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By W. H. MOOREHOUSE, B.A., M.D.,
Dean of the Medical Faculty, and Professor of Medicine, Western University, London.

GENTLEMEN of the Canadian Medical Association:—I desire to convey to you my very high appreciation of the honor conferred by you, in electing me to the highest position within the gift of this Association. I hope to prove worthy of your confidence, and that your time at this meeting may be spent both pleasantly and profitably.

On behalf of the medical fraternity of London and vicinity, I extend you a most hearty welcome. Also, on behalf of this Association and City, I extend fraternal greetings to those of our fraternity who come from abroad, as delegates and visitors.

Truly, this is the age of associations. No matter what the calling may be, we are sure to find a union or association connected with it. People have learned the truth of the old adage, "In unity there is strength."

Social progress, during the past thirty years, has been most marked. All along the line we see the word *progression* in large and vivid characters. By these unions or associations the status of society at large is raised.

The chief elements or the main essentials of an association are:—

(1) The ethical side, by which its members are united and harmony promoted among them, through the settling of internal differences by stating more clearly our duty toward each other.

(2) The scientific side, through which a higher state of efficiency pertaining to the craft or profession is attained.

(3) To resist aggression from outside sources.

These advantages apply equally as well to Medical Societies as to any other form of society.

The Medical Society or Association gives each member of the profession an opportunity of meeting his fellow practitioner from throughout the length and breadth of the land. They hear the papers and debates on the various subjects of interest, medical or surgical, in which are detailed the failures and the triumphs of disease. A single

paper or discussion may suggest to the mind of the hearer a train of thought leading up to untold benefit to himself and those under his care. It gives him renewed and increased enthusiasm, without which we are unable to work successfully or comfortably. The minds of men are not all of the same cast, hence we find all the sides and shades of a question taken up and inspected critically in all their varying aspects. Failures as well as successes are, or should be, recorded and discussed. The confession of mistakes and failures, while it requires a great deal of moral courage, is a means of imparting great information of a profitable character. The most brilliant and astute observers, the most successful practitioners, have all made mistakes and had dismal failures, the recital of which serves to encourage the more timid by showing that the leading men do not live and work on a higher plane than the ordinary observer, that these men have their perplexities and trials to overcome —all of which affords much instruction and encouragement to those who are diffident and less courageous—that "genius consists, chiefly, in an infinite capacity for taking pains."

Hints of a valuable character are frequently dropped, in discussions, even from the most humble, which may take root and bear fruit in the minds of the most erudite.

The beneficial results of these meetings are not confined to science. The ethical and social side is quite as important. Medical men are inclined to live within themselves, or within certain rings or circles, to the exclusion of their neighbors. At the Medical Association all barriers are, or should be, broken down. The hatchet of professional strife should be laid aside and the brethren dwell together in peace and learn to know each other—to know that our confreres are not the professional cut-throats and free lances we had imagined—to know that they belong to a profession whose members are united and cemented by the bonds of fellowship, laboring with enthusiasm at the greatest of all sciences, viz., the alleviation of human suffering and the conquering of disease.

The Ancestry of Our Profession.

The domain of science and literature has been aptly likened to a republic, wherein all its votaries are regarded as being upon an equality. It makes its own laws, each member having an equal right with his fellow. Truly, there is no royal road to learning. All must keep the same weary vigils. As scientists, we owe no allegiance to any nationality, kindred, race or tongue. We all tread the same broad platform, each contributing his quota to the general fund of knowledge. Each generation has handed down its experience, which has been verified and perfected by following generations. Thus the general fund of know-

ledge has grown, gradually becoming more and more defined, facts were weighed, great truths were established.

Let us look for a moment at the origin or early history of our own beloved profession, in other words, "our ancestry." Melchisedek, King of Salem, whose name signified King of Righteousness, who brought forth bread and wine and blessed Abraham, was both king, priest, and physician. He is regarded as the great proto-type of Christ, the God-man, who went about preaching, healing the sick and raising the dead.

In Melchisedek, as was usual in Egypt and India, we find a combination of the priesthood and physician. Melchisedek, being both king, prophet, priest and physician—a noble ancestry!—our profession has, as we have seen, both a royal and priestly origin.

In Hellenic history, the first allusion to medicine of an authentic character is found in the Homeric poems, which were written somewhere about 1050 B. C. In allusions there made it is clear that medicine had already a history. We find a distinct and organized profession, with rules and regulations as to the treatment of injuries, which must have taken many ages to formulate; also we meet with terms in nomenclature which, long after, were used by Hippocrates.

The Homeric heroes, themselves, are represented as having considerable skill in surgery and able to attend to ordinary wounds and injuries. But there appears to have been a professional class represented by Machaon and Podalirius, the two sons of Asclepius, who were treated with great respect. It would appear, too, from the Aethiopis of Archinus that the duties of these two were not precisely the same. Machaon's task was more especially to heal the injuries, while Podalirius had received from his father the gift "of recognizing what was not visible to the eye, and tending what could not be healed." Here we have the first indication of the Separation of Medicine and Surgery.

Asclepius or Esculapius appears in Homer as a Thessalian King, not as a god, although in later years, divine honors were paid him and he was worshipped as a god.

From this, it appears, that the origin of our profession both in profane, as in sacred history, has a most noble ancestry, being both royal and sacred in character, dating from time immemorial.

Seeing then, the very high position which our profession occupied in the past, and the very important, nay, essential part it plays in the welfare of civilized nations, in the present age, how necessary is it, that its members be men of culture.

In the early pioneer life of this continent, especially the newer settlements, the chief struggle consisted in providing homes and other

necessaries of life. Few and far between were the luxuries, as the struggle for existence was keen. The more provident had an eye toward laying up a fund for a time of need. The earlier generations were brought up in the stern lap of necessity. Books were scarce and difficult to obtain. Teachers beyond those having a mere rudimentary education were not easy of access yet, even under these discouraging circumstances we find that there were many men of prominence in our profession, for some are born to be great. As time went on and wealth increased, schools of a more advanced character were established. Our educational system has been founded upon a broad and liberal basis, so that we now boast of one of the most admirable systems of education, from the common schools up to our universities. With our admirable educational facilities which are now within the easy reach of all who are ambitious to excel, what excuse have we for a low standard for our matriculation in medicine?

Our profession has always been regarded as one of the learned professions, whose members are, or should be cultured gentlemen. The Poet Ovid tells us "Ingenuas didicisse fideliter artes emollit mores" "To have faithfully studied ingenuous arts softens manners." I am well aware that culture does not depend entirely upon mental training. A great deal is due to the innate character of the individual, then the early environment shapes and moulds the mental tendency or temperament, exaggerating or repressing as the case may be.

In no walk of life does the inner life of the individual shine out so brightly, unless it be that of our sister profession, the clergy. In no profession is the highly cultured man more truly honored, neither has any class, of society, more power for good than the cultured and polished physician. Emerson says that "a gentleman is a man of truth, lord of his own actions and expressing that lordship in his behaviour." In no way can this high ideal be so readily and effectually obtained as in the words of Ovid "To have faithfully studied or cultivated ingenuous arts."

Our country, although vast in extent, has not, until lately, attracted the attention of the better class of emigrants and settlers to the extent its importance demanded. Our great agricultural and mineral wealth has only recently been properly and fairly ascertained and placed before the old world. We are now on the eve of a great and continued prosperity.

One of the great essentials to success or prosperity of any kind is, for those concerned to have faith in themselves and their cause, whether it be our country, our profession or a more elevated plane of life in general. A tone of intense optimism prevails, betokening that confidence and faith which ensures our prosperity.

With increased wealth, comes greater leisure which leads to a higher culture, a higher plane of thought.

Let us, as a profession, be alive to our needs and establish a high ideal. Although we may not be able, at once, to attain this high standard, yet, it should ever be before us, constantly stimulating to farther efforts.

We should encourage our students to be thorough and well grounded in their preliminary training. A great deal can be done by our medical associations in advocating the higher education of students in medicine. You can strengthen the hands of those who have in charge the matriculation and medical curricula. I do not pretend to say that a high standard of education will make every man great and brilliant. Some will be great and brilliant in defiance of all the defects of our curriculum. If there be inherent greatness in spite of disadvantages, how much greater eminence may such men be enabled to attain under superior advantages?

Dominion Registration.

A uniform standard of medical education throughout the Dominion is much to be desired, and the advantages derived therefrom are many. Our country is vast and many sections are being rapidly populated

We had all hoped that we were within reach of a solution of the vexed problem of Dominion registration. All the provinces, even Quebec, appeared satisfied with the provisions of the bill when passed.

You will remember that the original draft of the bill contained the clause, "when five or more provinces consent." This clause was obnoxious to the Dominion Government and it compelled those in charge of the bill to change it to "all the provinces must consent" before the work can be begun. This action of the Government, which we now know, was done in order to placate Quebec, was particularly unfortunate, as it was the means of wrecking Dominion registration for the present.

Five provinces, viz., Nova Scotia, New Brunswick, Prince Edward Island, Manitoba and the North-West Territories, have passed the necessary legislation—to the effect, that anyone possessing the license of the Dominion Medical Council may enter any of these provinces and practise his profession on the payment of the registration fee of the province. The North-West Territories enacted, in addition that *this qualification alone would admit to practise there.* The Province of Ontario has not, as yet, endorsed this bill. The Premier, Mr. Ross, has expressed himself as being very strongly favorable and volunteered to take charge of it himself, but there is no doubt that his unstable tenure of office and the very grave charges brought against some members of his cabinet,

were the chief causes of its being left over, through pressure of weightier matters.

British Columbia also is in a very unsettled state, politically, the legislature being unable to get through its legitimate business.

Those in favor of Dominion registration who have watched the trend of public sentiment in these two provinces, feel assured that so soon as the political atmosphere becomes cleared, they will express their approval of the act by adopting it.

Quebec is the one great obstacle, the legislature having rejected it by a large majority, but I am proud to say that the English members voted solidly for it.

The New Brunswick Legislature, in their bill accepting the provisions of the act, recommended that the Dominion Government be urged so to permit the provinces, asking for the Dominion act, to go on and allow the other provinces to follow, just in the same way that Confederation was brought about by the four provinces, Ontario, Quebec, Nova Scotia and New Brunswick accepting the Confederation Act—Prince Edward Island and British Columbia, with later Manitoba and the North-West Territories coming in when convinced it was a good thing.

Since the defeat in the Quebec House, Dr. Roddick who had charge of the bill, has been endeavoring to induce the Dominion Government to allow him to bring in an amendment to the act on lines similar to the original draft, whereby five or more provinces, which is a majority of the total number of provinces, being ready to accept the act, the Dominion Council may be formed and put into operation. So far, he has not proceeded—the answer being that Quebec is certain to come in.

Now, present indications show that Quebec has no intentions of accepting the act as it stands at present, unless amendments of a most damaging character are made to suit this province only, and which will render it entirely unacceptable to the other provinces.

The solution to the difficulty as it now stands is, for the other provinces, if they want Dominion registration, to rise in their might and their right and insist upon an amendment such as Dr. Roddick has urged upon the Dominion Government.

Should the Province of Quebec desire to continue as at present, for certain selfish reasons, and adopt the "dog in the manger" policy, is it just that the other provinces be kept out of their rights?

Medical Literature.

During the past decade, literature has made considerable advancement in our Dominion. With increasing wealth, we have an increasing

appreciation of the fine arts and all forms of culture. Literature has not lagged behind the sister arts. Our daily papers are equal to those produced in any country. Our weekly and monthly periodicals both in medical and general literature are rapidly improving. Literary aspirations have been growing and bearing fruit in the form of many delightful books.

It is true, our literature has not yet assumed a type peculiarly our own, but has taken the tone and characteristics of our great motherland. This, in a great measure, is to be accounted for, by the abundance and cheapness of all kinds of literature brought from other countries, which has to a great extent, smothered out our native talent, while the struggle for existence in a new and growing country has been too great to allow of time and energies being spent along this line.

Now that general literature is making such advances, I feel constrained to express a fervent hope that medical literature may make an equally good showing in our country, in the near future, and trust some of our men may enter the fields of medical authorship.

The hospital equipment throughout the Dominion is rapidly improving and being put on a most excellent footing. Our larger cities with their well equipped hospitals should be in a position to give our men a thorough post-graduate course.

Patent Medicines and Proprietary Preparations.

I am anxious to call your attention to the patent medicine craze and the great danger therein to the unsuspecting public. It has been estimated by most reputable authority, that more than $600,000,000 are annually expended in this manner alone. One can scarcely grasp, at first thought, the true situation, nor its gravity. The evils are many and of a serious character. Certainly not the least, is the alcohol habit, which, insidiously insinuating itself under the apparently harmless form of a simple medicine, is stalking in our midst like a midnight pestilence. Many of these preparations consist largely of alcohol ranging from 10 per cent. to 60 per cent. Various narcotics also figure largely in their composition, such as opium, morphia, codeia, cocaine, belladonna, hyoscyamus, chloral, bromides, etc., etc. These manufacturers publish glowing accounts as to the wonderful manner in which their nostrums were discovered, with a number of laudatory testimonials, many of them fictitious, some, I am sorry to say, being from prominent citizens, such as clergymen, detailing the wonderfully curative properties of these mixtures, of the nature of the contents, of which they are utterly ignorant. These circulars and papers are strewn broadcast throughout the land. The credulity of people, in this respect, is great, neither is this extreme cred-

ulity confined to the less educated class. The more ignorant and mysterious the source of the medicine, the more marvellous the testimonial and unworthy of belief, so much greater is the confidence. Nostrum after nostrum is resorted to in the vain effort for relief before consulting a proper medical adviser, losing much valuable time in allowing the disease to make greater progress, then add to all this the irreparable harm often done by the use of medicine contraindicated.

