygenated petroleum preparation. Local applications, however, do not greatly affect massive infiltrations beneath unbroken mucous membrane. In these cases surgical measures find their proper sphere. Barwell has seen splendid results follow the use of punch forceps in infiltrated areas. The wound seems to heal well and is usually further cauterized by Lake's mixture, during the healing process. In properly selected cases, surgical measures are of value. Adverse opinions will certainly follow their indiscriminate use.

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EDITORIAL.

THE BRITISH MEDICAL ASSOCIATION.

Already much headway has been made by way of preliminary arrangements and the striking of committees. A strong executive committee composed as follows has been agreed upon :

"That the Executive Committee consist of the President elect, the Treasurer and Local Secretaries, the President of the Canadian Medical Association, the Presidents of the Provincial Medical Association, including the Maritime Medical Association, the Presidents of the Provincial Medical Councils, the Deans of the Medical Colleges, the Medical members of the Dominion Parliament and of the Local Legislatures, the Presidents of the branches of the British Medical Association in Canada, the local members of the Arrangement Committee, together with the Chairman and Secretary of each of the following sub-committees, namely : On Reception, On Finance, On Excursions, On Transportation, On Museum, On Printing and Publishing, On Dinner, On Local Entertainments, and On Hotels and Lodgings."

At a meeting a few days ago the various committees were struck. It will thus appear that all the preliminary steps have been taken. The various committees will soon meet and map out the work which each is expected to take charge of. It is quite evident that the intention is to make the coming meeting in Toronto second to none in the long history of the great association which is going to visit this country a second time.

From Montreal comes "a word of advice." The Montreal Medical Journal seems very anxious to point out to the President, Dr. R. A. Reeve, the necessity for extreme care to avoid certain hidden dangers, one of which is that the meeting should not be one for antiquarians. Dr. Reeve is told what subjects to avoid in the preparation of his address, etc. ; and the article concludes with the words : "We have thus pointed out, in a delicate way, the themes which may be avoided, and we have given the advice most cheerfully. It would be an excess of good nature on our part to suggest others which might be employed. That may well be left to the good judgment of Dr. R. A. Reeve, to whom the task will in all probability fall."

Up here in Toronto we think Dr. Reeve will have the requisite amount of good judgment to guide himself in the selection of his subject as well as in the avoidance of unsuitable topics. We would not take it badly if Dr. Reeve should happen to remark in his address that the state of medical education is vastly improved to what it was when he graduated, or that the medical college in Toronto is now, as in Montreal, an integral part of the University of Toronto, or that the Medical Council of Ontario has been steadily raising the standard of medical education in the Province, or that for many years there has been an effort to secure a common national standard of registration. All these subjects would come within the life time of Dr. Reeve; but according to our esteemed contemporary that page is closed.

Personally, I would not object to the president referring to good old Hippocrates, or to quote from the Psalms that the years of man are three score years and ten, etc., or to show that as science increases mysticism decreases. It is not the subject, but the manner in which it is treated that is the all important consideration on such an occasion. Dr. Reeve will, no doubt, select his subject or subjects wisely, and will clothe them in an atmosphere of thought and a radiance of words that will not disappoint the visiting members of the profession, not even those from Montreal.

THE HEREDITY OF CONSUMPTION.

An evening newspaper a short time ago published a letter purporting to have been written by a doctor. We would gladly think that such was not the case, and that some one else than a member of the Medical profession did actually write it, publishing it as if it came from a member of the medical profession.

Here is one statement. "I have been fifteen years in practice, and I have yet to see a single case of tuberculosis that did not have heredity right to it, that I could not trace a family taint." Every doctor knows that consumption is a very prevalent disease. About one death in every seven is caused by it. Now every person must have two parents, four grand parents, some uncles and aunts, some cousins, and generally brothers and sisters. Out of so many relatives there will almost for a certainty be deaths from consumption. On the method of reasoning that because a person's relatives have had a certain disease, it must be hereditary measles would be one of the most pronounced instances of heredity; for all the said person's relatives have had measles at some time. But we know better. We know that measles is an infectious disease, and has absolutely no heredity about it.

We could tell our newspaper correspondent of scores of families in which several died of consumption at intervals of one or more years. In one family six died in about 12 years, and they all lived together. In another four died in about 6 years, and they too lived together. In another three died in less than 3 years and two are ill with the disease. This could be multiplied many times over. The husband contracts consumption and, by and by, the wife takes ill with it, and then some of the children. Or a sister becomes tuberculous and the other sisters waiting on her also suffer from the same disease.

One cannot grow figs on thistles, neither can we have consumption without the germ. Surely this has been amply proven! No seed, no crop. No one denies the evil influences of food, poor housing, insufficient clothing, over crowding, lack of sunshine and fresh air. But all these combined cannot produce one tubercle bacillus. These conditions favor the growth of the bacilli, and lower the powers of the system to resist them, but that is all. Breathing bad air will weaken the lungs, poor food will thin the blood, lack of sunshine will make the face pale, but to all these we must add the bacillus to cause phthisis.

