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Original Communications.

THE RELATION OF THE PHYSICIAN TO HIS PREGNANT PATIENT.*

BY W. P. MANTON, M.D., DETROIT.

In his address on "The Future of the Medical Profession," delivered at the opening of the new buildings of the Harvard Medical School, President Eliot enlarges upon a subject which, if not new, has as yet failed to receive that attention from the profession at large which its importance demands.

"The ordinary physician," he says, "has for the last hundred years been almost exclusively a man devoted to the treatment of disease already developed in human bodies or of injuries already incurred." In the future his function will include not only these, but, entering a broader field, from his analysis of all the processes which accompany disease, and knowing their actual sequence, the physician will apply more and more largely the remedy—prevention.

It is a sad commentary on the art and science of Obstetrics that, while its literature deals so fully with the cure of existing disease and teaches with exactness the technique of operative procedures, it gives but scant consideration to the prophylaxis of, to a large extent, preventable disorders. That this is not the fault of investigators along these lines is evidenced by the voluminous writings on laboratory and bedside observations with which our journals are replete.

We are becoming fairly familiar with the processes accompanying the disorders incident to the child-bearing act, and

* Read before the Sixth Councillor District Medical Society, Flint, Michigan, November 7th, 1906.

know, to a large extent, their origin and results, but it is in the application of this knowledge that failure is conspicuously evident, and, neglecting the cause, too great trust is placed in ability to overcome results.

"If woman," writes Higginson, "really exists but as a child-bearing animal, let us say so frankly," and, he might have added, treat her with commensurate consideration. Certainly no breeder of fine stock would submit his animals to the same lack of care and attention as is ordinarily accorded to the pregnant woman.

Ignorance of physiologic and morbid processes being untenable as excuse for this neglect, we must seek elsewhere for an elucidating reason. And this, I believe, will be discovered in an incident which recently came under observation.

A patient, pregnant about the fifth month, was brought to one of our hospitals in a moribund condition. She was young and vigorous and, save some slight bladder irritation, had been well up to the morning of the day when convulsions set in. Dilatation of the os had begun, and at the hospital evacuation of the uterus was readily accomplished. The patient did not, however, regain consciousness, and died a few hours later in spite of the most energetic efforts to save her life. The urine of the patient had not been examined prior to her entrance at the hospital, and in conversation with her physician the remark was made that it still appeared necessary for the general practitioner to learn that the urine should be tested from the beginning of pregnancy, to which he replied, "Doctor, it does not *pay.*"

The case is a pathetic illustration of the present status of obstetric practice. Here was a young woman of the poorer class, in robust health, whose life was sacrificed on account of her inability to adequately remunerate the physician for the time and skill which he might expend in caring for and directing her during the trying period of gestation. Unfortunately the case is not exceptional, nor is the physician to be held wholly blameworthy for following a course which is almost universally practised among patients in all stations of life.

In these days of vigorous commercialism the physician is apt to forget that "the practice of medicine is an art, not a trade; a calling, not a business;" and that he has taken upon himself a vow to succor the sick and afflicted and to bestow the gifts of his knowledge freely and with open hand. It often happens that the practitioner is engaged for a confinement and, perhaps, does not see his patient again until the pains of labor have set

in. What of the interval, and why the neglected opportunity, except that it "does not pay."

It certainly is not incumbent on the physician to accept the responsibilities of any case unless he sees fit to do so; but, having once taken charge, the question of moral responsibility is one which cannot be ignored, even if after the expenditure of time and skill the reward may be no larger than duty well done.

Old Dr. James Jackson, in his "Letters to a Young Physician," says, "You are bound as by an oath, though you have never held up your hand before man, to use your best judgment in the treatment of those who are committed to your care," and while "a desire for profit and reputation might be enough to prompt him (the physician) to do all this, it would also be good policy. But he will not do it with a full certainty of success if he be not influenced by still higher motives, by a true love of science and humanity." With the average physician the quality policy is one which is generally well cultivated, and yet in the matter of the care of pregnant women a surprising shortsightedness is often manifested, so that, the unexpected happening, the practitioner is taken off his guard, to his own and the patient's detriment.

While pregnancy is a physiological process through which the great majority of women pass without untoward manifestations, the condition, as remarked by Robert Barnes, is the great test of bodily soundness, and the effects of the growing ovum on the maternal organism are such that the demarcation between health and disease is often very shadowy, trivial causes not infrequently serving to turn the balance from well-being to serious or even fatal consequences. It is to the anticipation and prevention of these morbid showings that the aim and purpose of the physician should be directed, no matter what the cost in personal discomfort or the possibilities of future remuneration. To accomplish this it is of the utmost importance that the practitioner keep in touch with his patient from the moment she comes under observation to the completion of puerpery. This is not only good policy, but a paying investment, for by so doing the physician enlarges his knowledge, increases his proficiency, and puts himself on the best footing with his client, but he also fortifies himself against the unexpected, and insures against the possibilities of mortification and chagrin on the sudden development of unforeseen contingencies.

Moreover, if we must accept the sordid motive for well doing, every woman, however poor or degraded, appreciates relief from suffering and escape from serious consequence, and, whether

she can pay in the coin of the realm or not, is more than ready to lavish her good-will, extoll the physician's kindness and dwell upon his skill.

There is no one of experience but can number among his most remunerative patrons one or more who have come under his care through such humble means.

Of the scientific side of the question much might be said. In the heat and burden of the day, the rush of life and the competition of the times, too little opportunity is given for the careful study and observations of those conditions with which we are in common contact. Increasing familiarity and the drudgery of practice too often appear to dull the senses as to the scientific truths which every one of us might cull from daily experience, and thus much that is worthy and much that would be helpful to ourselves and to the world is lost through slothfulness, indifference or haste. The apparently trifling observations of Oliver Wendell Holmes and Semmelweiss, regarding the connection between uncleanliness and puerperal morbility led to further advancement and made possible the wonderful achievements in obstetrics and surgery of the present day.

The maintenance of health of the pregnant woman is of the greatest importance, and she should be protected from the multitude of dangers which inevitably threaten her condition, and of which she is for the most part ignorant. In first pregnancies especially, the woman is uninformed by experience what to expect or what to do under the new and changed conditions. Many girls enter the married state in almost total ignorance of the sexual relations, and the advent of pregnancy is to them an unexpected and unexplained mystery. What can such a woman know of the dangers which may threaten from indiscretions in diet, from inadequate bodily protection, from excessive or unwonted exercise, or from the thousand and one daily indulgences and habits which she has hitherto practised without thought or evil consequence? And is it not eminently within the province and duty of the physician to guide her in the manner of living, to instruct regarding personal hygiene, to alleviate as far as possible the annoyances and minor ailments to which she is liable, and to direct her in the matter of even the smallest detail preparatory to the final event—labor?

Should she not also be warned that, while indiscretions, either from ignorance or wilfulness, may not perhaps seriously affect her own physical health, they may later become manifested in her child?

How many times want of forethought leads to abortion or

premature labor or the begetting of weak and sickly offspring whose insufficient hold on life renders post-natal existence impossible, or so handicaps the new-born with constitutional defects that it is unable successfully to struggle against external conditions and therefore perishes from the first extra strain imposed by sickness or disease.

In order that both mother and child may receive that attention which is their due, every gravid woman should be under the care and direction of a competent physician during the whole nine months of pregnancy. She should be told what to eat and wear, how to rest and exercise, and what attention should be given to bodily functions and cleanliness, in order that her own well-being may be maintained and the health of her future offspring established. Every physician is aware that, while most of the disturbances of pregnancy are but temporary and insignificant, depending either on reflex action or the pressure of the enlarging womb upon surrounding organs and parts, the entire relief of which may be impossible as long as the cause remains, yet that there are other symptoms of most serious import which arise insidiously,—the threatening evils of which may be anticipated and forestalled.

The importance of examining every woman during the later months of pregnancy cannot be exaggerated. A knowledge of the pelvic contents, the presence or absence of adventitious growths, and the approximate size of the bony canal, forewarns the physician as to possible difficulties, or the impossibility of labor, and, by a careful study of each case, enables him to determine the necessity for intervention either before or at the time of delivery. Pelvimetry is easily and quickly accomplished, and while it may furnish only relative information regarding the size of the pelvic canal, it serves to make the knowledge of the case more certain, and in that way fulfils its purpose.

In a recent case where there were no symptoms, examination revealed the presence of a dermoid cyst firmly adherent and so blocking the pelvic brim as to render engagement of the child's head impossible. The woman was quickly and sucessfully delivered by Cæsarean section, and the tumor removed, with happy outcome to both mother and child.

"Foreknowledge absolute," as Milton calls it, places the physician at once at an advantage with himself, the patient and the possibilities to come.

On the other hand, the practitioner will do well to remember

and avoid the common error of attributing every possible symptom to the gravid uterus, and seek by careful investigation to differentiate intercurrent affections from purely reflex phenomena.

And there is the other side of the question to be considered, —the child.

It has been said that the integrity of a nation depends upon the physical as well as the mental qualities of its individual constituents. The function of the physician includes not only the treatment of disease, but the teaching of the people the ways of right living and the prevention of morbid developments.

If the expectant mother could but be instructed from the beginning in those things which she is entitled to know, guided during the function of gestation, and protected from the threatening sorrows and evils which ambush her existence, it would not take many generations to produce a race of men and women who in both "intellectual supremacy and national strength" would rival the ancient Greeks.

These are vital questions demanding serious thought, and if the practitioner will but give them the consideration they deserve, the beneficent results will be manifested in a better profession, a safer gestation to all women, and an improved and strengthened posterity.

32 Adams Avenue, West.

EVOLUTION OF MEDICINE IN ONTARIO.*

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In assuming the duties of President of the Toronto Clinical Society for the coming year, I wish to express to you my deep appreciation of the honor. To be elected to the chief office in a society which represents so much of the medical life of a great city is something of which any man might be proud. Limited though it is in numbers, within the membership of this Society are found many of those whose eminence as clinicians has gained for the medical profession of Toronto the place it now holds in the confidence and esteem of the community, and whose ability as teachers and wisdom as counsellors has contributed largely to mould the medical thought and direct the policy of our profession during one of the most important periods in its history. While appreciating the honor, equally do I realize the responsibilities which the position involves, and how much one lacks the qualifications to properly discharge them. I shall continue, however, to rely on that personal kindness and friendship which has been one of the most valued assets of my professional life, and shall ask of you and my associates in office the same sympathetic and loyal support so freely accorded my predecessors in the chair. During my tenure of office I can assure you that my best efforts will be devoted to maintaining the high character which has distinguished the work of this Society since its organization, and which has made the meetings so valuable to us all.

It is not my intention to occupy much of your time this evening with any introductory remarks. Not that the present is an inopportune time, nor that a Clinical Society is an unsuitable place to discuss many matters of importance to the profession of our country,—matters which the rapid evolution of events will force upon our consideration in the near future, and in the solution of which a society of the standing and influence of this must play a considerable part.

The epoch making nature of the events which have been taking place around us since the organization of the Clinical Society in 1894 must have occurred to all of us, not in the medical profession alone, but in every line of intellectual, industrial, commercial and political activity in our country. After long years of waiting and hope deferred, we are privi-

*Presidental Address, Toronto Clinical Society, Oct. 10th, 1906.

leged to live at the beginning of the century which by common opinion belongs to Canada—an era which is to witness the transformation of an obscure colony into one of the great nations of the world. Our illimitable natural resources and opportunities are attracting attention from all quarters of the globe. Ever alert, financial, commercial and industrial interests have quickly grasped the situation, so that on every side we see an extension of enterprise, a broadening of foundations and a perfecting of organization to meet rapidly-growing requirements and to take advantage of the golden opportunities which the future has in store.

It therefore appears a fitting time to glance at our own profession,—its past history, present condition and future prospects. As an index to our hopes it is instructive to recall the transformation which a century has produced in the country which is so frequently compared to our own. At the beginning of the last century the United States had a population of about 4,000,000. The first medical school in that country, now the Medical Faculty of the University of Pennsylvania, had been established only thirty-five years; the Medical Department of King's College, N.Y., now Columbia, thirty-three years; Harvard, seventeen years, and the Medico-Chirugical Faculty of Maryland, eleven years,—all struggling institutions whose influence at that time had produced no effect on the medical world at large. In the whole country there were but two general hospitals, one medical journal (*The Medical Repository,* New York, 1797); and the only medical libraries were one each in connection with the hospitals of New York and Philadelphia. For the education of medical students the old apprentice system was still largely in vogue.