Evil habits are frequently contracted, leading up to confirmed inebriety, also to morphinism, etc., many of these preparations are used in secret, the so called secret preparations which are so largely advertised in the public press, suggesting evil thought and provoking curiosity in the minds of our youth, often leading to contamination.

There is another class of preparations, in the form of stimulating tonics, made and sold by reputable pharmacists, which is frequently the cause of much mischief, particularly where they are self prescribed which is so often the case. I allude to such preparations as wine of beef and iron, coca wine, etc. These, and similar preparations are frequently prescribed by people of apparently strong temperance principles who would hesitate to use or recommend the ordinary alcoholic preparations.

Those who suffer most from the use of these latter preparations are delicate neurotics who are attracted partly by the high sounding names, which convey to their minds the idea that this is, indeed, the very thing which they require, and partly because it is pleasant to the taste and of a stimulating nature, giving them a feeling of temporary relief from their depression. After a time, it becomes almost a necessity, leading frequently, to the use of stronger preparations, ending in inebriety.

Cannot something be done to shield the public from this great evil? Shall we, the members of this enlightened profession, who see this monster, with its many sided evils, daily flaunted before us, having its bold, indecent advertisements in our public press, pervading even the religious journals, thereby giving an apparent sanction, and clothing these nostrums with an air of respectability; we who daily meet in our professional rounds, melancholy examples of this terrible delusion, I say, shall we not raise our voices in loud protest against it? Can we not unitedly, in some way, arouse public sentiment, so that in some measure, at least, evil may be rectified?

There is a law in France, by which all makers of patent medicines are obliged to put the formula, both qualitative and quantitative upon the package. Should there be any suspicion of fraud, officers are instructed to obtain samples from the dealers or vendors. Upon the suspicion being verified by analysis, the officers are empowered to prohibit further manufacture and sale.

Our profession which has done so much in the form of preventive medicine, so much for the advancement of the public health in the past, should not stop short, while such important work yet remains to be done.

The Practitioner's Duty to Himself.

A great deal has been said about the duty of the Physician to his patient. I presume we are all quite familiar with this part of our duty. But there is another phase of the Physician's duty, about which very little has been said. I allude to the duty of the Physician to himself.

The life of the general practitioner is a most arduous one, even the ordinary holidays, and that most beneficent gift to man; viz: The seventh day's rest, are practically denied him.

As a result he is constantly in harness. This coupled with the great anxieties of his profession which so largely consists in dealing with that most uncertain of all things, viz., life, health, and human nature, keeps him almost constantly in an anxious condition. Through time if doing a large amount of work and having ambition and pride in his profession, wishing to excel, it begins to wear upon him, his vitality becomes lowered and he gets to be neurasthenic—being both mentally and physically below par, which seriously lessens his capacity for work and impairing its effectiveness through impatience and irritability. Who is there among us, that cannot recall many times in his professional life, when he has been unequal to the occasion through some mental infirmity? Now, these mental infimities are largely the result of overwork, along with the perplexities and anxieties with which we are so constantly beset.

Many of the brightest ornaments of our profession die early or are laid aside from work as a result of this terrible strain.

The profession, no doubt, is much overcrowded. The old adage, "There is room at the top," has been overdone Many good and brilliant men perish in the ascent, and when the top is reached the strain is often too great to retain the position. In order to overcome the effects of this great strain, complete relaxation is necessary, such as is obtained in an occasional holiday, with change of scene. It is also well to cultivate some particular hobby, so long as it does not entail too great a drain upon the pocket.

The perusal of literature other than medical subjects, attendance upon concerts, lectures, the opera are all useful in bringing into use another set of faculties or brain cells which unfortunately are, too often, allowed to lie dormant by the average medical man.

A prolonged rest, however, with change of scene, is, without doubt, the best treatment for the broken-down neurasthenic medical man. Some years ago, I came across an able article upon this subject, wherein the

writer made the assertion that the busy practitioner should have every seventh year entirely free from professional work, in order to compensate for the prolonged strain and the loss of the seventh day's rest. In fact, let us be wise, and prescribe for ourselves just in the same manner we would for our patients.

Medical men, as a rule, do not follow strict business methods in their financial affairs. The chief reasons for this grave and serious irregularity in business methods are :—

(1) The irregular life they are obliged to lead, especially in severe epidemics and unhealthy seasons, long drives and irregular hours soon upset method and order, and the accounts rapidly assume a state of chaos.

Finally his affairs get into a state of inextricable confusion, the unfortunate medico being driven into despair and is obliged to make a settlement with his patients, often, considerably under the proper value through the want of a proper statement to guide him. I have known a physician to pass an entire week without even taking a note or making an entry of his daily work.

(2) Many are too sensitive to send out their accounts regularly and are too modest to claim a proper honorarium, or it may be, they are too dilatory in their work to do so in a regular manner. Why should the medical man who has gone to great expense and labor, sacrificing his time for years while securing his professional training, hesitate to claim a fair honorarium ?

No other class in any community is called upon to make greater sacrifices of time and comfort, and which so readily and conscientiously responds to calls of distress, or is so abundant in deeds of charity. Then what should he fear in claiming a fair pecuniary reward, or why should he defer the day of reckoning ?

The progressive physician will be ever on the alert to provide himself with the latest devices to save time and labor, so as to allow himself all the freedom and relaxation consistent with the demands of his profession.

The minor affairs of professional life are apt to be thought too insignificant to occupy the attention of such an assembly as this learned body, yet we must remember that life is made up of a series of details, each important in itself, we cannot always live in the clouds or upper strata of science, but must descend from time to time to the more homely affairs of life, in order to refresh and invigorate ourselves for the higher plane of thought.

I have endeavoured to confine my remarks to some of the more commonplace subjects which interest us all alike, leaving the scientific side of our professional needs for your admirable papers and discussions.

THE CARDIAC ASPECT OF ARTERIO-SCLEROSIS.*

By T. W. G. McKAY, M.D., Oshawa.

THE changes to be considered are (1) compensatory hypertrophy without and with dilatation; (2) dilatation and failure of compensation; (3) pathological conditions, more or less interdependent in the coronary arteries, the myocardium and the endocardium; and (4) disturbed cardiac innervation.

Efficient compensation and good health may exist for years and no symptoms of cardiac trouble be present. Compensation is the natural result of cardiac response, by means of muscular hypertrophy, to the stress induced by the peripheral resistance following the toxic arterial spasm and increased functional activity of the heart. It is best marked in young, vigorous adults, or the well developed middle aged. They show on examination a full, regular, strong, sustained high tension pulse of normal rate and with no apparent thickening of the artery. The enlarged heart is indicated by heaving precordial impulse, displacement of the apex beat downwards and outwards, increased percussion, dulness, prolonged first sound on auscultation, and a clear ringing and accentuated second sound, particularly over the aortic area. In more advanced cases, arterial thickening and associated myocardial and endocardial changes are to be found. The preliminary change in the left ventricle is followed by hypertrophy in the left auricle, and also in the right ventricle and auricle, the signs of enlargement increase and the impulse becomes heavy and more forcible. The pulmonic second sound is accentuated.

As dilatation overcomes hypertrophy, the cardiac impulse becomes lessened in rate and the tension lowered. The first sound of the heart is shortened and sharpened. Complaints are now heard of headache, tiredness, coldness, numbness, and tingling of the extremities, noises in the ears, dizziness, and gastro-intestinal disturbances. There is an increased flow of urine of a low specific gravity, containing traces of albumen. Ruddiness gives place to pallor, robustness and corpulence to a loose flabby fat. Anæmia becomes marked. This condition demands prompt hygienic and tonic treatment.

Failing compensation is marked by weakness, dyspnœa, precordial distress, vertigo, loss of consciousness, irritability, convulsions and insomnia. The heart is still more dilated, its action becomes weak and irregular, and may be accompanied by to-and fro soft valvular murmurs, due to relative incompetence. These must not be mistaken for murmurs due to endocardial lesions which may also be present. Nutrition fails

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rapidly. The patient becomes sallow, emaciated and cachectic. The urine becomes scanty and high colored. The pulse is rapid, irregular and intermitting. Lividity and breathlessness on slight exertion, congestions of the internal viscera, œdema of legs, œdema of lungs, cardiac asthma, laryngeal cough and rusty, frothy, or albuminous sputum, hæmorrhages, and hypostasis indicate the gravity of the condition.

In long standing cases, emphysema and fibrosis of the lungs are found. Death is frequent from hypostatic pneumonia and, in the more acute cases, from syncope and sudden failure. The heart is dilated in all directions and its impulse may be seen and not felt. There is marked epigastric pulsation, venous congestion and pulsation, fœtal and gallop rhythm of the heart may be detected. The prognosis is very grave. The treatment in the milder cases is cardiac stimulation; in severer cases, with marked lividity and urgent dyspnœa, venesection.

Changes in the Coronary Arteries.

The changes in the coronary arteries give rise to, (1) embolism, which is very rare, and not diagnosable; (2) aneurysm, which is also extremely rare; (3) coronary endarteritis, which is one of the commonest manifestations of arterio-sclerosis, leading to defective nutrition and degenerative changes in the myocardium, and (4) thrombosis, due to coronary endarteritis, giving rise to anæmic infarct, fatty degeneration and slow fibroid change, frequently causing angina pectoris, rapid heart failure, and sudden death.

Changes in the Myocardium.

Aneurysm of the heart is rare and hard to diagnose. It interferes with the mechanical action of the heart. It is generally found in the left ventricle and follows fibroid myocarditis. Rupture occurs into the pericardium and causes instant death.

Fatty infiltration follows along the coronaries and their branches, interfering chiefly with the mechanical action of the heart. It occurs in stout, plethoric, middle aged, luxury-loving, individuals, who live too well, and exhibit defective elimination. It gives rise to no special symptoms, except those of a weak heart. The heart is usually enlarged, dilated and relaxed. The prognosis is good, unless complications set in. Such cases do well under hygienic, gymnastic and spa treatment.

Fatty degeneration is usually allied, more or less, with fibroid infiltration. It is insidious in its onset. The muscle elements undergo hyaline degeneration, fatty change and atrophy. Connective tissue infiltration of a conservative character, to maintain the resistance of the

heart wall, follows later. Once established, there is no tendency to return to a healthy condition. The subjects of it are usually middle aged and of the male sex. The symptoms are those of a dilating heart. The heart is enlarged, flabby and relaxed, and its substance friable. Over exertion induces syncopal and anginal attacks. Later on, these occur at night. There may be Cheyne-Stokes symptoms. The prognosis is very grave. Treatment is mostly palliative, dietetic, hygenic and massage, with tonics, such as iron, arsenic, strychnine, and oxygen, carminative stimulants, and heart tonics in emergency cases.

Fibroid infiltration,—fibroid myocarditis—is the commonest and most important of the arterio-sclerotic lesions. Generally associated with hypertrophy, it may be either general or local. It follows coronary obstruction and chronic congestion of the heart, indicating attempts at repair. The heart muscle atrophies and fibroid-infiltration occurs. The chambers are dilated, their walls thickened, their resiliency and contractile power diminished. There is a gradually failing compensation, and often there are other associated degenerative changes. Sudden death or angina pectoris may be the first manifestations of the presence of the condition. Like fatty degeneration, it occurs mostly in middle aged people, or those over fifty, and most often in males. The signs and symptoms are those of failing compensation. Frequent attacks of gastralgia have a grave significance. Signs of emphysema, chronic Bright's disease, or arterial degeneration are always present. In advanced, elderly cases, slow pulse (20 to 40 beats to the minute), with syncope, epileptiform, and apoplectiform attacks—the Stokes-Adams syndrome—are to be found. The arteries are thickened, palpable, and firm, the pulse regular at times, but more often slow, and of irregular force and rhythm. When secondary to mitral disease and emphysema, it is feeble, changeable and compressible. The heart is enlarged in all directions. Its beats are less forcible and more diffuse than in pure hypertrophy. The first sound is longer, duller, and rarely heard at the base. The second sound is dull, muffled and prolonged. The prognosis is grave. Treatment is as for fatty degeneration with the use of nitroglycerine.

Changes in the Endocardium.

Aortic changes are due to valvulitis, fibrosis, contractions and adhesions, of the valve segments. The changes are most marked at the points of contact and at the attachment to the fibrous ring of the aortic opening, and are induced by dilatation of the aorta, high tension, disordered cardiac nutrition, and involvment of the coronaries.

Aortic stenosis is diagnosed by a harsh, rough, sawing systolic murmur, associated with cardiac thrill and hypertrophy with, at first, but little dilatation, and a small, slow, sustained pulse of fairly high tension. It occurs usually in older people. In simple cases, the prognosis is good. Life may be long. Death results from exhaustion of the ventricle and syncope, or degeneration and asystole. It is usually associated with aortic regurgitation.