It is quite true that fresh air, cleanliness and sunshine are the natural enemies of the tubercle bacillus; and in two ways, by interfering with the growth of the germ and furnishing resisting power in the human body.

We make the statement again, which we have made on many former occasions. No case of consumption without a previous case some where to have come from. The living animal body is the only culture ground for the bacillus. From cow to cow, from horse to horse, from bird to bird, from man to man, the long chain is spun, link by link. Prevention not cure is the great remedy, and we believe the disease cannot be stamped out until the state comes forward and furnishes accommodation for the sick, that they may be separated from the well. This was done in the case of leprosy, and we all know the happy results.

A DEPARTMENT OF HEALTH FOR THE DOMINION.

There is no more important question before the public than that of the people. Preventive medicine is of more moment than many of the industries that are bonused or protected by high tariff walls. Take as an example a person who is able to earn \$300 a year and dies at the age of 30, the value of his future earnings is in the neighborhood of \$6,000.

Now grant that a thoroughly efficient Health Department could reduce the mortality rate one in the 1,000 and this is not expecting too

much, the saving would be 6,000 lives per year. The average age of death is under 30. This would give a saving of \$36,000,000 a year.

In great Britain the death rate has been reduced 3 per 1,000, and on 45,000,000, it means the saving of 135,000 lives; and at the average age of death and the average rate of wages, actuaries figure the saving to be equal to about \$500,000,000 annually.

The Federal Government has met the committee of the Canadian Medical Association with the argument that this is a provincial question. Well this may be so in the strictly legal sense; but this country cannot and must not be run on too technical an interpretation of the constitution. When the various provinces were carved out of the forest no one foresaw what the future would be. Nor, again, when these provinces were joined together into a common country, it was quite impossible for the fathers of Confederation to arrange every right that should be provincial or federal. The result is that there must be some latitude in the management of our public affairs.

There are many subjects of vital interest to the people, which cannot be successfully dealt with except by some central authority at Ottawa. We, therefore, make a strong appeal to the government to take steps to create a Department of Public Health. There should be no delay. The money so spent, will be well spent, and yield a splendid return to the people.

CANADIAN MEDICAL PROTECTIVE ASSOCIATION.

The season for medical activity is now upon us. The various colleges and medical societies are in full swing. Now is the time to take hold of the Canadian Medical Protective Association and put it in a position of strength and influence. It needs only members. Let every practitioner join this most worthy of all our societies. It has been the means of much good already, by resisting successfully a number of malpractice suits, and by restraining others that were threatened, as the plaintiffs were deterred when it became known that there was a strong organization at the back of the doctor.

Now, how are members to be secured. The officers cannot go round and interview the members of the profession; but the doctors should not require this. THE CANADA LANCET will be glad to receive the names of practitioners who may desire to become members, and will forward them to the Secretary, Dr. J. A. Grant, Ottawa. The fee is \$2.50. The sum is small and the cause worthy. We hope to hear from many of our readers.

THE INTERNATIONAL CONGRESS ON TUBERCULOSIS AT
PARIS.

The recent Congress on tuberculosis was a distinct success. It met in the Palace of Arts which was beautifully decorated with drapery, which had not been used since the occasion of the wedding of Napoleon III. President Loubet opened the Congress. The attendance was large, everything was excellently arranged, and the programme of papers and entertainments were successfully carried out.

The main reports were published in advance of the meeting in a volume of over 650 pages, but there were some four hundred other papers forwarded for the Congress. The work of the Congress was divided into four sections: The Medical Pathology of Tuberculosis, the Surgical Pathology, the Protection and Assistance of Children, and Social Hygiene.

Dr. C. Theodore Williams reviewed the history of the investigations on tuberculosis showed that Villemin had proved the contagiousness of tuberculosis long before the discovery of the bacillus. He also stated that in Great Britain the death rate had decreased two-thirds during the past 50 years. He went on to show that 60 years ago special hospitals for consumptives were established in Britain, and that now sanatoria were being founded for all classes. Voluntary notification was now almost universal and laws existed to prohibit spitting in public places. He spoke strongly in favor of educating the people on the matters of overcrowding, bad air, etc.

Dr. Hérard in a splendid address sketched the history of the work done, on tuberculosis from the Congress in 1867, when Villemin read his paper setting forth the fact the disease could be inoculated. But 17 years had to pass till Koch, in 1882, discovered the bacillus. He pointed the relationship between the soil and the germ; and mentioned many have the bacilli in their systems, escaping, however, because of their good health.

Surgeon-General Dr. Schjerning from Germany said there were now in his country 127 sanatoria, erected at a cost of \$13,500,000. Showed that the death rate had been reduced 21 per cent. from tuberculosis.