Reflection on the position of the profession in our own country, our medical laws and institutions, at a corresponding period in national development, is indeed reassuring and must impress us with a deep sense of the gratitude we owe those worthy pioneers, the military surgeons, who at the beginning of the last century were laying the foundations of the profession in this province. We of the present generation are reaping the advantages of the high ideals by which they were actuated, and of the strenuous efforts they put forth to establish and maintain in a struggling colony the honorable character and traditions of the profession of the motherland. From the view-point of the present it would be not only instructive, but inspiring, to look back and consider for a moment what manner of men they were, these pioneer surgeons,

the difficulties they encountered, what they accomplished, and to trace their influence on the evolution of the profession in the province; but the time at my disposal will permit of only a brief reference to them. They were men socially of high rank, and certainly well abreast with the advancement of medicine at that time, thoroughly trained in the schools of London, Edinburgh and Dublin at a period made brilliant by the labors of the Hunters, Edward Jenner, Percival Pott, Benjamin Bell, John Bell and other great teachers. They possessed a wide experience, not only of medicine, but of men and affairs, gained by active service during the wars of that period. The influence of these early military surgeons had been indelibly stamped on the medical profession of this province, and has been an important factor in giving character to our clinical teaching and practice. To their efforts we are indebted for the first efficient legislative control of the practice of medicine, obtained by the Medical Act of 1818 under which the Medical Board of Upper Canada was created. From that time until its last meeting in 1865, before the formation of the College of Physicians and Surgeons of Ontario, this Medical Board guarded the entrance to the profession, and practically controlled the medical affairs of the province. Up until 1830 the influence of the military element in relation to the medical profession was practically supreme and undisputed. In the very nature of things they were in close touch and sympathy, and evidently possessed the confidence of the Governors and the Executive, which, in the period preceding the MacKenzie Rebellion, administered as they deemed best the affairs of the province. This intimate association of the founders of our profession with the all-powerful Family Compact was a potent factor in securing the sympathetic co-operation and often active assistance of the early Governors and other branches of the Administration, in establishing the profession on a proper basis. In this connection it is pleasant to note, in parenthesis, that the profession in the early days had a warm friend and able advocate in the Rev. Dr. Strachan. In all ages the true followers of Aesculapius have had to deplore the ease with which too frequently clerical support has been enlisted on behalf of their enemies, the rapacious irregulars and quacks who fatten on the ignorance of the laity in matters medical, but the prevalent quackery of the days prior to the Medical Board got no quarter from this strenuous ecclesiastic.

It was through the efforts of the military surgeons that the

General Hospital was established in 1819, at a time when the population of Toronto was less than 1,200. The outstanding figure among them, who for thirty-five years was chairman of the Medical Board and the recognized leader of the profession, was Dr. Christopher Widmer. Resigning his commission in the service and undertaking civil practice in York in 1815, at a time when the medical needs of the population could no longer be properly cared for by the surgeons attached to the garrison, for many years he had practically a monopoly of the practice of the town, and until his death in 1858 his name appears in connection with every movement for advancing the welfare of the profession. When Dr. Widmer began practice there were only about forty regularly qualified doctors in the province. He was one of the founders and first President of the Medico-Chirurgical Society of Upper Canada, established in 1833. A perusal of the minutes of the Medical Board during his thirty-five years as President indicates his broad grasp of medical politics, and illustrates with what constancy, courage and military precision he directed its proceedings. In speaking of him, Dr. Osler says: "One picture on the canvas of those early days lingers in the memory, illustrating all the most attractive features of a race which has done much to make this country what it is to-day. Widmer was the type of the dignified old army surgeon, scrupulously punctilious, and in every detail regardful of the proprieties of life." Dr. Christopher Widmer has therefore justly been called the Father of Medicine in Ontario. He and his associates on the Medical Board were early and vigorous advocates of the necessity for providing for the medical education of those desiring to enter the profession in the province, and they were largely instrumental in securing the establishment of a medical department in King's College when that institution began operations in 1844. Tories by instinct and association, they had an antipathy to everything American, born, no doubt, of the Revolutionary War, perpetuated by the influence of the United Empire Loyalists on the politics of Upper Canada, and intensified by the experiences and memories of the War of 1812. This ever-present fear of American influence was one of the chief reasons continually urged on the Government of the importance of establishing a medical school in Upper Canada, so that our students might be educated at home, without their loyalty being exposed to the possibly too democratic atmosphere of New York and Philadelphia.

Between 1830 and 1840, however, with the gradually

increasing population, another element became prominent in the medical as well as the political affairs of the province. They were not of the military type, nor were they the favorites of the Family Compact; consequently they soon came into opposition alike with the Government and the dominant medical faction. Much dissatisfaction arose from the composition of the Medical Board, the control of the examinations for license, the administration of the General Hospital and other public medical institutions. This discontent culminated in the calling of a public meeting in 1836, at which these grievances were ventilated and resolutions adopted for transmission to the Government, embodying many suggestions for reform. Resolution No. 4 reads as follows: "That it is the opinion of this meeting that over the Hospital of this city a veil of obscurity impends which it is highly advantageous to have removed. No appointed days await the attendance of medical men in connection with the institution; no published reports inform the public of the number of those who have been restored to their friends, cured of their infirmities; the passing bier alone affords a melancholy proof that the institution still exists in active operation." The clouds of discontent were evidently deepening over the medical as well as the political institutions of the province. The struggle for responsible government was being bitterly prosecuted, and in the movement no class of the community took a more prominent part than a section of the medical profession, of whom Drs. John Rolph, William Warren Baldwin, Thomas David Morrison and Charles Duncombe were the leading spirits. It therefore appears how inevitably a breach in the medical profession occurred between the adherents and intimates of the administration and those who espoused the cause of reform. Of the latter Dr. Rolph was for many years such a conspicuous figure in the medical affairs of the province that to us his career is of unusual interest. He was a student of Guy's and St. Thomas's Hospitals, and a pupil of Sir Astley Cooper's; at the same time he studied law and became a member of the Inner Temple. He first devoted himself to the practice of law, being called to the Bar of Upper Canada in 1821. By his great intellectual endowment and eloquence he soon acquired a large practice and became one of the leaders of the profession. Early at variance with the judiciary owing to his political views, in 1828, dissatisfied with a decision of Justice Sherwood, he with Dr. Wm. Warren Baldwin (who also practised dual professions), threw off his gown, and left the court. He thenceforward devoted himself to poli-

tics and medicine, passing the examination of the Medical Board in 1829. He was then nearly forty years old, and his subsequent career is a brilliant example of a man's capabilities in medicine after that age. He soon attained a position in the medical profession as eminent as the one he had forsaken in law. He was appointed a member of the Medical Board in 1832, and for some years was an active advocate of a medical department in the projected King's College. Of the part he played in the struggle for responsible government, his association with the Rebellion, and his six years' exile in Rochester, I shall say nothing. Returning to Toronto in 1843, out of touch and sympathy with the newly created medical faculty of King's College, he established a private school in rivalry with that institution, which afterwards became known as the Toronto School of Medicine. These details are given to show that, in the beginning, political disagreement at that period was responsible for producing school divisions and rivalries, which affected the profession of the province long years after the original cause was forgotten.

In 1850, after the ascendency of the Reform party, King's College passed from under the control of the Anglican Church and became a secular institution under the name of the University of Toronto. Through the efforts of the Rev. Bishop Strachan, Trinity University was then established in connection with the Anglican Church, and the Upper Canada School of Medicine was constituted its Medical Faculty, with Drs. Hodder, Bovell, Bethune, Hallowell and Melville as lecturers. This school, however, lasted only a few years. Owing, it is said, to the influence of Dr. Rolph in the Reform Government of Sir Francis Hincks, the Medical Faculty of the University of Toronto was disestablished in 1853.

In 1856 a disagreement arose between Dr. Rolph and his colleagues, Drs. Aikins, Workman, Langstaff, H. H. Wright, of the Toronto School of Medicine, a separation occurred, and after some litigation Dr. Rolph established a school in Yorkville, which became the Medical Faculty of Victoria University. As such, due largely to his wonderful powers as a teacher, this school had a prosperous career until Dr. Rolph's death in 1870.

The resuscitation of the old Trinity School shortly after this time, by Drs. Geikie, Hodder and others, the reorganization of the University of Toronto in 1887 with the Toronto School of Medicine as its Medical Faculty, with the subsequent events leading up to the amalgamation of Trinity in

1903, are matters so familiar to all as to require no reference to them.

Kingston was early an important centre, medically speaking. The Kingston General Hospital was completed in 1835, with a capacity of 120 beds, Dr. James Sampson being its first physician. The Medical Faculty of Queen's College, Kingston, was organized in 1854 chiefly through the exertions of Dr. J. R. Dickson and Dr. Horatio Yates, with the able support of the late Sir John A. Macdonald.

We are thus able to trace the formation of the various medical schools in Ontario between 1843 and 1856.

Of Dr. Rolph, it is difficult even yet to estimate the value of the services he rendered the profession in this province. He represented a strong independent sentiment which won many adherents. He apparently commanded the admiration and affection of his friends as much as he aroused the bitterness of his enemies, but all had to respect his ability. An unprejudiced judgment must acknowledge him as a great teacher whose view of medical affairs was at times biased by his strong political convictions. Dent says of his: "He possessed talents which under favorable circumstances would have made him a marked man in either political or public life in any country. Chief among his qualifications may be mentioned a comprehensive, subtle intellect, high scholastic and professional attainment, a style of eloquence at once ornate and logical, a noble and handsome countenance, a voice of silvery sweetness and great power of modulation, and an address at once impressive, dignified and ingratiating."

For us of the present day, forgetting the differences of the past and the causes which produced them, we cannot look back on the history of the profession in this province without a feeling of admiration for the ability, courage and foresight of those who labored so earnestly to establish its foundations on a basis which enables us to begin the century free from the difficulties with which they had to contend. The founders of our profession were men of whom we may well be proud, not alone for their achievements in medicine, but for the important part they played in the social and political development of the province. Widmer, Rolph, Baldwin, Bovell, Hodder, Workman, King, Gwynne, Bethune, and, later, Aikins, Ross, Fulton and Graham are representatives of a group of men who must always command our respectful admiration and regard. A few of the same type still remain

with us. Some have retired from active work, others still in the harness distinguish their calling. These doctors of the old school furnish many examples of all that is implied in the best sense of the term, gentleman—high in ideals, scrupulous in honor, dignified in bearing, broad in culture, and courageous in their adherence to principle. In this age of material prosperity, and lacking much of the environment which developed their characters, it will be no easy task for their successors to maintain the standards they set as citizens as well as physicians.

In the evolution of our system of medical education, the traditions and methods of the London schools, of which most of the early members of the profession were graduates, exerted the greatest influence. The schools of Edinburgh, Glasgow and Dublin furnished many able representatives, but on the whole they played a secondary role—in fact until 1839 their graduates were not recognized by the Medical Board on an equality with those of the London schools—a cause of much dissatisfaction in the early days of the province.