Aortic regurgitation may be primary, following an atheromatous and dilated aorta, or due to relaxation in aortic stenosis. It comes on gradually, being usually found in younger or middle aged people, and accompanied by a murmur of relative stenosis. There is great hypertrophy of the left ventricle, a diastolic murmur, traceable to the aortic valve, throbbing arteries, and Corrigan's water hammer pulse. The prognosis is graver than in all other valvular troubles, angina being common. Cerebral embolism may occur. It leads, sooner or later, to dilatation and mitral insufficiency.

Mitral disease is due to increased ventricular pressure, following circulatory obstruction, and the relaxation of an overworked, degenerating heart muscle. It also follows degenerative changes in the cords, papillary muscles, valves, and the fibrous ring of the opening.

Mitral regurgitation is the common result of all conditions which prevent a proper closure of the valve. Once the equilibrium is disturbed, it may persist for years. The signs are a mitral systolic murmur, transmitted to the left, and heard posteriorly, accentuated pulmonic second sound, and hypertrophy of both sides of the heart. The pulse is small, of low tension, and often dicrotic. The inevitable outcome is dilatation and its consequences.

Mitral stenosis is due to contractions and adhesions of the valve, and degenerations in the neighboring wall of the ventricle. It induces marked dilatation and hypertrophy of the left auricle, right ventricle, and auricle, and causes pulmonary congestion. The signs are presystolic thrill and a murmur of a churning character, hypertrophied right heart, left heart normal in size, and accentuated pulmonic second sound. The prognosis is unfavorable. Failure of compensation is the result of this lesion.

Pulmonary incompetence is exceedingly rare.

Tricuspid incompetence may be temporary—to relieve a laboring heart, or permanent. It is a common sequence of aortic stenosis, mitral incompetence and aortic regurgitation. The signs are systolic pulsation in the jugulars, swollen and pulsating liver, a soft, low, systolic murmur over the lower end of the sternum, accentuated pulmonic second sound,

increased cardiac dulness to the right of the sternum, epigastric pulsation and cardiac failure. The prognosis is bad. The treatment of all valvular troubles is to maintain the maximum of compensation.

Thrombi in the left ventricle may cause systemic emboli, whereas in the right ventricle they give rise to pulmonary apoplexy and infarcts.

Ulceration of chronically diseased valves may give rise to malignant endocarditis, manifested by rigors, fevers, chills, sweats, cardiac pain, sense of oppression, shortness of breath, and embolism. The prognosis is very grave.

The senile heart is often small, not necessarily hypertrophied, is pigmented, fatty, or atrophic. It shows brown atrophy. The arteries are tortuous, stiff and rigid. The patients are emaciated, sallow, anæmic and cachectic, with arcus senilis. The heart is small and its action weak. The pulse is small, rapid, it may be slow, at times, it is irregular and intermitting. Syncope is common. The treatment is mainly stimulants for the acute attack.

Angina pectoris, as a symptom group, is induced by all such cases as increase cardiac embarrassment by constricting the arterioles, by local cramp of the muscle, and by stretching, or compression, of the cardiac plexus. Fatty degeneration and mitral regurgitation tend to relieve the tendency toward it. It is least dangerous in fatty infiltration and gravest in aortic regurgitation, atheroma, fibroid degeneration, and aortic and mitral spasm. It is characterized by intensely agonizing, constricting, precordial pain. In mild attacks, it may be only dull and oppressing. In severer attacks, the pain radiates down the inside of the left arm to the fingers, to the sternum, the intrascapular region, the side of the chest and at times, to the right arm. The face is pale, anxious, and ashy, and covered by a cold beady sweat. The lips are livid. The patient at times is restless, but more often very quiet. The pulse may be small, hard, thready and irregular; nearly normal in rate, or slowed. The heart sounds are feeble, distant and valvular. The attack lasts only a few seconds, or minutes, and subsides. It may recurr successively. Death may occur at the height of the attack, or by faint and syncope. Relief is accompanied by eructations of gas, flatulence, passages of large quantities of urine, and exhaustion. Treatment, first for the paroxysm by amyl nitrite, nitro-glycerine, and morphia, followed by stimulants and carminatives, if needed; secondly, iodide of potash, arsenic, etc, as the cardiac state requires.

THE RENAL ASPECT OF ARTERIO-SCLEROSIS.*

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IN studying the renal aspect of arterio-sclerosis we come at once upon a broad division of cases into two classes, viz.:

1. These in which the symptoms indicate a more or less widespread vascular change, the kidneys not being specially involved, and

2. Those in which the kidneys are indicated as the chief cause of symptoms.

Into the vexed question as to whether renal change or general vascular change be primary in those chronic cases in which a fibroid and shrunken kidney has been found I do not propose to enter. This much however, seems to be beyond dispute, viz., that we find in practice arterio-sclerosis declaring itself as a widely generalized condition, with or without symptoms indicating that some one or more organs are suffering especially and as an affection apparently well limited to certain definite structures. It does not seem to me to be reasonable to speak of arterio-sclerosis of the cerebral vessels, arterio-sclerosis of the vessels of the heart, arterio-sclerosis of the digestive tract, not considering the changes inflammatory, and then when we find a similar condition in the kidney to talk of nephritis, and leave out of view the relationship in causation between the various clinical conditions. It must of course, be understood that these cases in which we have a history of chronic kidney change following a definite initial attack of nephritis are not under consideration.

Although I have spoken of a division into a generalized and a localized arterio-sclerosis as affecting the kidneys, it must not be supposed that in the one case some systematic influence is at work and in the other a merely local influence. On the contrary the symptoms and findings go to show that some widespread defect of metabolism is accountable for the changes. The proof of this lies in the fact that close observation demonstrates our inability to predict from general symptoms (and these will be found in all cases if carefully enough looked for) before marked defect is showing itself in any one locality, what the progress of the case will be, whether kidney, heart, or brain, or more than one of them, is to be specially affected. Variations in the pathological conditions found, however, would indicate differences in the toxic matters giving rise to the changes and, perhaps, peculiarities in the

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constitution of the structures affected. It is taken for granted that all disease is due to toxic influences, using toxic in the widest sense.

It has been said that all pathological changes and conditions have their physiological prototypes. There is nothing new under the sun. In this view the vascular changes found in scar tissues and in advancing years may be taken to represent those of pathological arterio-sclerosis. Whether that changes in other tissues induce the vascular alterations in old age or the opposite of this be true, at any rate in the condition of the arterial system we have an indication of the age of the organism. These changes have been described in detail and need not, therefore, take up our time, but I would like to point out that if what precedes be correct, arterio-sclerosis conditions should vary greatly in seriousness according to the age at which they occur, even if considered in part at least pathological. This, I think, is actually proven in practice. The urinary peculiarities indicating vascular degeneration are of relatively less serious import in the man of 70 years than in the man of 40 years, and this is not merely because the expectation of life in the septuagenarian is much less in any case than in the man of 40, but because the symptoms and progress in the younger man will be much pronounced and harassing. It may be asked why, if pathological arterio sclerosis be toxic in origin, do we compare it with the normal process of ageing? The answer is clear, that the ageing of tissue is due to intoxications, it may be of various kinds. There comes a time in every chemical experiment when apparatus must be cleaned and renewed if results are to be accurate; environment prevents the completion of this process in the case of the human crucible and continual small accretions finally render it useless.

Anatomy.

The kidney in arterio-sclerosis, not specially affecting the kidney.—Here we find changes such as are seen in old age. The whole organ is somewhat reduced in weight, it is firm to feel and gives one the impression on handling that the fibrous elements are increased. The capsule peels fairly readily, however, and, whilst both cortex and medulla are reduced in amount, their relative proportions are preserved. The appearances are suggestive of an evenly diminishing blood supply. Small cysts may or may not be seen beneath the capsule. The microscope shows the blood vessels somewhat thickened, perhaps but slightly, here and there fibrosed malpighian bodies together with slight increase of connective tissue, particularly beneath the capsule, where the tubules may be compressed.

The kidney in Arterio-Sclerosis where Renal Changes are marked. Here the fibrosis is well marked and widespread, the connective tissue of the kidney being greatly increased. The increase is not evenly and regularly diffused throughout the organ, some parts being much more pronouncedly affected than others, and in the areas where change is greatest vascular sclerosis may have progressed to complete occlusion. Why some vascular areas should be more affected than others we can no more tell than in the case of other organs. The microscopic findings vary with the fibrosis, the destruction of secreting tissue being marked and due evidently to both direct external pressure upon the tubules from new tissue and internal changes in them resulting indirectly from it.

The Urine in Arterio-Sclerosis.

In arterio-sclerosis whether discovered through patients seeking relief from symptoms or in apparently quite healthy persons who may be, *e. g.*, applying for life insurance and so subject to examination, the urine gives definite and perhaps in all cases, characteristic information. I would not like to say that in all cases the results of a single examination can be taken as positive proof, but I am sure that even where other means of diagnosis may give dubious information, careful, repeated analysis of the urine will justify at the very least the opinion that the conditions which will ultimately produce marked arterial changes are operating. I am speaking now of distinct pathological sclerosis. not the condition of normal ageing.

The quantity of urine in 24 hours varies, and is, where the kidney is not specially involved, about normal, rather lessened than increased. Its color is more often on the dark side than the light. The appearance is usually clear and limpid and a permanent froth is often found on it even where albumen cannot be demonstrated by any ordinary tests. This froth has the peculiarity that its bubbles are small compared with those forming on a distinctly albuminous urine. Pouring from a bottle which is being shaken demonstrates the difference. The sediment, if any, is usually nebecular and often shows uric acid or oxalate of lime crystals.

The reaction is acid and very commonly markedly so.

Specific gravity varies of course, but the tendency is to a fairly high mark. If kidney changes advance, then later, with decreasing elimination, relative specific gravity becomes lower.

Phosphates are often diminished and this is noteworthy.

Chlorides vary within normal limits.

The amount of urea varies greatly. In some instances it is considerably increased beyond the average for a time. As kidney action fails it diminishes.

Albumen is found in small quantity, often the merest trace, at some time or other in nearly all cases. This is true at any rate of such as are examined on account of symptoms. Where symptoms, referrible to kidney lesion, become more prominent it tends to persist and the quantity may increase markedly. Early in the disease the appearances of albumen may be at such intervals or in so small quantities that any but the most careful and exhaustive examinations will fail to detect it The minority of cases in which albumen is never found is small and the results of microscopic examination should suffice to put one on the right track.

Indican is often present in excess. It is of importance to make this test. It is quite within the possibilities that a chief factor in the starting production of arterio-sclerosis is absorption of toxic matters from the digestive tract which, acting locally to begin with, finally bring about widespread faulty metabolism. Indicanuria is taken as one of the chief signs of this condition of affairs. The corresponding compound skatol is also found in some instances.

The Microscope.

For microscopic examination where arterio-sclerosis is suspected, the solid matters of urine should be thrown by centrifuge. In the ordinary process of sedimentation by standing in a tube for 24 hours much that is of the greatest importance and interest will fail to drop. Objection has been taken to the centrifuge on the ground that it gives us as sediment that which is not to be regarded as pathological unless falling by its own unaided gravity. Extended experience shows, on the contrary, that without it much may be missed which it is of vital importance to discover. The sediment in the urine of arterio-sclerosis exhibits some elements so constantly and increasingly as the disease progresses that taken along with the symptoms even though they be few, its examinations should be of the greatest possible use as an aid in diagnosis. The findings in advanced kidney cases and in those much less damaged are often practically the same, although different elements preponderate in different cases. Hyaline casts are prominent and may be few or many in numbers. The more marked the kidney aspect of the case the more numerous are the true hyaline casts. Cylindroid are *always* found and the less the kidney is involved the more numerous the cylindroids relatively to true casts. Study of these elements will, I think, convince one of the close relationship between them, the one apparently passing over into the other. Both are the result of irritation, and whilst the so-called *true* hyaline cast appears to lose something of

importance the cylindroid gains from widening experience. The *constant* presence of cylindroids alone is a very sure indication of vascular mischief which may end in marked sclerosis. Epithelial cells of various forms are often present but are of no special diagnostic value, as it is usually impossible to tell from what part of the urinary tract they come. Blood cells, both free and adherent to or embedded in casts or cylindroids, are seen sooner or later in most cases. In oxaluric patients even before it is at all likely that arterial change has made any considerable progress it is not rare to find blood cells embedded in cylindroids ; much less frequently does this occur where uric acid is the crystal.

Crystals of both oxalate of lime and uric acid are common in these cases. Their persistent recurrence should be considered as important.

In the above we have the sedimentary elements which call for most attention in the urine of arterio sclerosis. You will see that I have confined myself practically to a qualitative analysis of the urine except in so far as urea is concerned. Undoubtedly the solution of many of our difficulties in connection with the disease, whether considered as a general or local process, lies in far more elaborate chemical investigation of the urine and other excreta than our ordinary clinical facilities will permit of. It is impossible to doubt that errors of internal chemistry sufficient to give rise to changes so disastrous as are those under consideration should not be represented in some detectable measure in the secretion of the kidneys. Results and processes heretofore have not been of great practical value to the practitioner and are quite outside our time limits even if I had the knowledge and skill to speak of them.

Symptoms.