Dr. Maurice Letulle, of Paris, mentioned that the French Government had voted \$20,000 to aid in spreading literature upon the disease. As a consequence publications had been sent to over 600,000 persons.

After a very lengthy discussion in the medical section on the relationship between human and bovine tuberculosis, the following resolution was carried: "The Congress, after hearing the exposé of the most recent investigations, declares that it is not only indispensable to

avoid contagion from man to man, but also to pursue the prophylaxis of bovine tuberculosis and to continue to take administrative and hygienic measures to avert its possible transmission to our species; and, finally that it is desirable to be on our guard against all forms of animal tuberculosis."

In the surgical section, Drs. S. Arloing, H. Kossel and M. P. Ravenel held that bovine tuberculosis can be transmitted to man, and that every precaution should be taken with regard to milk and meat from tuberculous animals.

The prevention of tuberculosis among children was very fully discussed and the following conditions agreed upon: That children, living in a family where the disease existed, should not be allowed to see the patient; that children with tuberculosis should not be allowed to attend school with other children; that the scrupulous care is needed; and that children should not be allowed to frequent places to which consumptives resorted.

The Sanitarium treatment was advocated on the grounds it was the best for the patients, that it was the means of spreading a knowledge of how these patients should care for themselves on their return home, and that it was the means of separating the sick from the well and thus lessening the centres of infection to the general public. In 1861, the death rate from consumption in England was 256 per 100,000, but in 1903 it had fallen to 123. In Massachusetts it had fallen from 356 to 167 per 100,000.

THE NURSE, PAST AND PRESENT.

Since the time when man first took sick or met with an accident we have had the nurse in some form. Records show that there were organized efforts to aid the sick in Egypt as early as the eleventh century B.C. In Ancient Greece there were the sanctuaries of Hygeia, Sarapis and Aesculapius. We learn that the nurse had an important place in the poetry of that country. In the fourth century a hospital was founded at Rome by a woman, named Fabiola. Hospitals began to spring up in various places, and the sick in them were cared for by women of different religious orders. During the eleventh century was founded the order of St. John of Jerusalem. This sisterhood was bound together by several rules of a strict character to keep themselves chaste and to wait upon the poor. They had much to do with the sick and wounded among the crusaders. The Sisters of Charity were called into existence by Vincent de Paul, of France, in the middle of the seventeenth century. Though mainly animated by religious motives, these women were true nurses.

In 1836, a minister called Fliedner established at Kaiserswerth an institution for the training of women in the first principles of nursing. This was the commencement of the modern trained nurse. The idea once conceived and put into practice, it has spread over the entire world.

Elizabeth Fry, of London, visited the institute at Kaiserswerth and studied its methods. She then organized a body of trained women in London to attend upon sick, poor and rescue distitute and fallen women.

Then came Florence Nightingale with all her genius to create a new condition of things. She had become interested in work of Elizabeth Fry, and went to Kaiserswerth. She returned in 1844 and founded a training school for nurses in connection with St. Thomas' Hospital.

The movement spread to this continent. In 1863, the Hospital for Women and Children in Boston established the first training school for nurses in America. In 1872, Bellevue Hospital fell into line with the second.

The trained nurse has a great field of usefulness, a fact that is amply verified by the enormous growth in the number of training schools and trained nurses. She has practically forced out of existence the so called neighbor nurse. With her knowledge of various diseases and injuries, her acquaintanceship with the principles of antiseptics, her experience in the feeding and routine handling of patients, and recognition of the importance of carrying out the medical attendants orders, she has won for herself a place both with the profession and the public.

It is needless to say that the well educated is not only a help but is also a stimulus to the medical attendant. Her presence tends to beget greater system in the care of the patient. At a recent meeting of graduate nurses held in Toronto; Miss L. L. Dock, of New York, and Mr. I. H. Cameron, of Toronto, urged registration of nurses. The latter speaker said the time would come when nurses would be examined by the state and be registered as doctors are now.

THE VOMITING OF PREGNANCY.

At a recent meeting of the Toronto Medical Society, Professor M. D. Mann., of Buffalo, read a very interesting and instructive paper upon the above subject.

He contended that toxæmia explained most of the cases. He divided the causes into three classes: 1, the reflex; 2, the neurotic, and 3, the toxæmic.

Properly conducted examinations would reveal the conditions causing reflex vomiting, as erosions, displacements, etc. The absence of abnormal conditions and the presence of a normal condition of urine,

together with an improvement of the patient under the influence of suggestion, would indicate the neurotic nature of some of the cases. The toxaemic cases were due to either overproduction or faulty elimination of waste or toxic substances from the system.

The liver had been found at autopsy in a condition of acute yellow atrophy. This was probably the result, not the cause of the toxaemia. Those cases which recovered in a month or two were cases of benign toxaemia. The greater the amount of vomiting the less water was taken, thus increasing the toxaemic condition.