It is interesting to note here the causes which have helped to determine certain differences which have characterized the educational and clinical methods of the American profession as compared with our own. The important influence of the military element has already been alluded to. Another potent factor arose from the estrangement between the United States and the mother country following the Revolution, on account of which American students went to Paris instead of to London. There, at the beginning of the last century, they came under the influence of the great teachers who laid the foundations of modern clinical medicine—Bichat, Laennec, Corvisart, Louis and others. The scientific and clinical awakening which began in France did not reach Great Britain until about the thirties, at the time of John Cheyne, Graves, Stokes, Bright, Addison and Latham, all of whom came under its influence. Through their students it extended to Canada between 1830 and 1840. The French school maintained its position until the time of Trosseau (1866), when the German influence began to dominate medical thought and progress. Vienna and Berlin then became the centres of attraction for American students. The American profession then passed under the dominating influence of Virchow and his followers, where they have remained until the present time. In contrast to ourselves, during the greater part of the past century, French and German methods have been much more powerful than British in mould-

ing the medical thought of the American profession. That we have been affected by French and German scientific methods, especially in later years through our close association with Johns Hopkins, goes without saying, but they have been modified by passage through English channels. The majority of our students still go to London rather than the Continent. Whether this has been a misfortune or not is a debatable question. If we missed the direct quickening influence of the scientific awakening of the French and German schools, we have avoided the therapeutic nihilism which followed in its wake. If our medical horizon has thereby been narrowed, if we have remained too much under the thraldom of authority, having accomplished little in the way of original investigations, we have avoided the tendency which for a time made the study of medicine an accumulation of dry scientific facts, obtained by the observation and research into the phenomena of disease as exhibited by plants, animals and man in the aggregate, rather than of an art which has for its main purpose the prevention or relief of pain and suffering as it affects the individual. Moreover, what Osler says of the American profession applies equally to our own, "Justice compels us to acknowledge that while winning an empire from the backwoods, the people of this land had more urgent needs than laboratories of research." Medicine with us, as with the English-speaking people in general, has been essentially utilitarian and practical, exalting the art rather than the science. "Sydenham, not Lineacre or Harvey, is the model English physician in whom was concentrated all those practical instincts upon which we lay much stress in the Anglo-Saxon character (Osler)." As the result of this practical trend our race may lay claim to most of the great discoveries which have lessened the suffering of mankind. Sydenham introduced the treatment of malaria by quinine, Jenner discovered vaccination, Simpson and Morton general anæsthesia, and Lister the use of antiseptics in surgery.

There is apparently at the present time a movement to pursue scientific work along lines of more immediate value to the clinician, as exemplified by the revival of interest in the study of therapeutics and the brilliant researches of Sir A. E. Wright. This closer association of the science with the art of medicine will more strongly appeal to men of our race. The maxim of Sir Astley Cooper still reflects the attitude of the majority of our profession, "Profound erudition is good for a man of means and practical knowledge for the physician and surgeon."

The outlook in all branches of medicine was never so bright as at the present time, and in the progress that is bound to take place during the 20th century, no country is more favorably circumstanced than our own for playing an important part. That Canadians are possessed of the intellectual capacity, the energy and the zeal, has been amply demonstrated by what our countrymen have already accomplished, and it should be a source of no small degree of pride to a country so young, that Dr. William Osler, a fellow citizen, should be the greatest living exponent of internal medicine.

As for Toronto, the most favorably located city on the continent, medically speaking, with a great university, one of the largest medical schools in the world, with the assurance in the near future of the best hospital facilities and abundance of clinical material, with a medical profession unsurpassed in the average of attainment, and supported by a country of unlimited resources, if we avail ourselves of the opportunities presented, and fulfil our stewardship to posterity as faithfully as the Fathers of Medicine in the province did for us, we may indulge the most sanguine hopes of its future as a centre of medical activity.

THE TREATMENT OF DIFFUSE PURULENT PERITONITIS*

Results in Sixty-two Operations in which Diffuse Purulent Peritonitis was Found.

By James F. W. Ross, M.D., C.M.
Professor of Gynecology, University of Toronto.

Case-book No.	Pathological Condition	Result
38a Mrs. P. (Dr. Carveth) ..	Gonorrheal	Died
52 Garrett.....	Sepsis from Miscarriage	"
66 London.....	Sepsis from Extra-uterine Pregnancy	"
70 Moss	Sepsis from Extra-uterine Pregnancy	Recovered
102 White.....	Ulcer Duodenum; perforation; starvation 3 weeks after	Died
103 Urquhart...	Gonorrheal Peritonitis	Recovered
112 Medway....	Perforated Appendix	Died
115 Hitchman ..	Ruptured Pus Tube	"
121 Todd	Perforated Appendix	"
147 Middleton ..	Perforated Appendix	"
166 Barnes	Perforated Ulcer Duodenum	Recovered
194 Ditner	Perforated Appendix	Died
214 Farnen.....	Perforated Appendix	"
265 Stedman....	Ruptured Pus Tube	"
267 Holman	Sepsis Following Labor	"
277 McFadden..	Attempted Abortion	"
286 Maddison ..	Perforated Appendix	"
373 McCully....	Gangrene of Intestine	"
374 G—e.....	Following Dilatation of Uterus	"
376 Yelland.....	Perforated Appendix	"
496 Roblin	Perforated Appendix	"
497 Northcote ..	Ruptured Pus Tube	"
595 Forfar.....	Perforated Appendix	"
602 Hopkins....	Perforated Appendix	"
632 Dunn.....	Perforated Appendix	"
649 Cane.....	Gangrene of Intestine	"
680 Hall.....	Perforated Caecum	"
697 Mills.	Perforated Appendix	"
713 Devitt	" "	"
738 Johns.....	" "	Recovered
762 Dunnington	" "	Died
827 Adams	" "	Recovered
874 Barth.. ...	" "	"
912 Farar.....	" "	Died
1021 Holdcroft ..	" "	Recovered
1032 Tustin.....	" "	"
1042 Cowan.....	Perforated Caecum	"
1033 Magwood...	Perforated Appendix	Died
1051 Hobbs	" "	Recovered
1051½ Hopkins ..	" "	"
1126 Cockburn...	" "	"
1161 May	Attempted Abortion	Died

* Read before the Clinical Society, Toronto, October, 1906.

Case-book No.	Pathological Condition	Result
1179 Eager.....	Perforated Appendix.....	Recovered
1191 Wilson.....	" "	"
1210 B—s.....	" "	Died
1230 Meservey...	" "	"
1261 Illing.....	" "	Recovered
1266 Forrester...	" "	"
1267 Finkle.....	" "	Died
1280 Coste.....	" "	"
1293 Sweetman..	" "	"
1317 Buck.....	" "	Recovered
1322 Trewin.....	" "	Died
1369 Chesnut....	" "	Recovered
1409 Rowell.....	Ruptured Pus Tube.....	"
1422 Thomas.....	Perforated Appendix	"
1435 McCullough.	Perforated Appendix	"
1443 Thompson..	Ruptured Pus Tube.....	"
1464 Hutcheson..	Perforated Appendix	"
1465 Alexander...	Perforated Gastric Ulcer.....	Died 1 hour later
1480 Jones.....	Perforated Appendix.....	Recovered
1501 Hearn.....	Perforated Appendix.....	"

It should be distinctly understood that the subject under discussion is diffuse purulent peritonitis, an inflammation that is general, extending over the whole peritoneal cavity, so that the pouches behind the liver and spleen, pouch in the loin, and the pelvic pouch, are all found filled with sero-pus.

Having made recently, for the discussion of this subject, careful examination of the results in sixty-two operations, I am able to give you some deductions:

The cases were as follows:

	Recovered	Died
Perforation of Appendix	19	22
Perforation of Caecum	1	1
Gangrene of Intestine (Internal Strangulation).....		2
Perforation of Duodenal Ulcer	1	1
Perforation of Gastric Ulcer.....		1
Following Labor.....		1
Following Miscarriage		1
Attempted Abortion.....		2
Sepsis from Ruptured Ectopic Gestation.....	1	1
Gonorrhoel	1	1
Ruptured Pyosalpinx	2	3
Following Dilatation of Virgin Uterus.....		1
	25	37

In discussing this very interesting subject I would be ashamed to present such an appalling record were it not for the redeeming feature shown in the very gratifying results of the last thirty cases.

In the first series of thirty cases there were twenty-six deaths and four recoveries; in the last series of thirty cases there were ten deaths and twenty recoveries. Of the last eleven cases there have been nine recoveries; one of the deaths in this number having been a foregone conclusion before operation was undertaken at the patient's urgent request. The striking difference is due to two factors: First, to improved technique, and second, to earlier interference.

1. The early cases were washed out with gallons of water; "salt solution was not used at this time." I found that with the intestines in the abdomen much rubbing of the viscera was necessary, and this, no doubt, is a mistake. The endothelial cells should not be displaced; the protecting layers of lymph should be left in situ: these layers of lymph are placed in position as nature's guard to prevent rapid absorption through the lymphatics.

Some say that they wash only in cases in which stomach contents or intestinal contents have escaped. Why a case should be differently treated when tubal contents or appendiceal contents have been discharged into the abdominal cavity, I fail to understand. Until different vaccines have been arranged, with which the resisting power of the blood can be raised above the normal, and a condition of immunity produced, we must continue along the old lines of treatment; but we should endeavor to improve these as greatly as possible. Up to the present time I know of no better than (first) gentle, rapid evisceration through a large incision, with closure of the site of the original infection, thorough washing of the abdomen and its contents, and a closure with as much saline solution as the cavity will keep. Secondly, subcutaneous saline injections, as well as large rectal enematas, frequently or continuously administered. Thirdly, the administration of morphine in large doses; and, fourthly, the adoption of a posture that is known to benefit the patient.

It will be noticed that during operation it is difficult to keep the intestines from escaping, and why not let them escape, so long as they are kept warm and not rubbed? The lymph cannot be removed by a stream of water. If two of the inflamed intestines be separated from one another, lymph will be found adhering to each, and their separation does not remove the lymph from either of them. It would be interesting to ascertain the presence or absence of germs in this protecting lymph. If the intestines are sponged, or rubbed with towels, there is a danger that the lymph may be removed, and the endothelial

cells may be interfered with. I use no sponges in these cases; after the abdominal cavity has been closed, the fluid remaining becomes sterile. There is a condition frequently met with, and particularly in the pelvis, formerly called cystic peritonitis. This is nothing more than the condition left after a severe attack of peritonitis, where recovery takes place without operation; fluid is poured out, the lymphatic stomata are closed, and the fluid thus remains encysted. It will remain in this condition for years, and is undoubtedly sterile, as can be demonstrated at a subsequent operation.

At one of the meetings of the American Association of Obstetricians and Gynecologists, Dr. Howitt, of Guelph, read a paper, and there advocated evisceration for the purpose of locating any obscure intestinal obstruction. He stated that this was not accompanied by shock so long as the intestines were kept bathed with warm saline solution, and were not allowed to become chilled. It is difficult to keep them from escaping, and it is certainly impossible to wash as thoroughly when they are below the abdominal parietes as when they have been allowed to escape. Pockets that would otherwise evade the cleansing stream are by means of evisceration broken up and cleansed. Two streams of warm saline solution can be used; the one attached to a medium-sized Tait's Ovariotomy Trocar for internal use, and the other to a form of spraying nozzle for external use, that will distribute the fluid evenly and without too much force. The intra-abdominal stream should be made to cleanse the post splenic, post hepatic, the two iliac and the pelvic pouches. One need not consider the condition of the pulse under the circumstances; it is generally rapid, but the washing should be carried on until the operator is thoroughly satisfied that the viscera have been cleansed, that the abdominal cavity has been cleansed, and then the viscera are returned; the abdomen is left full of saline solution, and the wound is closed without drainage. I use no posture for the patient and no drain for the peritoneal cavity. I long since concluded that drainage under such circumstances did not drain for longer than about thirty-six hours; that a very small quantity of fluid, comparatively speaking, was removed by drainage; that there was an added element of danger owing to the fact that this large serous sack was left open to the danger of added sepsis from without. In one case I drained from each loin; the patient recovered, although there was scarcely any discharge from either the central incision in front, from the cul-de-sac of Douglas, or from the wounds in the loin.

I have not drained since, except in the case of 1,465, when the patient was practically dying from the effects of the hydrochloric acid that had been escaping from a large perforation in the stomach for hours before I saw him, and the operation was only undertaken at his request. Even in the case, No. 1,443 (ruptured pus tube), no drainage of any kind was used and the wounds were completely closed. Very soon after a drainage tube is placed, adhesions take place, the main peritoneal sac is shut off, and we are accomplishing nothing, except the possible contamination of a small quantity of fluid at the end of a small pouch. Drainage should be resorted to if we are unable to close off the original source of infection, but if that has once been accomplished no drains should be left and the wounds should be closed. Such wounds often begin to open by an ulceration of the sutures and a gaping of the skin; they may open even down to the intestines themselves, and when they do there is but little drainage of fluid; the peritoneal covering of the bowel looks dryish and red. This reopening of the wound shows the virulence of the poison that has been washed from below over the raw surface.