The symptoms in arterio-sclerosis which would naturally be referred to the kidney are those classed as uraemic. When we inquire what is uraemia then difficulty begins. It is quite impossible to believe that all of the symptoms of uraemia are the result of the partial failure to excrete or secrete or both, on the part of the kidney. We are forced to think of the more or less diffuse character of the vascular lesions and of the consequent manufacture and absorption of poisons which would have at least some part of their effect irrespective altogether of kidney action. Whilst then the term uraemic is useful so far and until our knowledge is more accurate, it should not be allowed to lead us away from the widest possible view in the matter. Occasionally certain special phenomena such as blindness from hemorrhages in the retina or manifestations of improper heart action—may lead to discovery of serious kidney change and thus, in a sense, may be called symptoms of it ; but

here again we must remember that they are indications of vascular changes in these organs themselves and in the circulatory apparatus generally.

In closing let me state briefly the two chief conclusions that I have reached in a clinical and laboratory study of arterio-sclerosis looking specially to its kidney relations.

1. We must not allow attention to be fixed upon the changes in one organ to the exclusion of consideration of parallel changes in other organs and the vascular system generally, and this specially if we are to arrive at correct views as to causation and treatment.

2. Examination of the urine can be made of great value in any case of arterio-sclerosis even when incipient.

CEREBRAL ASPECT OF ARTERIO-SCLEROSIS.*

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PHYSICIANS of the past generation had spoken of arterio sclerosis under the head of "brain softening." When attributing this condition to arterio-sclerosis with its accidents one must not forget that defective metabolism and altered blood are precedent conditions or causes and their destructive process may be as readily spent upon the parenchyma of organs as upon vessel walls. Alterations in the cerebral neurons arising from the same cause as arterio-sclerosis may keep pace with the changes in the arterial wall. This is to be kept in mind as an explanation of the mental and sensory symptoms found in the early and late stages of arterio-sclerosis. So many theories in medicine based upon the cardio-vascular system have perished that it is difficult to commend any enthusiasm for theories of pathological phenomena so based. Leaving all theories aside, thickened arteries constitute an index to a variable clinical condition Arterio sclerosis has a tendency to spend its worst storm upon certain vital organs. Brain vessels may be diseased without much determinable evidence elsewhere. Syphilitic arterio-sclerosis may produce nodular changes in the circle of Willis and sylvian arteries while sparing the rest of the arterial system within the skull, thus showing a very selective action of the syphilitic virus.

The changes due alone to cerebral arterio-sclerosis can be classed as (a) cerebral anaemia, local or general, arising from diminished vessel lumen with or without thrombosis; (b) cerebral hæmorrhage.

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The result of local anaemia are variable, depending upon the situation and its completeness. Thrombosis of a terminal artery generally gives rise to an area of local softening. General brain anaemia arising from arterio-sclerosis without vessel plugging is said to give rise to attacks of vertigo, fugitive motor and aphasic symptoms. Transitory paralysis of motion and speech, while very suggestive of syphilitic arteritis, is not peculiar in luitic patients. It is the warning signal of conditions of thrombosis whose onset may follow these warnings with all the clinical picture of an apoplectic stroke. The cerebral anaemia affecting the medulla is a cause of hightened tension in arterio-sclerosis. Cases of arterio-sclerosis, unaccompanied with renal cirrhosis, showing considerable increase in tension, should be suspected as marked cerebral types of the condition. The increased blood pressure, being called up by the cardio-vascular centres in the medulla, overcome the diminished lumen of the cerebral arteries. I shall return again to this question of cerebral anaemia and high tension under the head of cerebral hæmorrhage. Arterio-sclerosis of the vessels supplying the medulla have been charged with the causation of Cheyne-Stokes respiration, Adam-Stokes syndrom and a form of pseudo-bulbar paralysis.

The most common motor symptom of arterio-sclerosis is hemiplegia, with or without aphasia. As pointed out before, the transitory hemiplegia or aphasia is significant of empending thrombosis, and its occurrence, in a syphilitic subject, should be met by heroic doses of iodides and free mercurial inunctions. Alternating hemiplegia from arterio-sclerosis is not unknown. I saw a case under the care of Dr. Hurlburt, of Mitchell, who had had paralysis of the left arm two days previously. On the day of my visit, the left arm was virtually recovered but the right arm was completely paralyzed. There was no cardiac disease. The urine showed a trace of albumin and casts. At my visit his condition was not serious but, two days after, he became suddenly comatose and died in a few hours. While the case may have been uræmic paralysis, I am inclined to look on it as arterio-sclerosis terminating in thrombus.

As pointed out by Sir William Gowers, cerebral thrombosis may give an exact clinical picture of apoplexy. In cities, where syphilis is common, the majority of cases of hemiplegia surviving the first week are thrombotic. This was well expressed by a well known neurologist who said: The post mortem statistics of general hospitals show that the majority of cases of hemiplegia are due to cerebral hæmorrhage, while post mortem statistics of nerve hospitals show that hemiplegia in the vast majority of cases is due to thrombosis. These apparently contradictory statistics point to the frequency of early death in cerebral hæmorrhage and the chronic character of thrombotic cases.

We now come to the consideration of cerebral hæmorrhage. Bouchard and Charcot, in 1866, pointed out that rupture of a miliary aneurism is the cause of cerebral hæmorrhage. This view of cerebral hæmorrhage, harmonizing with the noticed vessel condition of hæmoptysis, is being generally accepted by neurological authorities. It may not explain all forms of hæmorrhage; indeed, there is evidence that in the cerebral structure, adjacent to new growths, softening may weaken a vessel and rupture occur without antecedent aneurismal dilatation. I might remark, while passing, on the frequency of hæmorrhage into and surrounding new growths of the brain, constituting not infrequently a terminal condition. The form of apoplexy known as ingravescent is of great interest. It is onsetted with fugitive symptoms, but unlike those that precede thrombus, they are neither hemiplegic or aphasic but rather the symptoms of shock, viz:—"The face becomes pale and the body cold and the pulse very weak, faint and exhausted he may fall to the ground," or "Have a slight convulsion after a little he may walk home; he is quite sensible but oppressed. Then he becomes flushed, he answers questions slowly, and gradually he sinks into coma from which he rarely recovers." Fagge attributes this picture and its terrible fatality to thrombosis and declares that all subsequent writers have recognized the truth of it. It is the frequent picture of meningeal hæmorrhage of traumatic origin and is of great medico-legal interest.

English pathologists invariably refer to the frequency (about 80 per cent) with which granular contracted kidney and arterio-sclerosis are associated with cerebral hæmorrhage. Continental authorities seem not to have found the kidneys cirrhotic in anything like a similar proportion of cases. The effused blood in cerebral hæmorrhage encroaches upon the blood supply of the brain through increased intracranial pressure. This necessitates increased arterial tension to force blood into the cranial cavity. The tension will mount with the increasing intracranial pressure. This mounting of arterial pressure serves to help diagnose apoplexy from other forms of coma. Any form of acute compression, threatening to produce anæmia of the medulla, will be attended by a rise in blood pressure to restore the local circulation. The local anæmia, however, may become so severe as to lead to failure of the vaso-motor centres and a rapid fall of blood pressure. The respiratory centre becomes likewise embarrassed. (See Harvey Cushing's article on "the blood pressure reaction of acute cerebral compression, illustrated by cases of intracranial hæmorrhage," *American Journal of Medical Science*, June, 1903. See also Mutter's lecture in *American Journal of Medical Science*,

1903, Vol. cxxiv., page 393.) While passing, I might mention the great value of Babinski extensor great toe reflex as a diagnostic sign, separating apoplexy from other sudden comas. The immediate appearance of Babinski's sign after cerebral hæmorrhage makes it of great value. I saw with Drs. Hadley Williams and McLaren, five hours after a runaway accident, a comatose patient with a view to operation. Babinski's sign was present in both feet, accompanied with forced movements on the right side The left side was flaccid and gave the most marked Babinski sign. The patient was trephined over the right middle meningeal artery and a large subdural clot found and removed. The opinion held before operation from the double Babinski's sign that the hæmorrhage was bilatual and extensive, was shown by the temporary character of the improvement and the death of patient the following day.

Before leaving the subject of cerebral hæmorrhage, it has often been a subject of interest whether there are persons of peculiar build or body habit who are particularly prone to apoplexy. It would seem to amount to this:—Do cases of cirrhosis of the kidney show peculiar build or body habit, for it seems that the vast majority of cases of apoplexy are cases of renal cerrhosis? Apart from this line of argument, clinical statistics will show cases of apoplexy to be very frequent in those of spare frame. It would far exceed my allowed time to enter into the mental and sensory side of arterio-sclerosis. The meaning of the term "brain softening" to the laity show how frequently mental symptoms attend on arterio-sclerosis. The relation of arterio-sclerosis to testamentary capacity is of interest to the medical expert. In the treatment of the cerebral type of arterio-sclerosis the entire body must be considered before treatment is instituted. The patient should be examined from head to foot in the naked state. The state of nutrition of the skin, muscles, and the amount and position of the cutaneous fat constitute inarticulate speech to the experienced eye. The normal disposition of the female and male fat are very different. The former carries her fat in the breast, buttocks and upper half of her four limbs, particularly the legs. The rest of the body in most cases is avoided in this warehousing in the female. The male warehouses his fat on the neck, between the shoulders, and in the abdominal cavity. The female, after the climacteric, has a tendency to take on the male type in fat disposition; but where one sees any well marked type of this departure it will be found to be accompanied by arterio-sclerosis. In male patients, a departure towards the female form of fat deposition, viz., on the limbs and buttocks, is of similar significance. It may be said that these pathological cases of fat disposition is an attempt to revert to the type seen in the

child. These cases of arterio-sclerosis require massage, baths, careful dieting and regulation of out door exercise. They are always anæmic and this feature is not unfrequently overlooked, because the skin of their faces looks rosy. In syphilitic cases of cerebral arterio-sclerosis iodides and mercurial inunctions should be given heroically.

In the non-syphilitic, hypodermic use of artificial serums have given, in some hands, good results in cases of vertigo in arterio-sclerosis. Trunicek's salts (soda chloride, soda phosphate and magnesium phosphate, made into a solution 10 times as strong as in the normal serum; dose of this 1—2 C C hypodermically) have been given and supposedly good results occasionally obtained. Trunicek's salts can be given in tablets several times a day by the stomach.

EYE SYMPTOMS IN ARTERIO-SCLEROSIS.*

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CHANGES in the retinal vessels as a result of arterio-sclerosis are seen with comparative infrequency, though they are not so rare as was formerly supposed. Raehlman found visible changes in twenty-four out of forty-four cases of arterio-sclerosis. Disturbance of function is not always present, and, in the absence of subjective eye symptoms, no doubt many cases escape observation. When vision is affected the reduction varies from slight fogginess to complete binocular blindness.

The changes to be seen by the ophthalmoscope are: (1) Pulsation of arteries and veins. (2) Tortuosity and attenuation of the vessels; (3) white streaks along the margins of the larger vessels; (4) hemorrhages; (5) rarely, a beaded appearance of the smaller vessels is seen, due to the formation of small aneurisms.

The third symptom mentioned—the formation of white streaks or lines along the margins of the larger vessels—is thought to be pathognomonic of senile arterio-sclerosis. It may, however, be very difficult to differentiate this from the somewhat similar appearances which follow neuro-retinitis. In the latter condition, however, the calibre of the vessels is not usually constricted as it is in arterio sclerosis.

Pulsation of the vessels is most likely to be seen early in the course of the disease when the arterial tension is high. Several varieties of of abnormal pulsation are seen, but the most common resembles a rhythmic wave, beginning at the papilla and spreading out over the retina. The pulsation is produced by a difference between the intra-

* Read at the Ontario Medical Association, June 18th.

ocular tension and the general arterial tension. The most marked cases of pulsation I have seen have been associated with aortic insufficiency.

Tortuosity of the vessels is most noticeable at points where vein and artery cross, and it is at these points that hemorrhages most frequently occur, and that the pathological processes are most marked. Lateral displacements and flexions are more common than real changes in calibre.

The changes in the retinal vessels consist of connective tissue formations complicated with degenerative processes which affect the intima and result in thick, rigid vessel-walls. The media is thinned and shows hyaline degeneration, while the adventitia is thickened. The smaller vessels show greater changes proportionately than the larger ones. Constriction is present in those portions of a vessel which remain hard, and where softening takes place the wall yields and forms an aneurism. This process in the veins causes a spindle-shaped varicose appearance.

All these conditions are present more frequently and extensively in the choroid, but their demonstration is rarely possible with the ophthalmoscope.

Bader describes the process as a thickening of the walls of the small arteries of the retina and choroid by a homogeneous, strongly reflecting, not quite transparent substance. Consequent upon these alterations in the arteries and upon the hemorrhages, are degenerative changes, fatty degeneration of nerve fibres, infiltration with round cells and separation of the fibres by hyaline fibroid material. This explains the loss of vision.

Hemorrhages, both flame-shaped and irregular, may occur at any stage. The larger hemorrhages are likely to be at points where the veins and arteries cross, as already stated; the smaller flame-shaped ones at any point in the nerve fibre layer of the retina.

Several cases in elderly people have come under my notice in which small sub-conjunctival hemorrhages, developing without apparent cause, have been the immediate reason for the consultation. The conjunctival lesion appeared trifling, but examination of the fundus showed an advanced arterio-sclerosis. One of these patients died suddenly a short time ago while taking a cold bath.