If the amount of ammonia excreted by the kidney was normal the kidneys were at fault, but any increase in ammonia showed liver involvement. An increase to 10 per cent was the limit and the uterus should be emptied at once as soon as this limit was reached.

The correction of reflex causes, the use of suggestion and elimination were the three cardinal points in the treatment of vomiting in pregnancy. Jaborandi, m. 8 to 10, before a hot vapor bath assisted excretion.

The liver was very generally at fault, regardless of the condition of the kidneys. The elimination by the bowels was of much importance, sometimes being of greater use than the combined action of the skin and kidneys.

PERSONAL AND NEWS ITEMS.

Dr. P. J. Houston, after looking carefully over the whole field, has at last decided to locate in Teeswater.

Dr. J. W. Brien has removed to Windsor and has arranged to have his office along with Dr. J. O. Reaume.

Dr. P. A. Currie, of No. 2 College street, Toronto, has returned from an extended tour of Europe.

Dr. E. E. Meek, late of the House Staff of Mount Sinai Hospital, New York City, has opened an office in Regina.

Dr. Alex. Hutchison has been appointed chief medical officer of the Grand Trunk Pacific and will have his headquarters at Montreal.

Dr. J. A. Robertson, of Stratford, has returned after his trip to Europe.

Dr. A. W. Maybury, of Spadina avenue, has returned from England, looking well.

Dr. B. J. Ferguson has located in Desboro for the practice of his profession. Dr. Ferguson comes from Teeswater.

Dr. Penner left Rosthern at the end of September to go into partnership with a prominent practitioner in Winnipeg.

Dr. J. F. James has been appointed surgeon for the Pere Marquette Railway of Sarnia, to succeed the late Dr. T. G. Johnston.

Dr. D. Smith has entered into partnership with Dr. J. D. Monteith, a well known medical man of Stratford.

Dr. Kippen has bought out the medical practice of Dr. Stewart, of Newdale, and will in future attend to the ills of that community.

Dr. D. King Smith has arrived home from London, England, where he has been walking the hospitals. He will take up practice in Toronto.

Miss Jessie McCormick and Dr. Thomas R. Henry, of Harriston, were married in Toronto on 18th October.

Dr. R. M. Stewart, of Markham, and Miss Flora M. Logan, of Pickering, were married on 19th October.

Dr. W. B. Thistle and Miss Wright, both of Toronto, were married on 25th October.

Miss Mabel Robertson, daughter of Dr. Robertson, of Milton, and Dr. C. W. Field, of Milton, were united in marriage, October 25th.

The Woodstock Hospital has received a legacy of \$20,000 from the estate of the late Hon. James Sutherland. The Hospital is to be congratulated on account of its good fortune.

Dr. J. A. L. McAlpine, who acted during the past year as Dominion Immigration Inspector and Health Officer at Vancouver, has resigned, and has been succeeded by Dr. A. S. Monro.

Drs. J. T. Fotheringham and E. B. Echlin represented the Canadian Medical Service at the Convention of United States Military Surgeons which met in Detroit on 25th September.

The home of Mrs. A. McBrien, 119 Bartlett avenue, was the scene of a very pretty wedding on 27th September, when her only daughter, Catherine was united in marriage to Dr. Fred J. Conboy of Toronto.

A pretty wedding took place on 21st September, in St. James' Presbyterian Church, London, Ont., when Miss Alma Fleming and Dr. George Kennedy of that city, were united in marriage.

Dr. Macdonald has sold his Acton practice to Dr. How, of Lindsay, and will take a post graduate course at Johns Hopkins University, Baltimore.

Dr. D. M. King, who has had charge of Dr. Oldright's practice, has left for Ottawa, where he intends to establish himself in his profession.

Dr. Charles H. Gilmour, son of Dr. J. T. Gilmour, Warden of the Central Prison, Toronto, was married to Miss Edna Sayers, on 3rd October.

Dr. William Turnbull, who was married recently at Stratford to Miss Jean McIntyre, arrived in Winnipeg with his bride. Dr. and Mrs. Turnbull will take a residence on Redwood avenue.

Dr. George D. Porter, who had charge of the Royal Muskoka, during the past summer, spent a few days in Toronto in October. He

has gone to Vienna where he intends to make a special study of diseases of the skin.

A Provincial Medical Association has been formed for Saskatchewan. The officers are: President, Dr. Harrison, of Q'Appelle; Vice-President, Dr. Turnbull, of Moosejaw; Secretary, Dr. Charlton, of Regina; Council, Drs. Argue, Egleston, Stewart and Graham.

An association of physicians has been formed in the Gulf of St. Lawrence district. Senator J. P. R. Fiset was elected president; Dr. J. A. Ross, M.P., Vice-President; C. J. A. Pinault, 2nd Vice-President; Dr. J. Gauvreau, Sec-Treas.