I am satisfied that the salt has a very beneficial effect. What I endeavor to do is to put the intestines, after they have been thoroughly washed, into a weak pickle. At the same time an effort should be made to load the blood with salt solution; this can be accomplished with submammary or subcutaneous normal saline, and of late it seems to have become fashionable to use the rectum and colon as a vehicle for carrying this material. I tried, with the assistance of others, intravenous injections of saline solution, but after one or two sudden deaths occurred we discarded this method. The blood and urine should be tested to determine whether there are any definite changes in the solid constituents. We have not had this done, as we have not a physiological chemist connected with our hospitals. The submammary injections should be carefully administered so as to prevent any necrosis of tissue; every precaution should be used to prevent sepsis after these injections. On certain occasions we have left the needles *in situ* with a clamp placed on the rubber tubing beyond the Y, so that the nurse could renew the solution from time to time as it disappeared from under the breasts into the circulation.

2. Earlier interference. Diffuse purulent peritonitis is now recognized more readily than it was a few years ago, and as a consequence the surgeon is called earlier, and owing to the education of the public, is allowed to do what is necessary

without delay. Formerly people said, "Wait till to-morrow." Now they say, "Why not attend to this at once?" We hope that the time may arrive when there will be very few cases of diffuse purulent peritonitis, particularly from perforation of the appendix. However, such cases will be met with from time to time, and must be treated accordingly. When once the patient has become greatly distended, and there are signs of impending early dissolution, it is not wise to operate. We must see these patients before this period is reached.

From perforation of the appendix, in my list, twenty-two died, nineteen recovered only after a terrible struggle, and every one of these might have been saved by early operation. And, then, in this list those cases of perforation without diffuse purulent peritonitis that lost their lives from profound sepsis are not included. We see from scanning the list that perforation of the appendix caused diffuse purulent peritonitis in forty-one cases, and that there were only twenty cases from all the other causes combined.

One of the most unfortunate cases dealt with was No. 374. A young woman had submitted to a dilatation of the uterus for the relief of dysmenorrhea. Pain set in, and when I saw her she was very much distended and in a desperate condition. Notwithstanding what I thought at that time to be a thorough washing and drainage, she succumbed.

A large incision is essential in all cases.

Now, just a word, as to the replacing of the intestines after washing has been carried out. Some may think that this is difficult. It can be easily accomplished if the assistant, turning the palms of the hands outwards, grasps the two sides of the incision, and lifts up as if he intended to lift the patient off the table. The abdominal parietes are thus elevated and the intestines are readily replaced by the operator.

Must a surgeon be brave to close such an abdomen? I had that feeling at first, and closed my first case with fear and trembling. Many comments were made by those who saw it done, but the patient recovered.

In a recent discussion of this subject, after Dr. J. B. Murphy, of Chicago, had read a paper on the treatment of diffuse purulent peritonitis, I gave the results of my experience, as prepared for, but not given, at the meeting of the British Medical Association. It seemed odd that we should both obtain such a marked improvement in our statistics by two diametrically opposed methods of procedure. Murphy stated that he adopted a plan whereby he first relieved pressure

by incision; secondly, established drainage without washing; thirdly, maintained drainage by posture; and, fourthly, washed the blood by intrarectal injections of salt solution. It is difficult to understand why this difference should exist. Let us for a moment compare the two methods of treatment. We both make an incision and close off the opening through which the septic condition has been originally established. He establishes drainage, endeavoring to drain off the intraperitoneal fluid without washing or sponging the cavity. I wash most thoroughly every atom of septic material that can be removed without using a very forcible stream of salt solution, and instead of draining, close the cavity and leave it full of salt solution. He places the patient in Fowler's position, with the chest elevated, the pelvis lowered, to drain away the poisons from the upper or diaphragmatic zone. I keep the patient lying in a recumbent position, so that the heart may be given as little as possible to do in its embarrassed and enfeebled condition. We both endeavor to wash the blood with salt solution, whether this be accomplished through the subcutaneous tissue or the intestinal tract. Several of my friends have been adopting this method of evisceration, washing and closure of the wound, leaving the abdominal cavity full of saline solution, with good results.

Some years ago I endeavored to explain to myself the *rationale* of the treatment adopted by Alonzo Clark. I found that on post-mortem examination of patients dying from an over-dose of opium, it had been discovered that there were many congested patches, well marked and distinct, studding the peritoneum. I believe that this indicates that large doses of opium delay absorption from the peritoneal cavity, and that it was owing to this fact that Alonzo Clark obtained such good results. If we can delay absorption until a certain condition of immunity to the toxines is produced, we are able to tide the patient over the critical period and save life.

FAUCIAL TONSILS—ABNORMAL CONDITIONS AND TREATMENT.*

By JOHN HUNTER, M.B.

In medicine as in war it is the results that attract attention rather than the slower processes that lead up to them. In war the tidings of victory or defeat are heralded world-wide whereas but little interest is taken in the details that assured the victory or the neglect of which courted defeat. With our patients we are very anxious to ascertain the morbid conditions present, but are we not likely to be far less zealous in endeavoring to seek out other possible sources of infection that may be slowly undermining health. How many thousand prescriptions have been written for mixtures to relieve dyspepsia, or cough, when a careful examination of the upper portion of the digestive or respiratory tracts would have revealed the most potent etiological factors in producing the disturbance. A young lady brought to her physician a large handful of prescriptions given for the relief of a spasmodic cough by men of repute. The detection and removal of a small septal spur rendered immediate and permanent relief. It might not be an easy task to prove that a diseased tonsil was the most potent factor in producing pulmonary or gastro-intestinal disturbance, or a mild form of general septicæmia, yet no one could question the undesirability of having a more or less continuous discharge from a septic focus in a submerged tonsil.

When a patient comes with a breath laden with the odor peculiar to septic material—a hyperæmic condition of faucial pharyngeal, or laryngeal structures, cough, or gastro-intestinal disturbance, the physician will quite often find himself well repaid, if with a good light, a retractor for the anterior pillars, and a probe he searches diligently for disease, especially in the crypts or lacunæ of a submerged or atrophied tonsil. The more deeply the tonsil is hidden out of sight the more suspicious the physician should be of its character, for like venereal disease the septic tonsil may be found in the most sequestered retreat. A young man came to his physician to seek relief from an attack of acute specific urethritis. He scornfully resented the imputation of having associated with anything "common or unclean," and asserted that his only amorous indulgences had been with one who was a most zealous church worker, and

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therefore beyond reproach. The microscope relentlessly revealed the gonococcus despite the origin from an irreproachable source. The fact that a submerged tonsil is unobtrusive is not positive proof of its innocuous character.

The purport of these post graduate clinics of the Western Hospital being of a practical rather than of a didactic character, I can perhaps more briefly and profitably discuss my subject under the following heads:

I. Normal conditions. II. Abnormal conditions. III. Treatment of latter.

Normal Conditions.

The faucial tonsils, two in number, right and left, situated between the palato-glossus and palato-pharyngeus muscles, known as the anterior and posterior pillars of the fauces, are practically enlarged lymph nodes. The tonsil has not afferent vessels like the regular lymph gland or node, but the fact remains, that the fluids of the mouth, laden with other material such as inorganic matter or micro-organisms find their way through the tonsils into their efferent vessels, and are conveyed by these through the deep cervical lymphaties into the general circulation. The normal tonsil varies in size. It is somewhat almond-shaped, about an inch long by half an inch in width and depth. The outer surface rests on the superior constrictor muscle, which separates it from the ascending pharyngeal and the internal carotid arteries. The lateral surfaces are in contact with the pillars of the fauces, and are often found to be quite adherent to these. The inner or free surface presents from 12 to 15 little depressions known as crypts or lacunæ which extend the full depth of the tonsil and give the sponge-like appearance. If the walls of one of these crypts be examined several minute openings may be detected. These are the outlets of little follicles whose secretion is poured into the crypts, and when abundant appears on the surface of the tonsil as an exudate. The inner surface of the tonsil and also the walls of the crypts and follicles are lined with mucous membrane. A threefold function is assigned to this membrane. (I.) It permits the leucocytes to escape into the follicles and crypts, and (II.) allows fluids, inorganic material, and some microbes to pass into the lymphatic spaces found in the tonsil. (III.) When healthy it acts as a barrier against the entrance of micro-organisms. Other functions are ascribed to the tonsil,—physical in keeping pillars apart, the furnishing of a lubricant for the easier passage of the food, and probably a so-called internal secretion.

Abnormal Conditions.

The location of the tonsils, and the easy access to their crypts and follicles, make them very vulnerable points of attacks for pyogenic and other forms of infectious bacterial. The mucous membrane especially suffers, and the crypts and deeper structures are affected more or less severely in all the infectious diseases of childhood. The exudate thrown out on the surface of the tonsil or embedded in the superficial tissues, varies in quantity and composition. In a mild form of tonsillitis the tonsil is swollen, hyperæmic and covered more or less densely with an albuminous exudate. A more virulent source of infection might involve the crypts or lacunæ, and follicles, and produce ulcerative tonsillitis. These ulcers may vary much in number and size. The specific micro-organism of diphtheria gives rise to a thick fibrinous exudate. When infection is due to pyogenic bacteria, the lymphoid tissues of the tonsil may become involved and the suppurative process, known as quinsy, produced or the infection may spread to neighboring tissues, and cause one or more abscesses to form, the purulent contents of which may be evacuated into the mouth or pharynx, or burrow deeply along the structures of the neck, opening externally or into the larynx, œsophagus or chest. Such abscesses sometimes prove rapidly fatal.

In childhood and adolescence any cause of irritation,—nutritive, mechanical, vascular or neurotic, may give rise to a proliferation of either or both of the tissues of the tonsil,—lymphoid or fibrous, and produce hypertrophy. The density of the enlarged tonsil will depend on which tissue is most involved hence the softer and harder varieties. *In childhood the lymph cells* are the main elements in the hypertrophy, hence the softer consistency in this period of life.

The tonsils, like any other structure in the body, may be the seat of benign or malignant growths, but a description of these belongs rather to the domain of general surgery. I shall therefore devote the very limited time at my disposal to a description of the submerged, compressed, or atrophied tonsil. This condition of the tonsil is almost invariably overlooked by the general practitioner, and occasionally even by the specialist, in patients in adult life. To be able to make a diagnosis in these cases, three or four things are essential. A good light, some form of retractor, a hook or blunt knife to break down the adhesions between pillars and tonsils, and different sized probes for penetrating the occluded mouths of the crypts. When the submerged tonsil, has been fully exposed for examination, the following con-

ditions may be found. The tissues may be quite normal, but present a condition somewhat analogous to a compressed sponge. There is generally more or less atrophy of the structures, and pyogenic or other infective bacteria may become occluded in the crypts and follicles and give rise to chronic suppurative processes. The discharge from these septic tanks may be continuos or intermittent, and can readily be conveyed by the saliva and food to the stomach. If it be in sufficient quantity or of a virulent type it may readily give rise to various forms of gastro-intestinal disturbance and to septicæmia or chemical changes may take place, in the purulent discharge and noxious gases form. These may be conveyed to the lungs and there set up irritation. The infectious material may be carried from a diseased submerged tonsil by its efferent lymphatic vessels into the general vascular circulation, and according to its character, cause tuberculosis, rheumatism, pneumonia, pleurisy, septic arthritis or pericarditis, for experiments prove most conclusively that inorganic material or infectious bacteria can, when the mucous membrane of the crypts is diseased, pass readily from the tonsil through the cervical and thoracic lymphatics to the heart and lungs.

Treatment of Morbid Conditions.

Normal tonsils are the legacy of heredity, and their preservation in health a question of hygiene and nutrition. The location, structure, and functions of the tonsils make them quite vulnerable to contaminated food and air, and to sudden changes of temperature. Pathological products from the stomach and lungs may infect them. The morbid conditions of the tonsils produced by the exanthematous diseases incident to childhood, by typhoid or other infection, are generally limited to the more superfical structures, mucous and sub-mucous tissues, crypts, etc., and are best relieved by hygienic and sanitory measures, restricted diet, purgatives, and antiseptic gargles and sprays. In case of ulceration, the ulcers may be cleansed and cauterized. Specific infection from diphtheria, syphilis or tuberculosis, requires in addition to the above measures antitoxin, mercurials, iodides or germicides as the case may be. The opsonic theory may be tested in these cases. Where the pyogenic bacteria have penetrated more deeply and produced an abscess in the tonsil (quinsy), or in the surrounding tissues, the suppurative process may be hastened by hot poultices applied externally and relief obtained by an early and free incision. When there is difficulty in locating the site for an incision or in getting the patient's consent to make one, the pain can be relieved, and,

if necessary, the heart's action improved by a hypodermic injection of morphine and strychnia. In many cases the relief that follows this simple measure is most gratifying to both patient and physician. All morbid products emanating from diseased tonsils should be destroyed.