The recognition of arterio-sclerosis of the retina is of value, as it indicates similar disease of the cerebral vessels. This indication may be regarded as positive even when the vessels of the general circulation are apparently unaffected.

To the oculist the information is important as it affects the indications for treatment of concurrent eye lesions and the prognosis in operations.

My experience also leads me to believe that epistaxis in old people, without apparent cause or after violent emotion, must be regarded as a symptom of incipient arterio-sclerosis, *i.e.*, it occurs in a pre-sclerotic stage when the only recognizable symptom may be the heightened arterial pressure. Later on the attacks diminish in frequency, when there is lowered blood pressure and lessened cardiac activity.

THE THERAPEUTICS OF ARTERIO-SCLEROSIS.*

By JOHN L. DAVISON, B.A., M.D., C.M., M.R.C.S., Eng.
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AN imperfect supply of Arterial Blood is so universally harmful to the animal economy, and so far-reaching in its effects, that the possible alleviation or cure of a disease of the arteries, upon the integrity of which depends the blood supply to every part, can only be considered as one of the greatest importance. Accidents and infections barred, death generally comes through Arterio-Sclerosis.

To begin at the beginning. I hold that young persons of both sexes should be taught that over-exercise is just as baneful, in a different way of course, as under-exercise. As to the latter, there are not many children who do not play naturally, as the lambs do; and the tendency in civilized nations with highly differentiated sports, is altogether in the direction of over-exercise. True, in early youth and adolescence, the safety valves are in such excellent condition that even a certain amount of abuse of the machine-engine seems to leave no permanent impairment. But too often the mechanism is taxed beyond what even young healthy flesh and blood can bear without injury. The spur of competition in games, among the young men of to-day, leads to a strain, especially of the heart and arteries, which makes itself felt, not only at the time, but all through life. Just as alcohol acts, partly by exciting too strong action of the heart, so undue, prolonged, or severe exercise induces sclerotic changes in the arteries; and young athletes are "old men" as to their arteries by the time they are 25. Life Insurance Companies look with disfavour on athletes as applicants for whole life policies, knowing that often in the dust of the arena, is laid the foundation of future and early disease of the organs of circulation, with the inevitable shortening of the expectation of life. A case in point. Not long ago a young man, a school teacher, aged 23, applied for life insurance. It fell to me to examine, and decline him. He could not realize that he was not a gilt-edged risk. He was a power on the football field, and a well-known athlete. But, heredity aiding perhaps, he was about 60 or 65 years

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years old according to Cazalas rule, though he had seen only 23 summers. Indeed I have examined many men of 55 or 60 whose arteries were younger than his were.

I need not enumerate the signs: hypertrophied heart; tortuous and degenerate arteries; displaced apex beat; accentuated second sound *et al.* They have all been enumerated. Such persons are hard to treat. It requires time, tact and patience to get them to understand that they are not what they have always thought themselves, "In the pink of condition;" and accidents barred, reasonably sure of a long active life. Pity it is also, that the young men who thus cripple themselves in early life are the ones who have the most pluck, stamina, earnestness and energy, and should therefore, make the best, and most progressive and useful citizens.

So much in brief from Prophylaxis in the early period of life, when the abundant energy overdoes the natural instinct of the young animal to play. We now naturally come to the consideration of over-work in the ordinary affairs of life. The fact that men especially, and not a few women, habitually overwork themselves is patent to every physician. The expression, "The Strenuous Life," has become trite even in its short life, but it expresses exactly the condition under which a great majority of persons living under the newer civilization exist. Constant teaching is needed to impress the truth upon them that the strenuous life kills early. Even when the truth is borne in upon the combatants, the struggle goes on as fiercely as ever. Here and there *one* has sense enough to realize that wealth, titles, office decorations, etc., without health are not to be desired; and that the sheltered life is the one which makes for the true happiness of the individual—that John Tompkins with a good digestion is really happier than Jay Gould with apepsia.

The temperament, of course, has much to do with arterio-sclerosis. The slow-moving, phlegmatic individual, does not weaken and exhaust his nervous force by allowing trifling irritations to produce great activity, and thus wear out the circulatory apparatus; while the active, sanguine, nervous man puts his heart and blood-vessels to do superfluous, and for the most part purposeless work, inducing early senescence. So a part of your duty will be to teach your patient to cultivate the *festina lente* and cheerful habit of kind, contentment, and self control. I have said enough to direct your attention to the duty you owe to your patients and fellow-citizens, in speaking in season and out of season, against the fierce struggle for wealth and supremacy. The millions may come—not however, to many, though the struggle be for all—but with little power to enjoy them.

Temperance.—It is given to few persons to have the natural, normal balance, which causes them to lead temperate lives. We have been

accustomed to think of temperance, as the very limited use, or total abstinence from alcohol. Now, while no body of men have more reason to deplore that terrible scourge the abuse of alcohol than physicians have, so also, no other body should so fully realize that temperance runs along other lines than abstinence from whiskey consumption. Intoxications take place from too much nitrogenous food, from constipation, from mental worry, from over-work, from tobacco because of a jaded and worn out nervous system, from the exigencies of social life, etc.

I do not speak of uric acid, that scapegoat in medicine, which some of our brethren used to demonstrate to admiring patients in their blood, by means of a pocket lens. Recent investigation discredits this product entirely as the causative agent in gout and so in arterio-sclerosis. In THE LANCET of January, 1903, Professor Woods Hutchison shows "that uric acid is no loger regarded as a product of the improper combustion of proteids into urea," also, "that uric acid is innocuous, and that variations in its excretion are purely symptomatic." This is a blow to many a practitioner who gives uric acid as a cause for hosts of complaints of which the pathology is nebulous, from ingrowing toe-nails to appendicitis; all going to show that we still as in the days of Job, "darken counsel by words without knowledge."

I fear that there is much intemperance of a sexual nature; and that sexual neurasthenia is quite common, both among men and women. At any rate we know that intemperance along any line tends to arterio-sclerosis—here again phophylaxis is of much more importance than drugging.

I need proceed no further in this direction, having briefly called your attention to the necessity of practising temperance in every phase of life, if the sum of years is to be complete, and the machine to do its best work to the end of the chapter.

To speak more definitely, let me urge that the patient suffering from this disease should live a quiet, well regulated life, and avoid excess of everything, eating, drinking, pleasure and excitement of all kinds. Alcohol should, in my opinion, be interdicted, though some physicians think light wines may be allowed. I would like to say, that in the vast majority of cases where the patient takes a stimulant, it is the alcohol he is after, and not the particular flavour which he may enjoy more or less, and it is the alcohol that does the injury whether it be in the guise of beer, wines, spirits or liqueurs. I do not deny that the use of light wines is less injurious than that of heavy spirits, but the difference is largely due to the diminished amount of alcohol taken.

As to Food. It should be light and easily digested, so that no irritating products formed from decomposition of meat nutrition, whether

uric acid or xanthine bases, or poisonous ptomanies, shall act upon the vessel walls stimulating them to proliferative processes, or anatomically injuring them as do lead, ergotin, etc.

Rumpf advocates a diet low in lime salts. His suggestion is one which does not include milk. It is meat, 250 grm.; potatoes, 100 grm.; bread, 100 grm.; fruit, 100 grm.; fish, 100 grm.; along with butter and sugar. The patient may take vegetables instead of fruit, but is not allowed cheese, eggs, rice or spinach. This diet contains ten times less lime salts than a meat diet. He allows only distilled or boiled water as a beverage. It would seem that this plan of Rumpf's is reasonable, if the arteries show signs of calcification, but arterio-sclerosis is not necessarily calcification, and so every case would not come under this line of treatment. It has been observed that certain diseases, notably epilepsy and arterio sclerosis, are rare, if not quite absent in herbivorous animals. The hint is taken and I believe with good results in respect to the treatment of epilepsy—why should it not be taken in regard to arterio-sclerosis, and a vegetable diet prove equally prophylactic and curative as in epilepsy? Unfortunately the large ingestion of vegetables would tend to the deposition of lime salts. So it seems that there is no rule which will apply to all cases and at all stages, except this one: less food and of a bland, unirritating character, easily digested, in other words, temperance again in the matter of food.

Now as to Syphilis. May I say that I think the symposium at some future meeting of this society on the old subject of enthetic diseases would be productive of much benefit. We all see syphilis mentioned constantly, as present among us, and as causative of many and varied lesions, especially in the nervous system. But I think a heresy has crept in during the past two decades as to the necessary treatment of this disease. Owing to imperfect therapeutics, the awful effects of syphilis shew years after, and I have no doubt that every one who hears me has seen pitiable cases of ruined lives which might have been spared as useful and happy ones had the necessary care and time been taken in the early treatment of the disease. By early treatment I mean that of the first three years after infection. The heresy, to my mind, is that Johnathan Hutchinson's old rule of three years of mercury and iodide of potash; then six months of iodide of potash; then,—no signs, marriage allowed has been abridged with deplorable results, both to patient, his wife and offspring. Of course, the therapeutics of syphilitic arterio-sclerosis are the therapeutics of syphilis. I might as well say here, that the drug treatment of the syphilitic process, necessitates the free use of mercury, preferably by inunction, and iodide of potash internally.

When a patient gets near the end of the chain the question often arises as to spas and mountain air, etc. I can only say that there is a great volume of testimony regarding the benefits which arise from such treatment. I have known of at least one case of angina pectoris, which was given up by specialists in New York City, recover a fair amount of comfort, with an additional margin of life, by a stay at Bad Nauheim, with graduated exercises and modified Schot movements. The question is too large to enter upon here, but if I ever have a case of arterio-sclerosis which seems absolutely hopeless, I shall recommend Nauheim, if the purse will allow.

Altitude. Generally speaking, persons suffering from arterio-sclerosis do not do well at even a modern elevation, and all high elevations are positively dangerous.

I can not enter upon even an enumeration of the remedies and methods of treatment for arterio-sclerosis of the brain, heart, kidneys, etc., which while pertinent to my subject, properly belong to treatment of diseases of these organs respectively. It is left to me to say a few words as to the drug treatment of arterio-sclerosis *per se.* And fortunately for your patience there is but one class to which I need refer, viz., the iodides. It would be interesting to be able to say why and how these remedies give such good results, but with our present knowledge we must be content to use them empirically, nothing doubting that their long continued use will result in good to the patient.

Lauder Brunton, in his lectures on The Action of Medicines, a most admirable and helpful work let me say, something after the style of Fothergill's masterpiece of book teaching, his Hand-book of Treatment has two or three pages which are worth being committed to memory in this connection. He shows that iodide of potash given continually for months and years for other diseases, such as rheumatism and stiffened joints, effects wonderful changes in the arteries. He also shows the very beneficial effects of baths and massage in the same direction.

These iodides, the "medicines of the arteries" as they are called, must be exhibited for long periods of time in order that their beneficial effects may be seen. When the potash salt unduly reduces the heart's action, the sodium salt may be used They should be given in fairly large, but not heroic, doses, say 10 or 20 grains well diluted before meals. Milk forms a very suitable vehicle for their administration. Some practitioners prefer tincture of iodine in doses of 10 minims in sweetened water before each meal. The advantage of the tincture is said to be that "the iodine selects its own basis and thus in no way irritates the stomach or degenerates the body."

SOME BUSINESS ASPECTS OF MEDICAL PRACTICE.*

By DR. N. A. POWELL, Toronto.

MR. PRESIDENT AND GENTLEMEN,—In all the twenty-three years' existence of this association, the subject of the financial results of medical practice has never received formal consideration. When this fact was innocently mentioned by me a short time ago at a meeting of your committee on papers and business, that puissant body passed an order-in-council making me responsible for the presentation of this question before you. In spite of my objections and my suggestion of others for the honor, the committee next found a place for my name on the preliminary programme. When it so appeared, a certain person, whose advice I often receive, and perhaps not quite so often adopt, enquired with airy sarcasm if the chances for one's being selected to read a paper before the O.M A. was in inverse proportion to one's knowledge of the subject to be taken up. I side-stepped her question then, but in the privacy of our closely tyled session I freely admit that, like certain medical examiners we have known, I may ask questions for which I have no answers ready.

For more than a quarter of a century I have been watching the course of medical men in practice, and trying to ascertain the causes of complete or partial failure in those who might reasonably have been expected to have been successful. Many die leaving no provision for those dependent upon them, others become medical derelicts, floating half-submerged, useless to themselves or to the world, and a positive danger to all who approach them unguardedly. A third, and always a larger, class have simply been disappointments to all who, in earlier years, had builded hopes of success for them. I present to you no statistical study, but give you instead certain clinical impressions, and shall ask how these accord with what has fallen under your own notice in watching the drift of medical life.