Dr. W. A. Clark has resigned his position as resident physician of St. Boniface Hospital, and left for Arcola, where he will practice his profession. It is understood that Dr. R. N. Burns has succeeded to Dr. Clark's work in St. Boniface.

M. L. Menard is arranging to move his family from Belle River to Windsor in order that his daughter may attend school. His son, Dr. Adrian J. Menard, will start out in practice for himself in Windsor and will have his office in his father's residence.

Dr. C. K. Clarke, on leaving Kingston to become medical superintendent of the Toronto Asylum, was presented by the Rockwood staff with an address and a cabinet of silver. The Doctor has presented a pipe organ to St. John's Church, Portsmouth.

Dr. Arthur Kendall, of Cloverdale, B.C., intends leaving shortly for the East, where he will take up a post-graduate course. He has disposed of his practice there to Dr. J. W. Herald, of Medicine Hat. Dr. Kendall is well known in New Westminster and Vancouver.

W. H. F. Addison, M. D., one of the surgeons on the staff of the Toronto General Hospital, has been appointed lecturer on histology in the University of Pennsylvania, and will assume his duties at an early date. Dr. Addison is a graduate of the University of Toronto, arts 1902, medicine 1905.

Dr. Bruce L. Riordan has been appointed division surgeon of the Grand Trunk Railway, with jurisdiction over the middle, northern, and southern divisions. This includes all lines of the Grand Trunk Railway west and north of Toronto. The new appointment will be in addition to his present duties of district medical officer. Dr. Riordan has been in the G. T. R. medical service since 1882.

Smallpox has been of frequent occurrence throughout the Province for some time past. Dr. Hodgetts, Secretary to the Provincial Board of Health, complains that doctors who see suspected cases are not sufficiently careful and often regard these cases as chickenpox. In this way the disease spreads, causing much expense to the municipalities and inconvenience and danger to the public.

 OBITUARY.

FRANK BULLER, M.D.

Dr. Frank Buller, one of the most famous eye and ear specialists of Canada, died at his residence in Montreal on 11th October, after an illness of four months from anaemia. Dr. Buller was born at Campbellford, Ont., in 1844, and was a graduate of Victoria College, Cobourg. He subsequently settled in Montreal, and for many years has been connected with McGill University, Medical College, and enjoyed a large private practice, being consulted by patients from all over Canada and the United States. Dr. Buller was a second cousin of Gen. Buller, and during part of the Franco-Prussian War acted as surgeon in the army. He contributed many papers of very high merit on his special branches of study.

STEPHEN LETT, M.D.

Dr. Stephen Lett, late superintendent of the Homewood Retreat, Guelph, died at that institution on 11th October. Since 1901 he had been gradually weakening from paresis, the main cause of his breakdown being probably the shock resulting from plunging into the icy water of the river to save a boy's life.

Dr. Lett was a son of the late Rev. Stephen Lett, LL.D., D.D., of County Wicklow, Ireland, and later of Toronto and Collingwood. Deceased held appointments in asylums for the insane at London, Toronto, and Hamilton before taking up the superintendency of the Homewood Retreat at Guelph, and wrote and published various articles on mental and nervous maladies, alcoholism, and the opium habit. He was on active service at Fort Colborne, Welland, and Fort Erie during the Fenian invasion. Dr. Lett was married in 1874 to Annie, daughter of the late John McLeod, ex-M.P., Amherstburg, who survives him, with a son, Kenyon Lett, and a daughter, Miss Frances Lett.

Deceased was buried in the family plot in Toronto on Friday. A service was held in St. George's Church Guelph.

GEORGE I. MCKENZIE, M.D.

In the latter days of August, Dr. George I. McKenzie, of Pictou, N. S., died in his 68th year. He had practised for 34 years in the town of Pictou and the surrounding country, and his name was a household. He was a graduate of Jefferson Medical College of the year 1864. He was a public spirited gentleman, and by his death the Province of Nova Scotia is poorer and especially the medical profession of that Province. He enjoyed the confidence of the public and his professional brethren to a very high degree. His son continues his father's practice, having been associated with him for some time.

H. W. ROBERTSON, M.D.

In the death of Dr. Robertson, the community of Crapaud, P.E.I., lost one of its best known and ablest practitioners. He was 61 years of age, and for many years had a very large practice. Indeed, it was devotion to his work over a wide range of country where he was ever welcome as physician and friend, that caused his death.

L. J. A. SIMARD, M.D.

The death of Dr. Louis J. A. Simard removes one of Quebec's best known citizens, which occurred on 29th September. The deceased had been ill for the last two years and his demise was not unexpected. Dr. Simard was a well-known oculist and aurist of Quebec city and for a number of years had been a professor of Laval University, being the Dean of the Medical Faculty of that institution in Quebec. He leaves to mourn his loss three sons, Dr. Arthur Simard, Rev. H. Simard, B.A., D. T., professor of astronomy, Laval University, Alf. Simard, of the Provincial Secretary's Department, and two daughters.