In hypertrophy of the tonsils, relief is to be obtained by surgical measures. While atrophy may take place, yet the pernicious effects on mental and physical development caused by enlarged tonsils and adenoids obstructing the free passage of a sufficient supply of air to the lungs, render the early removal of these imperative. In childhood as the enlargement is chiefly due to proliferation of the lymph elements, the consistency is less firm and the guillotine answers about all purposes. As adenoids are a frequent complication and require removal, an anaesthetic—preferably nitrous oxide or ether—should be used. Any adhesions should be broken up, lest the pillars be caught in the ring of the instrument and injured. Engage the lower edge of the tonsil first and as the guillotine is slightly raised and pressed against the pillars, the rest of the tonsil protrudes through the ring. The fork is then pushed forward in order to draw the tonsil still further through the ring, and to hold it in position while the blade is drawn forward. Hemorrhage may be quite profuse at first, but generally ceases in a short time. If not pressure, ice externally or styptics can be applied. If not controlled by these measures, mattress or other forms of suture may be used to secure the stump. When both tonsils have to be removed the hemorrhage will be very much lessened by the use of the wire snare for removal of the first one. When the wire is drawn through slowly the stump remains quite dry. When the hyprotrophy is due to an increase in the fibrous tissue the density is much greater in these cases, and on account of the liability to hemorrhage from the ends of the blood vessels remaining open, the use of the snare is much the safer method. Adhesions should be broken up to allow the wire—an 8 or 10 piano wire—to engage the base of the tonsil. Care must be taken that the loop of the wire be not left too long to come entirely within the canula of the snare, otherwise a portion of tissue remains uncut, and it is painful to the patient to have to endure the delay, and annoying to the physician to have to use a knife or scissors. Semi-solid food may be taken at first, and gargles and spray used after the 2nd day. Rest in bed for a day or two, and a very quiet life should be advised for a week or so.

The treatment of benign or malignant tumors consists in removal by snare or complete eradication by cautery or other surgical measures that need not be detailed here.

We come now to discuss briefly the treatment of the submerged morbid tonsil. Different methods are in vogue, topical applications such as tincture of iodine or some of the silver salts, *e.g.*, Argyrol 20-40 grs. to the ounce, or destruction of diseased tissue by cautery. Complete enucleation of the tonsil is by far the most efficient measure. The adhesions to the faucial pillars are broken down by the aid of a retractor and hook, or blunt edged knife with blade placed at a suitable angle to the handle. The tonsil may be seized by a tenaculum and drawn inward, while the snare is adjusted around its base, or it may be removed piece-meal by a tonsil punch, or enucleated by the finger. Whatever method of procedure suggests itself to the surgeon, the object to be aimed at is the complete removal of all the tonsil tissue whether in a normal or abnormal condition. If any portion of the tonsil be left, the crypts and follicles may become infected, and a septic focus again established. The surgeon must remember that the tonsil is an encapsulated gland like the kidney or ovary, and its removal in its capsule, the object to be kept in view in treating submerged morbid tonsils. At the risk of some repetition of what has already been said, if the tonsil be seized by a double tenaculum, one prong engaging the upper end and the other the lower one, and drawn inward and forward, the adhesions broken up and the coil applied at the base, the tonsil with its entire capsule may be removed. The little fold known as the plica-tonsillaris extending from the anterior pillar over the lower end of the tonsil should be divided so as to prevent a pocket being formed in the lower portion of the cavity from which the diseased tonsil has been removed. The fossa-tonsillaris, the little cavity above the tonsil, is often diseased. It should be curetted and brushed with a disinfectant.

CLINICAL CASES:—1. GALL-STONES. 2. ABSENCE OF LIVER DULNESS. 3. CARCINOMATA OF LIVER.

By EVERETT D. HICKS, Port Dover Sanatorium.

Case I.—Patient.—Male aet. 69:—Has been complaining of pain in stomach at long intervals, for two years. About January 1st, 1906, he had a sharp attack of abdominal colic, pain being referred to the right shoulder and to the epigastrium—jaundice succeeded the pain and the urine darkened markedly. Examination in the early part of January elicited no gall-bladder tenderness nor any other tender spot. The liver dulness was decreased. The patient seemed otherwise in good health but was losing flesh. The pain occurred at more frequent intervals in spite of all kinds of medical treatment. On February 26th, I took an X-Ray photograph of the liver region. The negative showed a thickening in the gall-bladder region. I advised operation. The night following the patient was seized with severe pain, a very sharp rigor and sweat. When I arrived two hours later he was unconscious and in collapse, resp. ten per minute, pulse forty, feeble, intermittent and fluttering. Under stimulation he pulled up somewhat, recovering consciousness about five hours later. From this time he had an irregular fever, never high, 100 to 101½, pulse 96 to 115. For a few days no more pains occurred and we hoped that the gall-stone had passed safely through. Five days after this attack the pain came back and gradually increased in severity for a week. At the end of this time examination showed the liver dulness absolutely absent, no marked tenderness, some jaundice and a very dry, coated tongue. The patient was drowsy and in a semi-typhoid state. On March 11th, assisted by Dr. Stanton of Simcoe, I operated, making an incision along the margin of the ribs. The colon and omentum were drawn high up so as to completely cover the liver anteriorly and this was the cause of the tympanitic note. On dissecting off the colon we found the liver drawn down towards the back, its upper surface looking forward. By careful dissection we liberated it and reached the gall-bladder far back under the free margin. It was gangrenous. On recognizing the condition we walled off the abscess with gauze and after puncturing the gall-bladder mopped up the pus, probably a pint. No gall-stones could be felt. Time of operation forty minutes. Patient was a little more jaundiced the following day, due no doubt to absorption of bile by peritoneum and omentum. The jaundice cleared up entirely and

pulse and temperature dropped to normal on the second day. On the third day the temperature was 96, pulse 84, but both were normal next day. The wound did well, the fistulous tract being well walled off. Bile alone escaped the last three days. The patient lived ten days, death being due to simple weakening of the vital powers. A review of this case after operation does not alter the gall-stone diagnosis. The puzzling feature was the abscence of liver dulness and I cannot find in any work at my command a similar case with this condition of affairs as the cause. In a recent *Lancet* (January 20th, 1906), Mr. Moynihan explains clearly the other features of a non-malignant chronic case such as this, the loss of weight, the cirrhosis, the intermittent jaundice.

In contra-distinction to Case I. is Case II., seen last summer in consultation. Patient aet. 75, jaundiced six weeks, no pain, no increase or decrease of liver dulness, no nodules. Bowels very constipated, clay-colored stools, etc. Jaundice of a deep grade gradually growing deeper. Diagnosis of probable carcinoma made. Post-mortem a month later showed carcinoma involving the bile ducts first by position and later by extension.

Case III.—Male, aet. 73—seen in consultation summer, 1905. Had an indefinite distress, not a pain, in the epigastric region, loss of appetite and loss of weight, stomach contents normal, liver a little enlarged. Diagnosis of carcinoma of the liver made from the general appearance of the patient. Two or three months later a nodule could be felt. Patient lived eight months but was never at any time in pain nor at all jaundiced. He gradually lost strength and weight. Post-mortem showed one large carcinoma of the liver about the size of a small fist. No secondary nodules were found and no adhesions were present.

Progress of Medical Science.

MEDICINE.

IN CHARGE OF W. H. B. AIKINS, H. J. HAMILTON, C. J. COPP AND F. A. CLARKSON.

Methods of Treating Exophthalmic Goiter.

The following results were obtained by Paul Sainton in the treatment of exophthalmic goiter with thyroid serum, or antithyroidin: In three patients the symptoms disappeared entirely; three others were greatly improved, and in two still under treatment, the symptoms are disappearing. From 2.5 to 3 Gm. (38 to 45 min.) in water or wine were administered every second day for three weeks or a month. The serum was then discontinued for one week, and then given again for one month. The pulse soon became less frequent, and the thyroid tumor, exophthalmos and tremos disappeared progressively, but much later.

The duration of the treatment varies between six months and one year. With favorable cases, the periods for discontinuing treatment can be progressively increased. The year following the cure it is advisable to prescribe one or two courses of treatment of fifteen days each.

Good results have been obtained by a number of investigators with the milk of thyroidectomized goats, but they cannot compare with the results obtained with the serum. The dried meat powder prepared from the animals at the suggestion of Moebius has been found worthless. Similarly, the dried serum is less active than the fresh.—*Rev. de Therap. med.-chirurg.*

Salt-Free Treatment of Epilepsy.

Alfred Gordon, in New York *Medical Journal* of October 20th, discusses the result of treatment of epilepsy, with special reference to the effect of withdrawing salt from the dietary. According to Claude and Villaret, introduction of large doses of sodium chloride in an organism insufficiently fed, produces a considerable increase of elimination; when the salt is removed from the régime the sodium chloride of the organism continues to be eliminated, phosphoric acid is increased, and urea diminishes in quantity. On the other hand, Gaillard and

Paisseau prove that the retention of urea in the tissues can be accomplished *only* by chloride of sodium, that substances not combined with albuminoids, can exist only by the aid of the salt, which attracts the water necessary for their dilution. When the organism is deprived of its alimentary salt, it utilizes the reserve molecules of the chlorides, which are promptly eliminated by the kidneys. Thus it follows that the deprivation of salt leads to a discharge of material not combined with albuminoid substance, as urea, while phosphorus, intimately connected with nuclei of cells, remains undisturbed, the role that sodium chloride plays in osmosis is thus made evident. In a series of 37 cases of epilepsy, Gordon experimented with the above ideas in view. He concludes that the deprivation of alimentary salt has a favorable effect on the convulsive seizures, as also have strict attention to dietetic and hygienic rules, but if the bromide treatment is carried on in conjunction with suppression of the daily allowance of salt, the results obtained are considerably more satisfactory. That the elimination of such products as urea is facilitated by the withdrawal of salt from the diet (in consequence of increased action on the part of the residual chloride molecules of the organism) is, according to Gordon's personal views, corroborative of the toxic pathogenesis of epilepsy.

In several uncomplicated cases, where the seizures occurred periodically, he administered methylene blue a few hours before the convulsions were expected. The urine passed involuntarily during the fits was in in each case clear, but the bluish tinge commenced shortly after the seizures; this fact is in itself suggestive of an auto-intoxication of the organism culminating in a convulsion. He concludes both theoretically, and from his practical experiments, that the results of a course of bromides in epileptics are influenced by the withdrawal of the daily allowance of alimentary salt.

Gastric Ulcer.

The Leuhartz treatment of gastric ulcer is discussed by Habermann in the *Medical Record* of June. In brief it is as follows: Absolute rest in bed for at least four weeks, almost continuous use of ice-bag over epigastrium for a fortnight; administration of 200 to 300 c.c of iced milk, two to four beaten eggs (preferably beaten whole with a little wine and sugar), in teaspoonful doses, well chilled; in addition 2.0 gms. of bismuth subnitrate at a dose for the first ten days.

This treatment "binds" the supersecrative acid, relieves

the pain, causes the vomiting to cease and reinforces the general condition of the patient.

Coryza.

Lacroix (*Concours Medical Practitioner,* July, 1906), recommends the use of formic aldehyde (formal, 40 per cent.), as an inhalation in acute rhinitis. One and a half drachms of formic aldehyde are placed in a wide mouthed bottle, and the patient inspires gently, as if using a smelling bottle. This is repeated about once every hour for a few minutes at a time; the patient stopping for a moment or two whenever the tingling sensation becomes painful. It is stated to give great relief.

Treatment of Epilepsy.