When I first entered practice I think it could be safely said that the larger proportion of those who did not succeed owed their failure to the use of alcohol. That is not so to-day ; the profession to-day is moderate in the use of liquors, as a result of increasing self-respect and self-control ; misuse of them is, in consequence, a factor having far less importance than it had even a few years ago. The doctor who now drinks to excess cannot keep the pace, and must go down and out more rapidly than of old. In this country twenty-three may be taken as about the average age for entering practice, and fifty-three as the age of death for

* Stenographic report of an address delivered before the Ontario Medical Association, Toronto, June 18th, 1903.

physicians as a class. This gives us thirty years as a period within which success is to be won or lost. The time and money expended in obtaining an education and gaining a practice will represent not less than five or six thousand dollars. Since most Canadians are comfortably poor at the start, or at least are free from the paralyzing influence of wealth, we may estimate that it will take four years in the country and eight in the city for the average graduate to have cleared off all arrears of debt and reached a self-supporting basis. The modern physician, it must also be remembered, is a highly evoluted individual, with tastes that must be satisfied, and needs that must be met, in addition to the ordinary living expenses of himself and of those dependent upon him. Such provision for age and sickness as every prudent man sets about making must also be taken into account.

It has been said by some one that for an ideal practitioner there are three requisites: First, he must be a thorough gentleman; second, he must be a thorough physician; and, third, he must be a thorough business man. I believe that the third is the attribute most frequently lacking, and in this lies the cause of most failures.

Let me ask your attention to a few points which appear to suggest the cause of some failures. One difficulty our craft meets as many others are meeting it—the demand for first-class pay by those only able to do third-class work. That is the trouble in all other Unions as well as in ours; however, we have no walking delegate to come around and say, "This man who has made a botch of the case must be retained. You shall not discharge him and employ a better man in his place." (Laughter).

I think it is bad bnsiness for a physician in general practice, making an income of, we will say, over $3,000 in the country, or $4,000 in the city, to attempt to be his own book-keeper. His time is, or ought to be, too valuable for such work. If he tries to do so he will have to take the time either from his patients, or from his own needed rest and recreation. The best book-keeper he can possibly have is the one who has shown either that she had sufficient confidence in him or that she had sufficient confidence in her ability to manage him, to have married him. (Laughter.)

Year by year the world's work is passing, in larger and larger proportion, into the hands of women. They have long had more than a working majority in our churches. Some one puts it this way:

"In the world's broad field of battle,
In the bivouac of life,
The average Christian soldier's
Represented by his wife."

I do not say that this is right, but one cannot deny that it is so. Personally I am in accord with George Ade when he says, "It is a poor plan for a man to expect to slip through St. Peter's turnstile on Ma's ticket. (Laughter.) But no one else can take the same interest in a physician's books as the *right* sort of a *wife*—if only she be trained and trusted.

Accounts more than six months old in the city are far better handled by a collector—an honest, kindly and tactful man—than by the practitioner himself. Such a one collects money which would otherwise never be obtained, and more important still he helps to weed out the people who are able to pay and won't—always the most unreasonable and exacting of patients. In the country it is a most valuable plan to try and get all accounts of a year's standing closed by notes. This will seldom be objected to if the notes are drawn, "without interest if paid when due; otherwise, with interest, until paid." The addition of interest hurries up the payment. I did some years of country practice, and without having recourse to the courts, excepting once to vindicate a principle, I was able to collect 92 per cent. of all accounts on my books—a fair and reasonable proportion. Knowing the circumstances of one's patients, the charges can be made *right* to start with, and discounts never given excepting on account of poverty.

Another thing, in my opinion it is bad business for a man to neglect his correspondence, or to sit up late into the sleeping hours with it and his other writing, when by the combination of a card index system of case-histories and chest charts, a vertical filing system for correspondence, and all other records, a type-writing machine, and a stenographer coming in for a few evening hours each week, he can keep his writing not simply up to date, but up to the hour. So few physicians seem to appreciate the value of such modern aids to rapid and accurate work that I have thought it worth more than a passing reference. The necessary outlay is almost trifling, and by such a combination one is aided in obtaining that *maxima par eruditionis*, which may be taken to mean the art of knowing where any desired information can be at once found. I had a compliment paid me along this line recently; two friends were in consultation. One made an observation, and the other asked, "How do you manage to carry such things in mind?" The other replied: "I do not try to do so. When I want a thing I 'phone Powell, and he looks it up while I hold the line."

When a man has within him the potentiality of success *without* lodge practice, I believe it is bad business to ever touch lodge practice. (Applause.) The late Dr. George Wright, a conscientious man in practice if ever there was one, said to me in an almost pathetic way, "If I

had only left lodge practice severely alone, and given the time it took to study, and to cultivating the practice I wanted to keep, it would have been far better for me." As a rule we get the value we challenge for ourselves, and lodge practice tends to lessen a man's fee-earning power and to handicap his future. Granting that there may be present an urgent need for keeping the pot boiling, if this is done by using lodge practice as fuel, it will, in the long run, prove even more expensive than coal did last winter.

It is bad business not to be, and to keep, good friends with our medical neighbors. Some are not easy to live with; this for the reason that lineal descendants of Ishmael, of Ananias, and of Caliban, occasionally drift into the medical profession, and make trouble for us. After differences, they are ready to make up and bury the hatchet—but they take care to leave its handle sticking out. (Laughter.) No honorable physician can fight with their weapons; he would have no better chance than a clawless cat in Hades. Perhaps the best way is to strive for that height of calm philosophy which will enable one to consider the annoyances they cause, as being purely educational.

Every medical man needs and should have one or more fads. How shall we define a fad? We must make the attempt since Plato has told us that there can be no rational discussion without a definition. Fads, according to my friend, Dr. J. L. Davison, are "mental antitoxines which overcome the poisons generated by cerebral over-activity." (Applause and laughter.) The best of these, in my judgment, are shooting, fishing, photography, and canoeing, but a score of others may be named for second choice. Even that refuge for senile decrepitude known as golf has a field of usefulness. Some of my friends, infected with the virus of this game, seem to think its field is a prairie.

It is bad business for a physician to go without a fairly long annual, and a number of week-end, or other interstitial holidays. No grass growing under his feet means only too often an early crop growing over his upturned toes. From labors so exacting and imperative as his, duty to himself, to his family, and to his patients, requires that he should take the prescription he so often gives to others, and should seek rest and change. His holidays should be arranged for, insisted on, and always taken. Our great dramatist has said that—

> "Universal plodding poisons up
> The nimble spirits in the arteries."

Happy the man who heeds the warning, and for whom, as Thoreau said, "The woods are full of solicitations."

It is bad business, it seems to me, to drop behind the procession for want of a good working library. Two or three good journals are

absolutely necessary. In addition to these the purchase and right use of the latest and best work, first in one specialty, and then in another, will help wonderfully to keep a man out of the ruts. Now, what do we find in the office of the average physician, let us say, down in Kentucky? Things are better here, of course. If there were any Kentuckians here I would say, down in Tennessee. Out-dated text-books, journals bound up and never opened after they come back from the bindery, and subscription sets forced by glib tongued agents upon their unfortunate purchasers. Only this and nothing more! What wonder that such a library, so-called, should become a factor in the failure of its owner rather than an aid to his success.

Trying to do modern surgery with an archaic outfit, or to do modern practice in offices unattractive, inconvenient, miserably equipped, dirty, disagreeable, and depressing, are causes tending strongly towards failure.

Let me ask a plain question: Is a man honest with himself or with those who trust him, when he attempts serious surgical work with outfit and preparation inviting disaster? If stinginess, and not poverty, has limited the equipment, how grave is the responsibility. Look, if you will, into the ordinary obstetric satchel! Is it ready for the conducting of an aseptic confinement, and for meeting all emergencies of child-birth? Let each one of us, when he sits alone with his conscience, and seeks for the cause of a sepsis, answer this question.

Three or four other points occur to me as being elements in failure: want of thoroughness, want of decision, want of energy, and want of tact. The first of these runs through the work of many a man, and is a terrible handicap. Want of decision comes often from unduly considering the effect of what should be done upon one's immediate prospects in practice. It may prevent the right thing being done for a patient at the right time. Arnold said of Sophocles: "He saw life steadily, and saw it whole." I think the physician's attitude should be: determine what is right, and then go ahead regardless of immediate consequences, and looking to the whole life rather than to the present hour. The wise counsel given to the hero Sigurd in the Norse epic may be recalled: "Wilt thou do the deed, and repent it? Thou hadst better never been born. Wilt thou do the deed and exalt it? Then thy fame shall be outworn. Thou shalt do the deed and abide it, and sit in thy place on high, and look on to-day and to-morrow as those that never die."

Want of energy—in other words, laziness—is often constitutional and incurable. The world, Emerson tells us, belongs to the energetic; certainly, no lasting success is to be won except by hustling hard work. But the energy—the push—must be rightly directed. It is the hits

that count not the shots fired. When a small boy, in trying to get through a crowd, I found if I proceeded straight ahead I could make but little progress, but if I put one shoulder forward and used it as a wedge, I got to the front and saw the circus. In war and peace, in medicine and surgery, if one studies the lines of least resistance, and follows these he is most likely to succeed. Some time ago a circular was sent to the successful men in a certain large city asking, Why it is that not more of young men succeed. One answer read, "Because there are so many of them looking for white shirt jobs." There is, however, such a thing as pushing business too far. Quite recently I saw the advertisement of a photographer which read: "Babies reduced to $2 per dozen." We cannot hope to meet a cut like that! (Laughter.)

The next feature to which I refer is want of tact; tact is not the right word, but it comes near it. I mean the discretion which can tell the best thing to say or do, and the best way to say or do it. In theological circles they have a better word than that. An old darkie preacher said, "Brethern, what we want is sanctifigumption." (Laughter.) Devotion to a patient's interests, and good judgment in advancing these interests, would mean about the same thing.

Please do not consider from what I have said that I have wished to convey the impression that success can be measured by the dollar sign. The commercial practitioner thinks of the money first. The true professional practitioner thinks first of his patient's interest, and then he thinks of his proper remuneration. He has got to be paid for his work for he has got to pay others. He has got to protect those at home that he loves, or that he ought to have at home to love. (Laughter.) The love that does not protect its object had better be called by some other name.

I am willing to admit this, that no medical man who is a mercenary man, whose governing principle is mercenary, ever reaches the highest success in medicine, but a man who does not respect himself and make proper collections for the work he is doing, is not doing his duty. A wise man that I knew once used to say, "The quacks get rich, but they go to hell." (Laughter.) My own investigations have not been carried as far as that! (Laughter.)

Character—that all-important thing for every one—consists in a man's steadily pursuing the things for which he feels himself capable. What he loves to do he is likely to do well and successfully. Supporting this view, let me conclude this rambling talk by quoting from Arnold's recently published note-books: "Arise, be going, count your resources, learn what you are not fit for, and give up wishing for it, learn what you can do, and do it with the energy of a man." (Applause.)

INTOXICATION IN APPENDICITIS.*

By EDWARD HORNIBROOK, M.D., Cherokee, Iowa, U.S.A.

MORE than a quarter of a century has elapsed since I read a paper before this learned society. The etiology and treatment of appendicitis was then giving us no concern, for it had not been described and we did not know of its existence. The problem perplexing us then was in what way and to what extent the festive microbe caused or influenced medical and surgical diseases. Joseph Lister, now Lord Lister, had read his paper the previous year, 1876, at Philadelphia, and his writings and researches had aroused interest and stimulated investigation.

The microbe theory was seized upon with such avidity on this continent, that one writer said that the "Medical profession of America had transformed itself into a grand army of bacillus hunters." Many of the books written in the last three decades would leave the impression that there was no medical science prior to 1870, or, at least, that since that period "old things had passed away, an' all things had become new."

This view is manifestly incorrect. No reformation or revival has taken place. Medical science has been progressing for ages, but her attitude of observation has changed. For centuries she devoted herself to the verification of symptoms, the research of anatomical lesions, the elucidation of the functions of the various organs and seeking after means for correcting their perversions and curing pathological lesions. During the last thirty years investigation has been principally confined to discovering the causes of disease and finding out the manner in which deleterious agents enter the system.

We now know that the hands of the surgeon, his instruments, sponges and dressings can infect wounds, that the mosquito is the carrier of malaria and yellow fever, that the rat is the disseminator of bubonic plague and the consumptive patient the spreader of tuberculosis. This knowledge and the knowledge of how to prevent infection are the greatest additions to the sum of medical information since I last had the honor of meeting the distinguished gentlemen who were then members of this society.

The germs of many diseases have been isolated, and the means which will destroy them, in the test tube, and inhibit their growth, in the culture medium, have been discovered; but we have not learned how to destroy them in the organism, although serum therapy and recently discovered germicides in many instances bid fair to control their ravages or to mitigate their virulence. These results show how slow is progress even when unprecedented energy has been given to research, and ad-

*Read at the Meeting of the Canadian Medical Association, August 25 to 28.

monish us that the slowly accumulated knowledge of all the ages should not be lightly regarded.

The animal organism in its normal, as well as in its pathological state, is both a receptacle and a laboratory of poisons. Some of these poisons are formed by the organism itself and others by bacteria which may be either guests or normal inhabitants, or may be parasites at second hand and disease producing.

All microbes are not pathogenic. Pasteur isolated seventeen kinds of bacteria in the mouth, some of them serving to assist in dissolving albumen, starch, gluten, and casein. So that we are unable to say how much of the integration and disintegration which are in continual progress and which are necessary to existence is caused or prevented by the action of microbes. Attention being constantly directed to infection and germs creates the danger of overlooking or forgetting the lessons taught by experience, and therefore we might say with Kipling:

"Lord God of Hosts, be with us yet,
Lest we forget—lest we forget."