Dr. Riddell, formerly Provincial Health Officer, and one of the best known physicians of early days in Manitoba, died at Crystal city, 27th September.

Dr. Simon Fitch, of Halifax, died September 14th, at the age of 86. He was educated at Acadia College and Edinburgh.


Dr. Colin I. Dewar, of Ottawa, died on 7th September of Uraemia. He was in his 41st year. He was a graduate of McGill.

Dr. W. J. Andrew died in Winnipeg of an attack of scarlet fever. He was a graduate of Manitoba College and was 26 years of age.

Dr. Edward Tegart died on the 9th September at Brantford, in his 71st year. His wife predeceased him only a few hours. He was well known and highly respected.

Dr. D. H. Harrison, well known about twenty years ago in the political affairs of Manitoba, died in Vancouver a short time ago in his 63rd year. He had resided in Vancouver since 1900. He was a graduate of Toronto and McGill of the class 1864.

Dr. Gillies, of Teeswater, died 15th August. He was a graduate of McGill of 1867. He was in his 69th year. He had practised in Teeswater for many years, and enjoyed the confidence of the community in a very high degree.



BOOK REVIEWS.

A RARE MEDICAL VOLUME.

Editor, Canada Lancet.

In my library, recently acquired is a book entitled *Via Recta ad Vitam Longam*, published at London 1620 by Dr. To. Venner. The greater part of the work relates to various domestic interests, e.g.—gardening, the care of orchards, etc. The type used is that of the German text, and the most pleasing and instructive medical parts of this relic are those that contain the theses or *Dissertationes* presented at graduation for M.D. degree. For example I give the title of the first one presented :

Dissertatio de

Circulatione Sanquinis in Animalibus Genitis et non genitis, Quam Auspice Deo, et Præsidente.

D. Archilbaldo Pitcairne, M.D. et in illustri Academia Lugd, Batav.

Medicinæ Practicæ Prof.

Publicè defendam suscipit, Georgius Hepburne, Scotus.

Ad diem 6 Junii loco horisque sollicitis.

The second is :

Dissertatio de motu sanquinis per Vasa Minima.

The third is :

Diisputatio Medica inauguralis generalia circa oculi suffusiorum, guttam, serenam et inflammationem Ophthalmiam dictam complectans.

Publicè Examini subjicit.

Samuel Craddock Anglius.

The fourth is :

Disputatio Medica inauguralis de Febri Legitima seu Exquisita.

The imprimatur is,

Lugundi Batavorum.

apud Abr: Elzevier.

Academiae Typograpum M.D.C.XCIII., (1603).

The first part of work bears date of 1620.

I am carefully working out the translation of these theses and addresses and will present them as copy to Lancet. Treasures they are and afford startling evidences of ripe scholarship and able research worth endorsement and repetition by us.

That we M.D.'s have not changed in being easy marks or butterfly hunters—in fact are the same order of men—(etiam eruditissimi) as existed when these *dissertationes* were presented, is endorsed by the following taken from the text of second address :

“Ut Medici rerum novarum Videntur esse avidi, ita vobum plerumque novitate capicentur.” Yes, we now chase any new scheme as did our illustrious fathers—master minds in medicine and lamentable it is to find out how few there are who do not do their own thinking “altho’ man a thinking being was designed” and the “heart of man a differential possibility of unfathomed potentiality.” (Bostonian). J. S. Sprague, Stirling.

THE NATIONAL STANDARD DISPENSATORY.

Containing the Natural History, Chemistry, Pharmacy, Actions and Uses of Medicines, including those recognized in the Pharmacopœias of the United States, Great Britain and Germany, with numerous references to other Foreign Pharmacopœias. In accordance with the United States Pharmacopœia, 8th decennial revision of 1905 by authorization of the Convention. By Hobart Amory Hare, B. Sc., M.D., Professor of Therapeutics in the Jefferson Medical College, Philadelphia; Member of the Committee of Revision of the U.S.P.; Charles Caspari, Jr., Ph.G., Phar. D., Professor of Pharmacy in the Maryland College of Pharmacy, Baltimore; Member of the Committee of Revision of the U.S.P.; and Henry H. Rusby, M.D., Professor of Botany and Materia Medica in the College of Pharmacy of the City of New York; Member of the Committee of Revision of the U.S.P. Imperial octavo, 1858 pages, 478 engravings. Cloth, \$7.25, net; leather, \$8.00, net. Thumb-Index, 50 cents extra. Lea Brothers & Co., Publishers, Philadelphia and New York, 1905.