Dr. W. Runge, after fully discussing the various treatments of epilepsy heretofore in vogue and also those at present, claims that the bromides are more widely used than any other drugs at the present time. The methods of administration and the preparations used are very numerous. Most authors consider potassium bromide to be the most effective preparation, or, where this cannot be given, sodium bromide, ammonium bromide, or lithium bromatum. Strontium bromide has been much praised of late, on the ground that the organism is more tolerant of it than of potassium bromide, and that the effect is equally great. The great point in the administration of bromide is that it should be continued over a long enough period. The bromide treatment still has its opponents, the opposition being based either on scepticism as to the results obtained, or on the fear of bromism. Fürstner and Binswanger believe that the fear of bromism is exaggerated, and that careful administration of the drug will, as a rule, prevent its appearance. To counteract ill-effects on the state of nutrition, tonics, combined with hydrotherapy, and careful diet are recommended; for the indigestion, mineral waters and much milk; to increase the excretion of urine, diuretics; where the heart is affected, the avoidance of potassium bromide; and in severe cases, a very cautious administration of bromides, or even relinquishing the treatment; for the salivaiton, tannin and herba hyoscyami; for acne, arsenic; and in addition, baths, washing the body with fluid and potash soaps, and much muscular work. Binswanger answers the objection that bromides are in danger of doing psychical injury by the statement that such injury as the result of bromides is temporary, but that frequent fits lead to a permanent defect of

intelligence. In order to avoid bromism, new combinations of bromium have been introduced—as, for example, bromipin, an organic compound of bromium with oil of sesame; bromalin, a compound of bromine and formaldehyde derivatives; bromokoll, of bromine with gelatine and tannin. Lorenz treated thirty-four epileptics with bromipin, and found that there was no injury to the general condition, no loss of appetite, and the patients usually increased in weight; in five an acne, which had appeared during a previous treatment with bromides, disappeared; and in sixteen there was considerable improvement. It is also stated that such advantages as these are not the main advantage, which is that when the bromipin is used more bromine is absorbed into the organism, and a better effect therefore produced. Toulouse and Richet introduced in 1899 the use of a diet poor in sodium chloride as a means of rendering the bromine given more effective; the treatment being based upon the fact that bromine in the organism takes the place of the chlorine, and a diet which contains as little sodium chloride as possible will render the patient more sensitive to bromine. A disadvantage of this method is that the patient quickly tires of the diet without salt, and to remedy this defect Balint introduced a new method, namely, of using sodium bromide in bread instead of common salt, and of thus retaining the ordinary salty taste. His diet was as follows: 1-2 to one litre of milk, 40 to 50 gr. of butter, 3 eggs, 300 to 400 grams of bread and fruit; this diet contained 2 grams of common salt and 3 grams of bromine salt. He treated on these lines 28 patients for from 35 to 40 days; in 9 recent cases and in 15 out of 19 inveterate cases the fits ceased; in the remaining four cases there was improvement, and in no case was bromism observed. The fits soon returned at the end of the cure, but the effect lasted longer the longer the diet was continued. To meet opponents who believed the result to be merely due to the unirritating diet, Balint tried the same diet without the substitution of sodium bromide for sodium chloride, and found that it had no effect on the frequency of the fits. Other combinations of bromine have been recommended. Gowers advised the combination of bromine with belladonna, digitalis, and iron. Breach gives strychnine with bromine, etc. Bechterew's method is much followed—that of giving the bromides in combination with infusum adonis vernalis. In some of his cases Bechterew gave codeina with bromides, and found that the combination was sometimes effective where bromides alone had failed.

Flechsig's combined use of opium and bromium is widely used. It is only suitable for patients in an institution where its effect can be carefully watched, but in spite of the danger of severe bromism it is warmly recommended by many people.—*Zentralbl. f. die gesamte Therapie.—Medical Bulletin.*

PEDIATRICS.

IN CHARGE OF ALLEN BAINES AND W. J. GREIG.

Treatment of Diffuse and General Peritonitis. Dr. John H. Gibbons. (Philadelphia Pediatric Society, in June, 1906, Archives.)

There are three methods of treating general peritonitis: (1) non-operative; (2) opening the abdomen with irrigation; (3) opening the abdomen with simple drainage. The third method is the one strongly endorsed. He quoted Murphy, who had reported 29 cases treated in this way with one death, and that occurred from pneumonia.

The treatment consists in making a small opening in the abdomen, closing the perforation in the appendix, or removing it, introducing a large drainage tube into the pelvis, placing the patient into a semi-sitting position, and the administration of a quart of salt solution, every two hours, by the rectum.

His claim is that simply opening the abdomen relieves the pressure under which the pus rests, and this is all that is necessary to stop absorption from a pus cavity in any part of the body. No more manipulation than is absolutely necessary to remove the cause and drain the abdomen.

Children responded better to treatment in these cases than do adults. The use of saline laxatives was strongly condemned, on the ground that it churned up the pus around the peritoneum.

Dr. Deaver, in discussing the paper, fully agreed with the writer. In referring to the folly of giving laxatives in appendicitis, he mentioned a case operated on by him, and where calomel and a saline had been given. When the abdomen was opened, feacal matter was seen to be flowing freely through a perforated appendix.

Stricture of the Oesophagus with Gastrostomy. (Dr. Jopson, at the Philadelphia Ped. Society, reported in the Archives of Pediatrics.)

Six years ago he presented before the Society a child four years old, on whom he had performed gastrostomy for œsophageal

stricture resulting from swallowing lye. The operation was successful and she went home with a fistula, through which she received all her nourishment. He saw her again in December, 1905, and her condition then was as follows: The œsophagus was absolutely impermeable to food and liquids, both of which were administered through the gastric fistula. She is in good health, and her development normal for a child of her age. The operation was the old-fashioned gastrostomy in two stages, and she formerly wore a belt with an inflated rubber pad over the fistulous opening to prevent leakage, which is usually an annoying feature in these cases. The modern operations obviate this more or less perfectly. In this case she is not now annoyed in this manner. She wears continually a large rubber tube in the opening, which is dilated over its former size. A piece of gauze is tied around the tube close to the abdominal wall to prevent it slipping in too far. This tube is carried up under the clothing to the patient's neck, bent on itself when not in use, and tried with a string. She takes into her stomach a variety of liquid foods, including many eggs, and also gratifies her appetite and varies her tastes by masticating meats and other solid foods, which are afterwards expectorated and not ingested. The manner of feeding is decidedly interesting, perhaps unique, and he had an opportunity of seeing her consume a glass of milk. She takes everything into her mouth before passing it into the fistula. When drinking milk, she takes about three swallows, the milk passing into the œsophagus as far as the stricture. This quantity she then injects into the tube by placing the tube in her mouth and regurgitating into it. By three or four of these manœuvres she empties an ordinary glass of milk with much gusto and apparent satisfaction. It was suggested to the father that the stricture might be relieved by a retrograde operation from the stomach. The father stated that he would allow the girl to attain years of discretion, and then she could judge for herself.

Strangulated Inguinal Hernia in Infants. (Nassau & Mutschler, at the Philadelphia Ped. Society, in the June Archives.)

An infant five weeks old, with a hernia strangulated for thirty hours. Operation under chloroform. The sac tied off high up. Perfect recovery.

A second case in a child thirty-four days old. Operation also performed with a good result.

In discussing these cases, Drs. Deaver and Wharton both stated that strangulation was very rare in infants. Hernia was common, but strangulation not so under 10 or 12 years of age.

Use of Citrate of Soda in Infant Feeding. Dr. Shaw, Albany, N.Y. Archives of Pediatrics, March, 1906.)

The reader of the paper first referred to previous papers by Wright, Poynton, Varot and others. He next related a series of laboratory and clinical experiments performed by himself. His laboratory experiments showed that when citrate of soda was added to milk in the strength of 1 grain to the ounce, the milk curdled in fine particles, instead of in a solid mass.

He then reported 18 clinical cases, the majority of which were suffering from gastro-intestinal indigestion. Of these 18 cases, 1 died, 4 showed losses, and 17 improved.

The preparation of the food was very simple. No attempt was made at percentage modification. The milk was diluted in proportions varying between 3 parts of water to 1 of milk, and 3 parts of milk to 1 of water. The milk was neither pasteurized nor sterilized. The citrate of soda was kept in a solution of 10 grains to the ounce, and this was added to the milk in the proportion of 1 grain to the ounce of milk. Where there was habitual vomiting this was increased to 3 grains to the ounce.

Further Observations of Citrate of Soda. Dr. J. W. Van Derslice, of Chicago. (Archives of Pediatrics, August, 1906.)

He had used citrate of soda for two years, and now reported 9 cases, all of whom did well on the milk prepared as described.

Both of these papers were severely criticized by several speakers—some approving of the method, others strongly disapproving. One doctor stated that he had been unsuccessful in its use. Dr. Caillé stated that the less interference there was with the chemical constitution of milk, the better.

It is evident that further trials will be necessary before a definite conclusion, either favorable or otherwise, can be reached.

W. J. G.

Editorials.

A TRUNK SEWER FOR TORONTO.

It seems that at last the citizens of Toronto realize the chief need of the city is a trunk sewer. One of our Controllers recently expressed his surprise that the city had not been indicted long ago for maintaining a nuisance. Three methods are proposed for the disposal of the city sewage, but each one of them involves the building of a trunk sewer nine or ten miles in length.

The first proposal is to pour the sewage, after screening it, into the lake. The City Engineer and some others favor this method, and give a positive opinion that such a procedure cannot possibly contaminate the city's water supply. On the other hand, Dr. Sheard, the Medical Health Officer, who is also chairman of the Provincial Board of Health, all the other members of the Board of Health, the late Board of Health which went out of office a few months ago, and many others are decidedly opposed to such a method.

The second method proposed is to pass the sewage through septic tanks and then pump it over certain farm lands. The City Engineer suggested at one time as an alternative proposition in the treatment of the sewage, to pump it upon 600 acres of land north of Danforth Avenue. It has recently been decided, however, that this plan would not prove satisfactory.

The third proposition is to pass the sewage through septic tanks and thence into bacteria beds. The establishment of such tanks and beds would add materially to the cost.

It has been decided to go on with the building of the main sewer which is likely to occupy not less than three years. It seems not improbable that by that time there will be improvements as to methods in the treatment of sewage, and the Council can then select the method deemed best.

At the meeting of the Provincial Board of Health held Nov. 15th, the general plan of the sewer itself as explained by the Engineer was approved of, while the question of the outfall and the sewage disposal system was allowed to stand for consideration at a future time.

HOSPITAL ORGANIZATION.

We have heard much during the last couple of years respecting the reorganization of the Toronto General Hospital, both as to general management and the personnel of the staff. One of the main features now under consideration is the conduct of the different departments. The question of hospital organization has become a very complex one in recent years.

We find on the one hand a great Institution like Johns Hopkins, of Baltimore, in which each department is under the control of one man who receives a large salary, devotes a large portion of his time to the hospital, but is allowed to do a certain amount of consulting practice. These head positions are open to all the world. Some friends of our Hospital would like to adopt a similar system, and import a certain number of heads from abroad. So far as we can learn, any arrangement of this kind would receive the unanimous and indignant opposition of the profession of Toronto.

We have, on the other hand, great institutions in various countries, but especially Great Britain, where there are a number of seniors in each of such departments as Medicine and Surgery. Some such system would seem to be best suited for hospitals in Canada. If such views prevail there will be no radical changes in that regard at present.

There appears to be almost a consensus of opinion that there should be an age and a time limit as to appointments. It is believed that very definite rules in this regard should be made as to future appointments.

There is some difference of opinion as to methods of appointment. As the relationship between the University Medical Faculty and the Hospital will be very intimate, the Professors of the teaching body should hold the majority of positions on the hospital staff. There should, however, be some representation of physicians and surgeons not connected with the Medical Faculty.

The new Board is unfortunately too large, but we have every reason to believe that its members are anxious to make the Hos-

pital as nearly perfect as possible, and are consumed with a desire to work in the interests of both the public and the profession.

THE UNIVERSITY OF TORONTO.

We are told that the following new buildings are likely to be erected on the grounds of the University of Toronto in the near future: four residence halls for men, a model High School for the faculty of Pedagogy, a new Knox College, a new Trinity College, a building for the Department of Forestry, and an addition to the Gymnasium. It seems not improbable that on account of the great development of the University in various directions many other buildings or additions to buildings will be required within the next twenty-five years. The question of providing sites for these various buildings is rather a serious one. The available space on University grounds is now very limited; in fact, many are of the opinion that even now portions of the grounds are overcrowded.

We find an excellent article on this subject in *The 'Varsity*, Nov. 15th, from which we extract the following: "The Lawn, the Campus, and the Athletic Field are no more than sufficient for athletic activities. The University is not merely a tutorial institution but athletics form an integral and essential part of its activities. The Athletic Field is in every way as important a part of the University equipment as the Convocation Hall, and any attempt to abolish it to use the space for other purposes will evoke strong protest." We may say that we are quite in sympathy with the views herein expressed

THE TREATMENT OF APPENDICITIS.