Lest we forget that the human organism is a manufacturer of toxins and an eliminator of poisons; lest we forget that constant alertness is demanded to prevent accumulation of these poisons, and that if they cannot be eliminated their toxicity should be lessened or destroyed if possible. We all know that the lungs, the intestines and the liver manufacture poisons which will cause death if retained in the system. We know, too, that the liver inhibits, to some extent, the toxicity of poisons formed in the alimentary canal. We also know that the kidneys eliminate the same toxins which are found in the bowels. That the intestines eliminate other poisons besides those which they manufacture is shown by the odor of the fæces of those who frequent post mortem rooms, or dress foul wounds, or are long exposed to the odors of putrefaction.

This function of eliminating toxins, which are not found within the body but reach it from without, may account for some of the diseases of the alimentary canal and its appendages. My son, while studying comparative anatomy, dissected a putrefying dog and had his first attack of appendicitis two days afterwards. Medical students, hospital interne, and hospital nurses seem particularly prone to appendicitis. Sir Frederick Treves says that he examined twenty-seven healthy medical students and found tenderness at the ileo-cæcal region in twenty-four of them.

Bouchard in his work, "Auto-Intoxication in Disease," shows that an aqueous extract of muscle putrified by heat is toxic. I had three cases of appendicitis in one farmer's family who used canned meats

exclusively during the hot weather. A young man ate heartily of meat which had been shipped from Chicago in refrigerator cars. The meat had a slight odor but was not unpalatable. Within three days he had an attack of appendicitis. Others who ate the meat at the same time escaped with a severe diarrhœa.

I realize that these are scanty data upon which to build a theory. I offer them as suggestions which further examination may verify or reject. It seems reasonable that organs which have additional labor thrown upon them should suffer in consequence. If the hepatic secretion is deficient or defective the bile will lose its antiseptic properties. Diseased liver cells will lose their power of inhibiting the toxic action of the intestinal contents. If the intestines are called upon to eliminate poisons which reach them through inhaling foul odors or by the ingestion of putrid, or easily putrescible material like canned or frozen meats, the balance between the phagocytic action of the cells and the destructiveness of the germ will be destroyed.

In the *London Lancet*, June 27th, 1903, (page 1839) there is a communication from Dr. S. Kellet Smith, the object of which is to account for the increase of appendicitis. He says·

" Probably four-fifths of the chief perishable comestibles, are frozen or chilled for transmission or collection before reaching the consumer. Chilled or frozen meat, fish, poultry, rabits, game, etc., are notoriously prone to rapid decomposition when removed from cold store ; also they degenerate more rapidly after cooking than unfrozen articles.

Following the argument, it may be that the indigestion of chilled or frozen food especially liable to rapid decomposition may result in a more septic state of the intestine than in the pre-cold storage days, and this greater septicity may in its turn account for the greater virulence of those irritations to which the caecum and appendix have always been prone."

The intestinal canal is a veritable " ptomaine factory and bacterial seminary " and I have long been convinced that the toxic condition of the intestines is a frequent cause of appendicitis as well as a potent factor in causing the high mortality of this disease. We all know that the cases accompanied by constipation are more likely to result fatally than those in which we can procure free evacuation. Every experienced surgeon will admit that the extent of the pathological conditions bears no constant relation to the mortality. The most trifling lesions are sometimes followed by death, while cases with suppuration, extensive adhesions and gangrene will often recover. So that I have often thought that the greater the local expression of reaction, the less pronounced the toxaemia.

Dr. S. A. Brown, a distinguished surgeon of South Dakota, said in a discussion on this subject; "There is something peculiar about appendicitis. I often operate upon cases which notwithstanding the gravest pathological lesions, and expected death the patients make good recoveries; then again I find trifling lesions and the patients die. Last week I opened a peri-appendiceal abscess, drained and thought the patient had nothing to do but recover. Next morning I received a telephone message that the patient was dead."

Dr. Bernays, of St. Louis, says; "In these cases we witness a fight for the patients life between the septic and toxic infection of the blood and other tissues on one hand, and the antitoxic and eliminatory life processes on the other. Moreover we find the struggle made much harder for the organism by a more or less pronounced obstruction of the bowels."

Why is this struggle harder where there is ("obstruction") constipation? Is it not because the toxins are not eliminated? Why is it that Ochsner's starvation treatment is being received with such favor? Is it not because by withholding food we deprive the intestines of material from which to manufacture toxins? Why is it that the late Dr. Clark's treatment of peritonitis by procuring rest for the bowels with large doses of opium has fallen into disrepute? Is it not because that treatment retained the toxins instead of eliminating them? High enemata and salines may clear out the large intestines and yet leave the contents of the small bowel to do their deadly work.

Foreign bodies are so seldom found that they need scarcely be considered as etiological factors. Osler in ten years experience in Montreal found foreign bodies in but two cases. If not caused by foreign bodies why does it commence in the appendix?

Why is the tonsil so frequently first affected in angina? Is the answer to be found in the fact that there is a large amount of lymphoid tissue in the appendix as well as in the tonsils? When the resisting power of the cells is lessened by the auto-intoxication, the microbes attack the most vulnerable points, as the tonsils or the appendix. The vitality of the part being lessened by one attack may explain the frequency of recurrence. The resisting power being reduced, it becomes an easy prey to the pathogenic bacteria which, like the poor, we have always with us.

The bacillus coli communis is a normal inhabitant of the intestines. Dr. Kelly, pathologist to the German Hospital, Philadelphia, found that organism alone in 73.4 per cent. of acute cases.

The toxicity of appendicitis is further shown by the occurrence of multiple abscess, septic embolism, and appendicular black vomit. I had

one fatal case of embolism last June and a fatal case of appendicular hematemesis in July. Dieulafoy reports seven cases and Dr. Fowler of Brooklyn, reports two (see *Medical Record*, April 25th, 1903.) In my case the symptoms of intoxication were pronounced, but the local manifestation was not severe—a pus collection without limiting adhesions. The hematemesis began six hours after the operation and terminated fatally in about twelve hours.

Nitzsche reports a case of this nature in which no operation had been performed, so that hematemesis may occur with, or without operation and should, I think be classed with the evidences of the profound intoxication which sometimes accompanies this disease.

I submit then that intoxication as an etiological factor, and as a concomitant of appendicitis deserves more consideration than it has hitherto received from the profession.

The surgeons who remove the appendix and prescribe rest but do not endeavor to eliminate and neutralize the poisons still remaining in the intestinal canal have performed but half their duty. "Those ought ye to have done, and not to leave the other undone."

The removal of an inflamed appendix from which the infection may spread or is spreading and in which the danger of perforation and gangrene is always imminent violates no surgical principle and is in accord with the dictates of common sense, but the depression of an anaesthetic and the traumatism of an operation when the toxaemia is pronounced may turn the scale against those primary vital forces which are gallantly battling for the patients life.

Bouchard's experiments show that when a sufficient quantity of charcoal had been taken it required the extract of two hundred grammes of faecal matter to kill one kilo-gramme by weight of rabbit; whereas when the charcoal was not taken it only required 17 grammes. Numerous intentinal disinfectants have been used but most of them are objectionable, either because the stomach will not retain them in sufficient quantity or because they are in themselves toxic. Acetozone is not open to these objections. It is a potent germicide, an efficient deoderizer and an effective diuretic. It has been already shown that the same toxins found in the intestinal canal are eliminated through the kidneys and therefore it meets all the indications-disinfection, deodorization, and elimination.

During the summer of 1902, I treated several cases of cholera infantum by intestinal lavage with acetozone (1 to 3,000) with the most satisfactory results. This disease is by common consent of the best authorities admitted to be of infectious or bacterial origin. During the

last twelve months I have found benefit from its use in numerous cases of intestinal sepsis, as well as in typhoid fever.

Holding the views which I have enunciated as to the etiology and nature of appendicitis, the use of acetozone in that disease readily suggested itself. I have now prescribed it in twelve cases which were treated by myself and have suggested its use in many cases where the patients have been seen in consultation. When it was given from the first the effect was gratifying. One notable feature is, that while it almost entirely deodorized the stools in other forms of intestinal sepsis and in typhoid fever, it has no such effect in appendicitis.

My method has been to give ½ grain doses of calomel by the mouth every hour during the first two days or until there are copious evacuations. During the same period I order enameta of acetozone 1 to 3000 to be repeated every six hours whether retained or not. At the end of the second day I give one grain of acetozone in two ounces of water by the mouth every two hours. One tablespoonful of the mixture every fifteen minutes. No other fluid and no solid is allowed. If the calomel and acetozone enemata fail to move the bowels, I alternate Epsom salts and glycerine with the acetozone. In nine cases so treated the disease seemed to be aborted and everything except the soreness over McBurney's point disappeared from the fifth to the seventh day. Three of the cases lingered for about three weeks and in each of these the acetozone had to be stopped about the fifth day on account of the profuse diuresis. Some other intestinal antiseptic was substituted. In none of these cases was there marked constipation nor profound intoxication. None were operated upon and there was no pus formation.

I have advised interim operations, for, as I have already stated, I think that inflammation lessens the vitality of the part and renders it vulnerable to subsequent attacks. Of course I do not believe that acetozone is a panacea in appendicitis, nor do I attribute to its action any effect upon the localized inflammation. My claim is that it neutralizes the toxins in the intestinal canal, which are both a cause and concomitant of the disease and that therefore it should be used both before and after the operation as well as when the case does not come to operation.

I still think that proper medication and a prompt operation done before there is a marked intoxication promises the larger percentage of recoveries, but environment and the fears of patients and their friends often prevent us from acting according to our best judgment.

These views are presented in the hope that they will turn the attention of abler men to a phase of the disease which, I think, has been too much neglected, viz., intoxication.

CURRENT MEDICAL LITERATURE.

Conducted by A. J. MACKENZIE, B.A., M.B.

THE NATURE OF THE SYMPTOMS IN APPENDICITIS.

In the *British Medical Journal*, July 11th, 1903, there is an article on this subject by James Mackenzie. He claims that if the manner in which sensory and other phenomena arise in visceral disease is properly appreciated then the whole series of symptoms are easily understood though no relation is at first glance apparent.

By means of the sympathetic system of nerves a continuous stream of energy passes from the viscus to the spinal cord. In disease of the viscus an increased amount of energy passes so that when it reaches the spinal cord it affects neighboring cells, acting as a stimulus and symptoms are thereby produced according to the function of the nerve cells as stimulated—sensory, motor or secretory.

The portion of the cord in connection with that part of the sympathetic system supplying the appendix includes the origin of the eleventh and twelfth dorsal and first and second lumbar. The most important nerves that arise from this portion of the cord are the sensory nerves distributed to the abdomen and adjacent portions of the thigh, the motor nerves supplying certain of the muscles of the abdomen and of the thigh, and the motor nerves supplying the bladder. Now when stimulation reaches any part of a sensory nerve in any part of its course from the periphery to the brain, the resultant pain is always felt at the peripheral distribution of the nerve—thus the pain in appendicitis may be felt in the abdomen, in the thigh or in the lumber or illiac region. In this region also the affection may be recognized by hyperæsthesia, a tenderness not due to the inflamed peritoneum, and so showing that the stimulus has passed through the spinal cord. Tenderness of the testicle from the nerve supply of the tunica vaginalis by a branch of the first lumbar is a good example of this fact. Tenderness at McBurney's point is due to hyperæsthesia at small branches of the eleventh and twelfth dorsal which at this point pierce the rectus muscle.

Contraction of the muscles of the abdominal wall and sometimes of those of the limb is an evidence of the fact that the irritation may affect nerves of motor supply; and the writer emphasized the fact that under such stimulus there may be contraction of small parts of these muscles causing marked ridges or thickenings which he believes

are often mistaken for an inflamed appendix. Bladder symptoms belong to the same class, being either increased frequency of micturition or desire to micturate with difficulty in relaxing the sphincter. These symptoms are due to stimulation of the muscles both extrusor and contractor of the bladder wall.

The wide spread of this symptom complex increases the difficulty of making an accurate diagnosis in some cases, but an intelligent view of their causation may lead one to the correct conclusion where there is more or less complete mimicry of some other complaint.

DEATHS AT DIFFERENT HOURS.

"In an investigation covering over 3000 cases in relation to the hour of death," said a well-known physician, who has been himself a student of the question, "it has been ascertained that the greater number die between 5 and 6 o'clock in the morning, when the death-rate is over 40 per cent. of the average: the next during the hour before midnight, when the rule is about 25 per cent. in excess. A third hour of excess is from 9 to 10 in the morning, when the rate is about 18 per cent. in excess. On the other hand, the death-rate between 10 and 3 p.m. is 16 per cent. below the average, the hour before noon being the most fatal. From 3 o'clock until 7 in the evening the deaths rise to 5 per cent. above the average, and then fall from that hour to 11 p.m. From 9 to 11 o'clock at night there is a minimum of 6 per cent. below the mean average The least mortality is between 10 a.m. and 3 o'clock in the afternoon, and the greatest during early morning hours from 3 to 6 o'clock."—*Washington Star.*

CORTICAL CELL IN MENINGITIS.