To practitioners of medicine and pharmacy this new work of the highest authority is of great importance. It contains, by authorization of the Convention, every article in the new edition of the U. S. Pharmacopœia, together with such explanatory notes and instructions as are necessary to a full understanding of the brief official statements. In addition it covers the essentials of the latest foreign Pharmacopœias, and the very important domain of unofficial drugs and preparations so largely in use. Of its authors, Dr. Rusby has treated the department of Pharmacognosy, including the minor as well as the major drugs of the entire globe, a service never before rendered; Prof. Caspari deals with Pharmacy, giving full information regarding methods and products, with descriptions and explanations of the most approved apparatus and tests, and Dr. Hare has written the section on Medical Action and Uses giving a direct and compact presentation of modern therapeutics. An Appendix of 60 pages contains all necessary tables, formulas, tests, etc., for practical use. The general index, of about 90 pages, contains full reference, to every page in the text, making it a repertory of the world's knowledge of drugs, and the therapeutical index, of about 40 pages, contains under the name of each disease, references to all the medicines employed in its treatment, leading the reader to the points in the text where the conditions indicating their employment and choice will be found. In a word the National Standard Dispensatory is a new,

practical and authoritative work containing information on all substances used in medicine and pharmacy at the present day. The volume is embellished with no fewer than 478 new and instructive engravings in the text.

REST, MENTAL THERAPEUTICS, SUGGESTION.

Being Volume VIII of a System of Physiologic Therapeutics, by Francis X. Dercum, M.D., Ph.D., Professor of Nervous and Mental Diseases in the Jefferson Medical College of Philadelphia, Neurologist to the Philadelphia Hospital, etc., etc. The Series Edited by Solomon Solis Cohen, A.M., M.D., Senior Assistant Professor of Clinical Medicine in Jefferson Medical College, etc., etc. Philadelphia: P. Blakistin's Son & Co., 1904.

This is a first class book by a good authority. Dr. Dercum is already well known as an erudite writer on nervous diseases. The present volume rises to a very high plane of excellence. The publishers have done their part well and in keeping with former issues of this series.

The book is divided into three parts: Rest, Therapeutics of Mental Diseases, and Suggestion. In the first part rest is discussed as to its function and results. Then chronic fatigue and the fatigue neuroses are carefully studied. Rest in neurasthenia, hysteria and hypochondria is then considered. The influence of rest in chorea and the organic diseases closes this section of the book. In all of these chapters the advice is thoroughly reliable.

The second section of the book takes up the prevention of insanity and the general principles of the treatment of the insane, and the treatment of special forms of mental disease.

The third part discusses normal suggestion, and suggestion by mystic and religious methods. The author has some pertinent remarks to make on hypnotism, suggestion and crime, suggestion and hysteria.

It has not been our pleasure to have reviewed a book for some time with more interest and profit than the present one; and, therefore, speak in high terms of praise of its merits.

PRACTICAL MASSAGE IN TWENTY LESSONS.

By Hartvig Nissen, Instructor and Lecturer in Massage and Gymnastics at Harvard University Summer School; Director of Physical Training, Brookline Public Schools; Former Acting Director of Physical Training, Boston Public Schools; Former Instructor of Physical Training at Johns Hopkins University and Wellesley College; Former Director of the Swedish Health Institute, Washington, D. C., etc., etc. Author of "Swedish Movement and Massage Treatment," "A, B, C of Swedish Educational Gymnastics," "Rational Home Gymnastics," etc. With 46 Original illustrations. 168 Pages. 12mo. Price, Extra Cloth, \$1.00, net. F. A. Davis Company, Publishers, 1914-16 Cherry Street, Philadelphia.

This little book purports to be written on the author's own experience. The book gives a short account of the history of massage. The various passive and active movements are fully discussed. Massage of the various parts of the body are taken up, and the diseases for which massage is applicable. The work is an excellent one, and must prove of much service to those who require such a manual. It is well illustrated and neatly got up. We think that doctors might read some works on massage to advantage, and this would be a good one.

MISCELLANEOUS.

DR. HAMILL'S MEDICAL EXCHANGE.

Medical men can not be too often reminded that when they are thinking of selling out their practice, that it should be done quietly, quickly, and with the least publicity possible. It is very detrimental to one's practice to have it locally known that the physician is contemplating removing from their midst. Dr. Hamill who conducts the Canadian Medical Exchange for the purchase and sale of medical practices has certainly systematized his methods to perfection so as to insure a short-cut to the goal desired, and we feel safe in saying that physicians stand a better chance of selling their practices by having their offer on Dr. Hamill's register than by all other methods combined that they could adopt.

THE SUPERIOR QUALITIES OF SANMETTO IN CYSTITIS, PROSTATITIS AND GONORRHEA.

I have used Sanmetto quite extensively in cystitis, prostatitis and gonorrhoea, and find it far superior to any proprietary preparation or any prescription I have ever used. It controls admirably those cases of prostatitis where there is excessive desire to urinate frequently but an inability to do so.