Certain medical journals in the United States, in speaking of the treatment of appendicitis, refer to what they call Dr. Oschner's Starving Cure of Appendicitis. The physicians of the province of Ontario know fairly well Dr. Oschner's views

on this subject. We do not know whether this distinguished physician claims priority as to this method of treatment or not. He certainly would not if he did not believe that he was the first to recommend the so-called Starvation Cure.

We desire, however, to call attention to the fact that Dr. Palmer Burrows, of Lindsay, Ont., has been paying special attention to the treatment of appendicitis for over twenty years.

At a meeting of the Ontario Medical Association held in Toronto eleven years ago last June, Dr. Burrows used these words: "The measures which I take to mark the *ne plus ultra* in the treatment of appendicitis are as follows: The filling of the bowels by means of the long tube to remove any source of irritation, hypodermic injections of morphine or morphine with atropine, and complete abstinence from food or the taking of it sparingly in order to secure digestive rest."

Similar views have been expressed by Dr. Burrows to many physicians in private conversation, and in medical journals, including the London *Lancet*.

So far as we know, Dr. Burrows is entitled to the claim of originality, so far as this plan of treatment is concerned.

THE GAME OF FOOTBALL.

We find in the November issue of the *Canada Lancet* an interesting editorial on Football Fatalities. The writer recalls examples of six young men of Toronto who came to their death by this game, and goes on to state that the game which caused last year in the United States the death of twenty-eight students, and injured over one thousand more, many of these permanently, should be condemned.

The Toronto *Globe*, of October 13th, expresses the opinion that no man should be allowed to play football who has not first passed a medical examination and been certified as fit for such strenuous exercise. The University authorities hold the same views, and since the sad fatalities to which we referred in our last issue, have enforced the rule that no stu

dent shall play the game until he has been passed by Dr. Goldie or Dr. Mackenzie, the regular appointed examiners.

In connection with such examination, the *Lancet* very aptly remarks that no medical selection can prevent fractured skulls, broken legs, dislocated necks and injuries to the internal organs. As a matter of fact, it is well known that many deaths occur in persons of splendid physique.

It seems unfortunate that the open game of football which is so popular in England, and which is so much less dangerous than the Rugby game, appears to meet with no great favor on this continent. One of the most interesting games of football that we have ever seen was an open game between two teams, one representing Scotland, the other representing England, at which there was an attendance of nearly 100,000. We understand that at a recent game in London there were over 110,000 present.

The writer in the *Lancet* concludes as follows: "In what we have said against football we are not uttering a word against any form of manly, healthful sport. What we are condemning is football as it is played. There is something wrong when the student body are vociferously cheering a game that but yesterday sent the College flag down to half-mast, and the day following may injure for life one or more of the participants. Surely it is within the wit of man to relieve the game of these risks. If this be impossible, and the game must be retained, then let us also have the duel, the gladiator, the bull-fight and the chariot-race at once to complete the cycle."

NOTES.

The University Medical Faculty.

We understand that on Nov. 1st there were enregistered in the medical faculty of the University of Toronto altogether 641 regular students and 70 occasional students, that is, students at the Dental College taking Anatomy.

The following are the numbers in the different years: First year, 188; second year, 145; third year, 156, and fourth year, 152.

St. Michael's Hospital, Toronto.

We are informed that the authorities of St. Michael's Hospital, Toronto, have decided to build large additions to that institution, namely, a large new wing north of the hospital, similar to the Hugh Ryan wing, and a large maternity hospital south of the present premises.

It is also hoped that in the near future the old section of the hospital will be remodelled. When completed the hospital will have three hundred beds.

Queen's University Endowment.

We understand that the work of raising half a million dollars endowment fund of Queen's University, Kingston, is progressing very favorably, and up to the end of October more than half the sum had been subscribed.

Toronto General Hospital.

A committee has been appointed to consider the reorganization of the medical staff of the General Hospital. The committee consists of two representatives from each of the interested parties as follows: Mayor Coatsworth and Ald. Noble, representing the City; Messrs. Byron E. Walker and W. T. White, representing the University of Toronto; Messrs. P. C. Larkin and J. W. Flavelle, the Donors; and Dr. J. O. Orr and Prof. A. B. McCallum the Government.

McGill University has undertaken the task of raising an endowment fund of a million dollars, and it appeals to the public for help. Mr. Robert Reford recently offered to contribute $50,000 on condition that $1,000,000 was raised within a year from citizens, past and present, of Montreal.

The following candidates have been elected by acclamation to the Medical Council of Ontario from the territorial divisions named: Division No. 1, Dr. J. L. Bray, Chatham; 3, Dr. J. MacArthur, London; 4, Dr. J. A. Robertson, Stratford; 6, Dr. Henry, Orangeville; 7, Dr. P. Stuart, Milton; 8, Dr. S.

H. Glasgow, Welland; 10, Dr. E. E. King, Toronto; Dr. H. Bascom, Uxbridge; 13, Dr. S. C. Hillier, Bowmanville; 14, Dr. A. E. MacColl, Belleville; 15, Dr. W. Spankie, Wolfe Island: 16, Dr. J. Lane, Mallorytown; 17, Dr. M. O. Klotz, Ottawa.

A contest between Dr. John Mearns, Woodstock, and Dr. J. H. Carmack, of St. Thomas, will take place in Division No. 2; in No. 5 between Dr. L. Brock, Guelph, and Dr. Vardon, Galt; in No. 9 between Dr. R. Gibson, Sault Ste Marie, and Dr. Aylesworth, Collingwood; in No. 11 between Dr. A. A. Macdonald, Dr. J. S. Hart, and Dr. B. L. Riordan, Toronto.

Vaccination.

A curious and little-known fact regarding the history of vaccination for variola recently came under my notice. It appears that the "Gallas," a dark-skinned African race, of fine physical development, who inhabit the tract of country which lies south of Somaliland and some distance inland from the Indian Ocean, have for centuries practised vaccination as a protection against the deadly epidemics of smallpox which at intervals frequently decimate the natives of the "East Coast." In proof of its efficacy is the fact that the surrounding tribes suffer severely, while among the Gallas epidemics are unknown, and the occasional cases which do occur are of the mildest type, pitting being rarely seen.

That they are a nation of cattle-raisers is of interest, as also is the fact that they occupy an isolated position among their neighbors on account of their fondness for the latter's herds.

The inoculations are made on the side of the nose; beyond this my informant could give me no particulars, as the natives were most reticent regarding the whole matter.

That the Chinese and Gallas have forestalled one of our "modern" discoveries is something to which we should give more than passing thought. B. O'R.

Personals.

Dr. Adami, of Montreal, visited Toronto, Nov. 20th.

Dr. John R. Parry, of Hamilton, was married to Miss Breithaupt, Oct. 31st.

Dr. Arthur B. Wright, of Toronto, has been appointed President of the Canadian College Football Association.

Dr. S. T. Rutherford, of Listowel, returned Nov. 16th, after spending nine months abroad doing post-graduate work in Vienna and London.

Dr. Geo. W. Crosby (Tor. '04), of Dunchurch, Ont., is shortly going to London, England, with a view to special work in the eye, ear, nose and throat.

Dr. H. Horace Grant, of Louisville, Ky., was elected president of the Mississippi Valley Medical Association at the meeting held at Hot Springs, Ark., Nov. 5-8.

Prof. A. B. MacCallum, F.R.C.S., of the University of Toronto, received from Aberdeen University, at its quatercentenary celebration, the honorary degree of LL.D.

Geo. Wm. Ross (M.A. '01, M.B. '03, Tor.), who returned to Toronto recently from London, England, has gone to New York, and is engaged in research work in the Rockefeller Institute.

Dr. John L. Bradley (Trin. '94), who has practised in Creemore, Ont., for the last twelve years, has removed to Toronto and commenced practice at the corner of Wilton Avenue and Victoria Street.

Dr. Wm. H. Lowry (Tor. '02), formerly of Guelph, Ont., has returned to Canada after extended post-graduate work abroad, especially in England. He spent one year and a half in the Eye and Ear Infirmary of Birmingham, and will probably practise that specialty in Toronto.

Dr. C. B. Coughlin, who left Peterboro' Nov. 15th to assume his new position as Superintendent of the Deaf and Dumb Institute, Belleville, was on the evening of Nov. 7th the guest of honor at a large gathering of his personal and political friends in the rooms of the Young Conservatives' Club of that city. Many speeches appreciative of Dr. Coughlin's worth as a citizen and his ability as a professional man were made by prominent citizens of Peterboro'.

Dr. Gordon Campbell, of Montreal, and Dr. Graham Chambers, of Toronto, have been appointed secretaries for Canada for the Sixth International Dermatological Congress, to be held in New York, Sept. 9-14, 1907.

Dr. Geo. W. Badgerow has commenced consultation practice of the throat, nose and ear, at 64 Brook Street, Grosvenor Sq. W., London, England. He was recently appointed Surgical Registrar at the Throat Hospital, Golden Gate Square, West London.

Dr. Frank F. Allen, of Denver, Col., formerly of Cobourg, Ont., was married, Nov. 17th, to Miss Gage, a graduate nurse of a Denver hospital. Dr. and Mrs. Allen have gone to West China with a party of missionaries sent out by the Methodist Church in Canada.

Dr. B. E. McKenzie has been elected one of the representatives of Arts on the Senate of the Victoria University, and Dr. F. N. G. Starr a representative in Medicine on the Senate; also Dr. H. W. Aikins has been elected a member of the Board of Regents of the same university.

Dr. Levi Secord was seriously injured, Nov. 15th, while driving across the Grand Trunk tracks, at George Street, Brantford. He was struck by a train and thrown from his carriage, sustaining injuries which rendered him unconscious. At last accounts he was said to be recovering.

Obituary.

JAMES STEWART, M.D.

There appeared in our last issue an obituary notice of the late James Stewart, of Montreal. He was especially well known throughout the province of Ontario, and one of the most remarkable things in his career was the fact that he laid the foundation for his great reputation by careful research in a small country village while engaged in a very laborious practice. From this small country village he was brought to the great city of Montreal in consequence of his appointment to a professoriate in McGill Medical College.

We now reproduce the words of the Rev. James Barclay, spoken at the funeral ceremonies in St. Paul's Church, as we find them published in the Montreal *Medical Journal.*:

"We are met to pay our tribute of respect and affection to one whose professional fame and whose personal worth were widely and gratefully recognized, not only in this city, but throughout the Dominion. Had he himself been asked what should be said on this occasion, he would have answered: 'Let little or nothing be said.' If ever there was a man who was content to live unnoticed, and who would have been content to die unnoticed, it was Dr. James Stewart. All the honors that came to him in life were unsought. They were thrust upon him as the inevitable reward of sterling work and genuine worth. He was a man of retiring and reticent nature, and of a singularly quiet and unobtrusive bearing, and it was only those who knew him well who knew the riches of both mind and heart that lay hidden behind the simple and unassuming manner. He bore his weight of knowledge and skill, and the burden of his honors 'lightly like a flower.'

"He was a member of a noble profession, and he further ennobled it by the integrity of his character and the unselfishness of his services, and he enriched it by his valuable contributions. He was devoted to his life's work—an earnest and faithful student in his earlier days, he continued still to be a student when he had been promoted to a high place in the rank of teachers. Simplicity, sincerity, reverence, unselfish kindness, these were the features of Dr. Stewart's character that most impressed those who had the privilege of knowing him. Honored as perhaps few men have been with the confidence and esteem of his professional brethren, reverenced with the respect and affection of his students, he was trusted and beloved by his patients and warmly appreciated by his personal

friends. Montreal loses in him one of its worthiest citizens, and the medical profession loses one of its most gifted and most esteemed members. The knowledge he acquired and the skill to which he attained were ever regarded by him, not as means to self-promotion, but as gifts to be used in the service of his fellow-men, and that service was rendered with an unselfish readiness and generosity which secures for his memory a warm place in many a heart to-day. Not what he might make for himself, but what he might do for others, was the prevailing purpose of his life. Could he have known all the grateful and loving recollections that have been awakened by his death, all the kindly things that have been said of him, by his brethren, by his patients, by his friends, he would have felt that his life had not been in vain. 'He being dead, yet speaketh.' Through his teaching and his example he will still live, and the fruits of his life will be seen in the lives of many of the students who were privileged to know him as teacher and as pattern."

WILLIAM ALBERT BALL, M.D.

Dr. W. A. Ball, of 245 Bathurst Street, Toronto, died Nov. 3rd, of heart disease, aged 38. He received the degree of M.B. from the University of Toronto, and M.D. from the Trinity College in 1894. Soon after graduating he settled in Toronto, and acquired an extensive practice in the western portion of the city. He had been in poor health for six months befort his death.

HARRY A. DALY.

Mr. H. A. Daly, a graduate in Arts, '06, from the University of Toronto, and a third-year student in the faculty of medicine of the same university, died at St. Michael's Hospital of apoplexy following Bright's disease, Nov. 4th. Although he was known to have some disease of the kidneys, he was supposed to be in fairly good health when he was seized with obscure symptoms on the afternoon of the 3rd, and died in less than twenty-four hours thereafter. He was an excellent student, took a first-class stand at his examinations, and was extremely popular with the undergraduates. He was also much liked and highly respected by those of the professoriate who had the privilege of an intimate acquaintance with him.

Book Reviews

A Primer of Psychology and Mental Disease. For Use in Training Schools for Attendants and Nurses and in Medical Classes, and as a ready reference for the Practitioner. By C. B. BURR, M.D., Medical Director of Oak Grove Hospital, (Flint, Mich.,) for Mental and Nervous Diseases; formerly Medical Superintendent of the Eastern Michigan Asylum.; Member of the American Medico-Psychological Association; of the American Medical Association; Foreign Associate Member Societe Medico-Psychologique of Paris, etc. Third edition. Thoroughly revised, with illustrations. Pages viii-183, 12mo. Bound in extra vellum cloth, $1.25 net. F. A. DAVIS COMPANY, Publishers, 1914-16 Cherry Street, Philadelphia.

This excellent book we consider of great service to the medical profession, for the descriptions of the various forms of mental diseases are most vivid, and the method of treatment advised is thoroughly up-to-date. The few pages on General Paresis are exceptionally fine, and we know of no other book where the cardinal points of this increasingly common disease are so clearly enunciated.

Medical students of the last few years are well trained in mental diseases, but to those who were unfortunate enough to be born too soon we take great pleasure in recommending Dr. Burr's work as one which will put them in possession of the greatest amount of detail in the shortest possible time.

The Combined Treatment in Diseases of the Eye. By G. HERBERT BURNHAM, M.D., Tor., F.R.C.S., Edin., M.R.C.S., Eng., Professor of Ophthalmology and Otology at the University of Toronto, etc. London, H. K. LEWIS. 1906.

Readers of ophthalmic literature who have become acquainted with Dr. Burnham's claims for pilocarpine will be interested in his record of sixteen years' experience. Combined with a thorough-going course of mercury and iodide of potash it would appear to be in his hands something of a panacea.

"In iritis or cyclo-iritis, it matters not what kind, whether it be acute or chronic, slow, gouty, rheumatic, with hypopyon or without, gonorrheal, specific or non-specific, tuberculosis, benign or fulminating sympathetic, it gives relief and finally freedom from the disease."

Again: "Deeply-seated ulcer of the cornea is quickly put past the dangerous stage and the resulting nebula is removed."

Such a potent anti-toxic agent to the tubercle bacillus and pneumococcus leaves little need for the researches of Wright and Römer.

It is, moreover, we are assured, potent in conical cornea, episcleritis and sclero-keratitis, hyalitis, optic neuritis, paralysis of ocular muscles and "disease of the eyes due to masturbation."

An appeal is made to the profession for its trial in "irregularities and diseases of the liver," in skin diseases, early cancer, tubercular laryngitis, localized and general neuritis, chronic rheumatism and tabes dorsalis.

Chemistry: General, Medical and Pharmaceutical (including the chemistry of the U.S. Pharmacopœia). A Manual on the Science of Chemistry and its Application in Medicine and Pharmacy. By JOHN ATTFIELD, F.R.S., M.A., Ph.D. (Tübingen) F.I.C., F.C.S., Professor of Practical Chemistry to the Pharmaceutical Society of Great Britain, 1862-96; formerly Demonstrator of Chemistry at St. Bartholomew's Hospital (London); honorary member of 23 societies, associations and colleges of pharmacy in Europe and America; one of the three editors of the British Pharmacopœia, 1885, editor of the Addendum to the British Pharmacopœia, editor of the British Pharmacopœia 1898, and of its Indian and Colonial Addendum, 1900. Edited by Leonard Dobbin, Ph.D. Würyburg, F.I.C., F.C.S., Lecturer on Chemistry in the University of Edinburgh; lately Examiner in Chemistry on the Board of Examiners for Scotland, of the Pharmaceutical Society of Great Britain. 19th edition. Published by LEA BROTHERS & Co., Philadelphia and New York. 1906.

The above is a compact volume of about 700 pages, designed more especially for medical and pharmaceutical students, equally useful to those having no opportunity of attending lectures as to the university student.

The book may be used as a guide to those studying experimental chemistry; in it is included more or less subject matter on all recognized remedial agents, compounds at present of interest only to the scientific chemist are omitted.

The first chapters take up in detail the metallic elements and their compounds, physical properties, reactions, also their practical applications and qualitative analysis.

The chemistry of vegetable and animal substances, the so-called organic chemistry, is next considered, excellent synoptical tables showing relations between members of the paraffin and various other series are found. The glucosides, alkaloids and urinary excretions also receive due attention. The volume closes with several chapters on volumetric and gravimetric analysis.

The style throughout is excellent, and although the various subjects are treated in detail, the book is one which one can read with ease by a beginner in the study of the science of chemistry. It combines not only the subject of chemistry, but the chemical and physical portions of a materia medica, and is thus doubly valuable to a student of medicine.

Green's Encyclopedia of Medicine and Surgery, Vol. II. (Bread to Ear). WILLIAM GREEN & SONS, Edinburgh and London, Publishers. 1906.

In this, the second volume of the series, the general arrangement of the subject matter, the cross-references, definitions, etc., follow closely the plan adhered to in the former. The author has before him the necessity of keeping pace with modern methods, as is shown by articles on such matters as cytodiagnosis, cryoscopy, dechlorination, and many others.

A number of full-page illustrations are included in this volume. Those on color vision are particularly noticeable. Articles on disinfection and diseases of the eye and ear occupy

considerable space. The various subjects are written by the most eminent authorities—Radcliffe, Crocker, Jules, Hutchison, Allingham, and many others of equal standing. The book is fully up to the high standard set by the first volume. The set will undoubtedly prove a valuable addition to the libraries of many busy practitioners.

In the Van. By Dr. Price-Brown. McLeod & Allen, Publishers, Toronto.

This is a story of Canada and military life in the year 1813, and should be read with interest by every lover of the Dominion. Not only has the author caught the spirit of the early pioneer days, but he makes his portrayal vivid and fascinating to the reader, and the narrative speeds along, enlivened by incident and adventure, the interest being preserved until the very last word.

The book opens in a picturesque way with a description of the wedding of Lieutenant Harold Hanning and Helen Brandon in Westminster Abbey. The marriage is kept secret from the colonel of the regiment, Sir George Head, because, as the troops are on the eve of departing for Canada, his consent is sure to be withheld. Helen wins over the colonel to allow her to accompany her husband, and actually embarks on the warship *North King*. The voyage is long and terrible, but, finally, Halifax is reached. At a ball at the capital, Helen meets Maud Maxwell, who is inseparably riveted into the story, and they become friends immediately. The mid-winter journey from Halifax to Penetanguishene lies ahead, and, as soon as preparations are completed, the regiment starts on its perilous undertaking. Brief rests at Quebec and Montreal serve to give glimpses of the social life of those cities in the early days, and at last, after a severe overland march, the regiment reaches its destination. The building of the fort and the officers' quarters is graphically described, and the scenery of the Georgian Bay is depicted in all its primeval beauty.

It is, perhaps, natural that one of the most interesting figures in the book should be Dr. Beaumont. He is the physician of the regiment, and is an excellently drawn character. So, also, is the gallant Captain Morris. Both are aspirants for the hand of Maud Maxwell, and the reader is kept in suspense until the very end as to which is to be successful.

"In the Van" is a typically Canadian tale, and a pretty love story. Although there is not much attempt at plot, interest is by no means lacking. The book should receive more than passing attention at the hands of the reading Canadian public, and it deserves a prominent place on the list suitable for Yuletide purchasing.

Correspondence.

SOCIETY FOR THE REFORMATION OF INEBRIATES

To the Editor of The Practitioner:

Dear Sir,—The Ontario Society for the Reformation of Inebriates desires space for calling the attention of the benevolent public to its work and to its needs. Its object is the reclaiming of inebriates; its methods are as follows: Home treatment is given in suitable cases, and such cases as require hospital care are treated from one to three weeks in hospital. A friendly visitor, called a probation officer, takes the supervision of inebriates subsequent to treatment, finds them employment, and endeavors to bring them into touch with the church of their choice. The medical officer of the Society administers the treatment, and associated with him is a consulting committee of three leading physicians of Toronto. Arrangements have been made with the police authorities whereby persons arrested for drunkenness (when not hardened offenders) may be committed to the care of the Society instead of being sent to jail and forced to associate with the vicious and depraved. The medical treatment is conducted on strictly ethical lines—no secret remedies being used—and it is continued for three weeks, while the probation or parole is continued for several months. The scheme is a unique economic measure which for the class referred to renders prolonged detention in an institution unnecessary. It combines maximum efficiency with minimum expense. We wish to put this unique economic system to a crucial test, on a sufficiently ample scale to be used as an object-lesson, before the next meeting of the Ontario Legislature. The result, we do not doubt, would be eminently satisfactory and would more than justify legislation along the same lines. An eminent Oxford professor, and a Canadian, in a letter to the Secretary of this Society, speaks of the proposed legislation as follows: "I think the plan you propose is an excellent one, and I do hope it will be carried out."

At the last quarterly meeting of this Society the report of the officers was most gratifying, inasmuch as sixty per cent. of the cases of inebriates treated and cared for were doing remarkably well. In view of the satisfactory character of the report is was decided to make an appeal to the benevolent public for financial help to carry on the work efficiently and as an object-lesson before the next session of the Ontario Legislature.

Signed by order of Finance Committee,

E. J. Barrick, M.D.,
Chairman of Medical Consulting Committee.

A. M. Rosebrugh, M.D., *Secretary.*

S. C. Biggs, B.A., K.C., *Treasurer.*

Toronto, November 1, 1906.

Miscellaneous

The Role of Iron in the Nutritive Process.

It is an established custom of physicians to administer iron whenever a patient with pale, waxy, or sallow complexion complains of extreme exhaustion, muscular feebleness, easily accelerated pulse, aphasia, anorexia and the several symptoms which constitute the characteristic issues of a qualitative or quantitative reduction of the corpuscular elements of the blood.

Such symptoms are unerring indications of anemia, and iron is beyond dispute a cure for that disorder. But while the chief therapeutic property of iron is that of an anti-anemic, the subordinate, or collateral, effects of the drug are manifold, and are worthy of far more consideration than they usually receive.

As a hemoglobin-contributor and multipler of red blood corpuscles, iron will doubtless forever stand supreme, but its utility is by no means restricted to anemic conditions, for one of the chief effects of iron—one quite often lost sight of—is its influence upon nutrition.

The primary effect of iron is a stimulation of the blood supply. This results from invigoration of the blood vessels. As a consequence of a more active blood stream, the digestive capacity is increased and the nutritive processes are correspondingly improved. Subsequently, iron increases the amount of hemoglobin contained in the red corpuscles. This imported hemoglobin converts the systematic oxygen into ozone, and thuswise oxidation, upon which nutrition directly depends, is restored to its proper standard.

It is impossible to emphasize the fact too strongly that it is necessary to do more than increase the appetite to correct nutritive disturbances. A voracious appetite does not necessarily imply an extensive appropriation of nutriment. On the contrary, it is commonly observed that individuals who eat ravenously suffer, the while, a progressive loss in physical weight and strength, even in the absence of all exertions that might account for such losses. And while it is obviously needful to relieve the existing anorexia in order to arrest a loss of weight, it is likewise essential that the capacity to properly digest food be fully restored before the nutritive processes can proceed in befitting order.

The manner in which iron begets an increase in appetite has only recently been perfectly understood. The earlier observers entertained the belief that an increase resulted from the mechanical effect of iron, and that this mechanical effect never