Tremont, Ont.,

R. B. MEEK, M.D.

THE WINKLY ARTIFICIAL LIMB COMPANY.

The attention of our readers is directed to the advertisement in another page of the above company, which has a very successful record for the superior quality of all its manufactured articles.

ALVARENGA PRIZE OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA.

The College of Physicians of Philadelphia announces that the next award of the Alvarenga Prize, being the income for one year of the bequest of the late Senor Alvarenga, and amounting to about one hundred and eighty dollars, will be made on July 14th, 1906, provided that

an essay deemed by the committee of award to be worthy of the prize shall have been offered.

Essays intended for competition may be upon any subject in medicine, but cannot have been published. They must be typewritten, and must be received by the Secretary of the College on or before May 1, 1906.

Each essay must be sent without signature, but must be plainly marked with a motto and be accompanied by a sealed envelope having on its outside the motto of the paper and within the name and address of the author.

It is a condition of competition that the successful essay or a copy of it shall remain in possession of the College; other essays will be returned upon application within three months after the award.

The Alvarenga Prize for 1905 has been awarded to Dr. Chalmers Watson, of Edinburgh, for his Essay entitled: "The Importance of Diet, an Experimental Study from a New Standpoint."

THOMAS R. NEILSON, M.D.,

Secretary.

THE TREATMENT OF MENORRHAGIA.

Consists, in the main, of measures directed toward the restoration of uterine contractile power. This can be accomplished by the administration of Ergoapiol (Smith) in doses of one capsule three times a day.

It is advisable to begin the use of the preparation one week in advance of the flow. When the menses have made their appearance, the remedy is withdrawn to be administered again for a week after the flow has ceased.

Ergoapiol (Smith) effects the relief of profuse menstruation by its powerful tonic influence upon the pelvic organs. It augments the contractile power of all the organs of regeneration, imparts vigor and encourages a healthy functioning of each organ.

The promptness with which Ergoapiol (Smith) exercises a reparative influence upon the organs, and the fact that it is entirely free from the objectionable by-effects common to other products of this class, makes its use particularly well suited to patients whose vital force has been exhausted by long continued suffering and a loss of recuperative powers.

In addition to relieving the patient of the exhaustion consequent upon the excessive loss of blood, Ergoapiol (Smith) tends to invigorate the general economy and add greatly to the physical and mental well-being of the patient.

For the relief of profuse menstruation occurring in advance of the menopause, Ergoapiol (Smith) is of great value on account of the gentleness with which it acts upon the organs.

LIQUOZONE VERSUS GLYCOZONE.

Editorial from *The Louisville Monthly Journal of Medicine and Surgery*,
September, 1905.

In a recent issue of the *New England Medical Monthly* is an editorial setting forth the facts that much confusion has arisen over the similarity of name of *Liquozone* and *Glycozone*, and furnishes the following incident: "The name 'Liquozone' is confusing druggists and even doctors with another legitimate preparation, 'Glycozone,' to such an extent, that in March last the editor of the *New England Medical Monthly* called at a drug store in Mount Clemens, Mich., asking for a bottle of Glycozone, when the clerk turned around and supplied him with a bottle of Liquozone.

"Upon my remark that I did not ask for a bottle of Liquozone but for a bottle of Glycozone, spelling the name at the same time, he apologized, stating that he understood that I wanted a bottle of Liquozone.

"This instance shows plainly that the confusion which has been created not only on account of the fallacious claims but also on account of the sounding of the two names 'Liquozone' and 'Glycozone,' which is practically the same, is misleading to the limit."

The incident is very similar to one which happened to an editor of this *Journal* but very recently. He was at Atlantic City, N.J., and sent to a drug store—said to be a first-class one—for a bottle of Marchand's *Glycozone*, when he received a bottle of *Liquozone*. The mistake seemed inexcusable and goes to confirm what the journal quoted says about the confusion of names. And, too, it must be remembered that great injustice is being done an old and tried medicine—Marchand's *Glycozone*—by a late nostrum put in the field, and which has received the condemnation of the San Francisco Board of Health, in the following words in the report of the Health Officer:

"I therefore recommend that it be condemned by the Commissioners of Health, as a pernicious and unsafe drug. It may be used as a disinfectant for trains, urinals, stables, etc., and probably no objections could be urged against its external use by an individual to exterminate barber's itch.

"I therefore recommend that the same action be taken in respect to this deleterious drug as is prosecuted by your Honorable Commission in the case of impure food, viz.: that the Police Department and our Department act conjointly to have it removed from the shelves of all dealers handling this drug, and that the selling, exposing for sale, or giving away of *Liquozone*, in the City and County of San Francisco, constitute an offense, the violation of which will be followed by arrest of the offenders.

"Respectfully submitted,

"D. F. Ragan, M.D., "Health Officer."