In the *Maryland Medical Journal*, July, Hirshberg reports a case of meningitis with the findings post-mortem from the Pathological Laboratory, College of Physicians and Surgeons, Baltimore. The case was typical, adult, and proved by culture to be due to streptococcus pyogenes. The cortical condition is described as follows:

Sections taken from the cortex in the Rolandic area where the green, purulent exudate was very thick, stained by Nissl's modified method, show very interesting changes. All of the Nissl (or tigroid) bodies have entirely disappeared from the cell bodies. In no section was

I able to distinguish a cell which retained the Nissl bodies. Many of the cells have lost their nuclei and taken the stain very poorly. The cells are shrunken distorted, and irregular where the nucleus remains. It is swollen, vesicular, and its limiting membrane is at times in contact with the body wall of the cell. The nucleus as well as the nucleolus is displaced to the side of many cells. The change observed in these cells are not precisely like those which Barker found in his case of epidemic cerebro-spinal meningitis. The nuclei are not so much swollen as in his case, and the nuclei are more constantly swollen than in the case here reported. The disorganization of the stainable substance of Nissl seems to be more complete in this case than in Barker's case. This may be either a question of degree of intoxication or it may show a distinct action of the streptococcus toxin. In our case the question of the direct or indirect action of the toxins in the nerve-cell bodies must have begun so early that we find complete chromatolysis. The probabilities are, as has been suggested before, that although there may have been some effects from reaction at a distance, direct or immediate action of the toxins of the streptococcus is the most probable.

WHY MINOR GYNECOLOGICAL OPERATIONS FAIL TO GIVE RELIEF.

In the *Buffalo Medical Journal* for July, Goldberg formulates the following propositions:

1. That all so-called minor gynecological operations, to be of any permanent benefit, must be performed within at least one year from the time of the infliction of the original lesion.

2. That after the passage of about a year, either Alexander's operation, *trachelorrhaphy or curettage, or all combined, will be insufficient to* restore patient to perfect health.

3. The reason for such failure in the great majority of such cases, after one year, is because the adnexa are sure to be involved.

4. The best course will be to do some operative procedure intra-äbdominally, and not by the internal inguinal ring puncture of Goldspohn, but by free incision, so that the exact condition can be ascertained and properly treated, and this I hold to be proper rather than to depend upon the uncertainty of physical palpation.

DISEASES OF THE EYE, EAR, NOSE AND THROAT.

Conducted by PERRY G. GOLDSMITH, M.D., Belleville, Fellow of the British Laryngological, Rhinological and Otological Society.

TUBERCULOUS LARYNGITIS.

Sharp (N. Y. *Med. Jour.*, Feb., 1903), makes the following remarks in differentiating tuberculosis from syphilitic ulceration of the larynx. The diagnosis may be very difficult, as there may be a mixed infection, or a patient may have tuberculosis of the lungs and a syphilitic ulceration of the larynx at the same time. If, on examination of the larynx, the arytenoids and true cords are found to be thickened, with edges ragged, surrounding tissues œdematous of pearly appearance, and looking as though serum would flow on puncture with a knife, with infiltration of the aryepiglottic fold, one can safely make a diagnosis of tuberculous laryngitis.

Syphilis of the larynx will present a different aspect. Deep ulcers exist, having a punched-out appearance. They are usually unilateral, and there are mucopurulent secretion and slight dyspnœa, if paralysis or much thickening exists. The whole larynx is intensely red and infiltrated. The patient will have no pain, only an annoyance in swallowing. These appearances, taken in conjunction with the patient's other symptoms, are generally sufficient for diagnostic purposes.

THE RADICAL CURE OF DACRYOCYSTITIS BY EXTIRPATION OF THE LACHRYMAL SAC—THE REMOTE RESULTS.

Rollet (*Revue. gen. d'opthalmol*, January), thinks that we can nearly always secure a rapid and positive cure of dacryocystitis by extirpating the lachrymal sac, and reports the results obtained in twenty-seven cases, observed from six months to six and a half years after operation. A cure took place in twenty four cases, and in no instance did ectropion, cheloid, or adherent cicatrix follow. Epiphora was cured in eighteen cases, was insignificant in two cases, intermittent in one, appeared only when exposed to cold or wind in three, and in three it persisted. (Abstracted in *Jour. Eye, Ear and Throat Diseases.*)

THE OCULAR COMPLICATIONS OF SCARLATINA.

Strezminski (*Receuil d' opthal*, March; and abstracted in *Jour. Eye, Ear, and Throat Diseases*) observed seven cases during the epi-

demic of scariatina at Wilna, in 1902, in which ocular complications, apparently due to the disease, were noted. All of these complications appeared late in the course of the disease. Cases 1 and 2 were corneal ulcers; cases 3, 4 and 5, phlyctenular conjunctivitis; case 6 showed paralysis of accommodation; and case 7, diphtheritic conjunctivitis. Cases 6 and 7 were complicated with diphtheria. Incidentally, the author advises the following treatment for corneal ulcers: Cauterize with 50 per cent. lactic acid sol., instill atropin, dust in iodoform and apply a compression bandage and hot compresses over this.

DIAGNOSIS OF TUBERCULOSIS OF THE TEMPORAL BONE.

Jobson Horn (*Jour. Laryngology*, March, 1803,) gives the following clinical facts as diagnostic of tuberculous disease of the ear:

(1) Absence of pain out of all proportion to the destructive character of the diseased process. (2) Insidious onset. (3) Marked loss of hearing power. (4) Extensive destruction of bone, rapid extension to the labyrinth, absence of headache and dizziness. (5) Progressive and destructive character, leading perhaps to facial paralysis or even severe haemorrhage. (6) Absence of intra-cranial complications. (7) Occasionally considerable involvement of adjacent lymphatic glands.

NASAL SUPPURATION.

Adolph Bronner *Quarterly Medical Journal* draws attention to the following points:

(1) Nasal suppuration is extremely common and is often followed by dangerous complications. (2) It is generally due to localized disease of bone or affection of one or more of the nasal accessory cavities. (3) In children the discharge should always be examined for diptheria bacilli. (4) Syphilitic rhinitis is often fatal if not treated locally. (5) In most cases of nasal polypii there is local disease of bone or of one or more of the accessory cavities, especially the ethmoidal cells, in which case the middle turbinal bone and ethmoidal cells should be energetically scraped.

ADENOID VEGETATIONS, WITH SPECIAL REFERENCE TO ADULT CONDITIONS.

Logan, of Kansas City, at the last meeting of the American Laryngological Association, called attention to the importance, in all acute infectious diseases, of a careful examination of the naso-pharynx, and

the thorough antiseptic cleaning thereof. He thinks the failure of treatment in many cases of catarrhal disease of the upper air passages and middle ear is due to the non-recognition of the presence of adenoids. He claims that when the adenoid tissue is once pathologically enlarged, it does not tend to atrophy, especially if during their existence any acute infectious disease has occurred. He summarizes by drawing more particularly, attention to the importance of:

(1) Early recognition and removal in children. (2) Care of the naso-pharynx in acute infectious diseases. (3) The fact that enlarged faucial tonsils usually indicate the presence of adenoids, though the reverse is not true. (4) The presence of adenoids is not rare in adults and when present has developed since childhood, and operative measures are indicated in every (?) case to relieve present conditions and prevent future complications.

(The reviewer does not think operative measures should *invariably* be taken when a pad of adenoids are found, particularly in healthy adults, nor can he agree that there is no tendency for atrophy to take place.)

SYPHILITIC OTITIS.

The question of the influence of syphilis as a cause of inflammation of the ear is discussed by Parmentier, (abstract in *Boston Medical Journal*) who records the case of a woman who had an otorrhœa of six months duration and on examination was found to have a large polypus springing from a perforation of the superior and posterior portion of the tympanic membrane. In addition to this there were clinical manifestations of secondary syphilis. The patient refused to have the polypus removed and was placed on anti-syphilitic treatment. At the end of two months, during which the treatment was continued, the discharge had entirely stopped, the polypus had disappeared, and in its place was found a beautiful cicatrix of the drum membrane. Parmentier regards the aural trouble as distinctly one of specific origin.

FACIAL PARALYSIS.—SURGICAL TREATMENT.

Ballance, Stewart and Cushing have recently succeeded in re-establishing the function of the facial nerve after it has been completely and permanently severed. In Cushing's case the nerve had been completely severed by a bullet wound in the mastoid region. After the mastoid wound had completely healed he severed the spinal accessory nerve and united it with the facial. Six months later the patient had very fair control of the facial muscles, with the characteristic droop of the shoulder seen in cases of an injury to the spinal accessory nerve. In Ballance and Stewart's cases, which were on patients whose paralysis followed mastoid caries, electricity was of value in the subsequent treatment.

MARITIME TOPICS AND NEWS.

Conducted by W. D. Forrest, M.D., C.M., B.Sc., L.R.C.P., Lond., M. R. C. S. Eng., Halifax.

PERSONAL.

Dr. E. V. Hogan, of Halifax, has been appointed Surgeon to the Victoria General Hospital. This appointment is to fill the vacancy made by the death of Dr. Edward Farrell some three years ago. Drs. Mader and Foster have been appointed Assistants.

Dr. G. F. Thompson, M.B. (St. Andrews), has opened an office on Spring Garden Road. Dr. Thompson is a Halifax boy, but has been practising for some time in the old country.

Dr. A. F. Dixon, Cardiff, Wales, has been appointed professor in Anatomy at Trinity College, Dublin. Dr. Dixon is a contributor to Cunningham's Manual of Practical Anatomy. He is a brother of Prof. Stephen Dixon, of Dalhousie University, Halifax.

Dr. John Stirling, of Montreal, has been visiting friends in the Province during the past week.

N. B. MEDICAL ASSOCIATION.

The New Brunswick Medical Association met in St. John on July 22nd. After electing officers for the ensuing year and attending to matters of business, the Society adjourned in order to permit its members to attend the meetings of the Maritime Association.

LUNENBURG AND QUEEN'S COUNTY ASSOCIATION.

The annual meeting of this Society met at Chester, N.S., on Wednesday, August 5th. A number of the medical men of Halifax drove over to Chester the night before, and were present at the meeting. The members were treated to a sail on Chester Basin in the afternoon. Chester is one of the prettiest spots in Nova Scotia and a favorite watering place for American tourists.

In the evening Dr H. K. MacDonald, of Lunenburg—the President of the Association—gave his annual address. We have been informed by those present that this was one of the best written papers that has been read before any association in this Province for some time. Among other things he advocated the early establishment of cottage hospitals

throughout the Province, and the necessity of municipal and town councils taking some action to prevent the spread of tuberculosis.

Dr. Faulkner, of Mahone Bay, followed with a paper on "The History of Medicine during the Past Century." Dr. Ford, of New Germany, read a paper on "Albuminuria during Pregnancy."

MARITIME MEDICAL ASSOCIATION.

The thirteenth annual meeting of the Maritime Medical Association met in Orange Hall, St. John, N.B., on July 22nd and 23rd.

The meeting was called to order at ten a. m. by Dr. Murray MacLaren, the president. After enrolling names, reading the minutes of last meeting, and receiving delegates from sister societies, the president read his address, entitled "The Maritime Medical Association: Its Past and Present." Following this address several papers were read—"Methyl Alcohol Poisoning," by Dr. Armstrong, of Bridgetown, N. S.; "Pure Atmospheric Air, a Necessity for the well-being of Man," by Dr Bayard, of St. John. Dr. G. M. Campbell, of Halifax, reported a case of "Multiple Aneurism of the Aorta," and Dr. Skinner, of St. John, cases of (*a*) Renal Fistula, (*b*) Urethral Calculus.

The afternoon session opened with a discussion on smallpox, particular attention being given to its diagnosis.

Dr. John Stewart, of Halifax, read a paper on "Tuberculous Cystitis," and Dr. Crockett, of Fredericton, gave a report on an interesting case of Extra Uterine Gestation. The "Clinical Significance of Vertigo," was the title of a paper read by Dr. O. J. McCully, of St John, N. B.

The evening session opened at 7.30 p. m. with a paper on "Puerperal Eclampsia," by Dr. Ross, of Alberton, P. E. I

Dr. Norman E. MacKay, of Halifax, reported a case of *nephrotomy* for pyo-nephrosis of left kidney along with *nephro-lithotomy* for renal calculus of the right kidney in the same patient.

The history of the case was as follows:—Mrs. G. D., age 34, married admitted to Victoria General Hospital on February 18th with a large tumor in the left hypochondriac and left lumbar regions. Born in England, but lived in Nova Scotia for past 22 years Married fourteen years ago. Has five children living and one dead. Until the birth of her last child, patient enjoyed good health. She had been threatened with abortion the first four months in each of her last three pregnancies, and had had difficulty in her last three confinements. Four months before her last child was born she suffered from irritability of the bladder,

and noticed blood in her urine each time she passed water, but had no pain on voiding it.

The urine was very foul and contained a whitish deposit and ropy mucus. Her doctor ordered her to bed and put her on appropriate treatment, but her condition remained unchanged until after the birth of her child, when the urine became normal in color, but the sediment remained present.

Since the birth of her child, Nov. 5th, 1902, she has had pelvic pain, chiefly in the left iliac region, and a feeling of weight and dragging sensation in the lower part of her stomach. Exercise aggravated these symptoms. About three weeks before being admitted to hospital she experienced a chilly feeling, with flashes of heat and axorexia. She vomited at times. She also suffered from backache, which was worse on walking about, and had occasional attacks of indigestion and flatulence after food.

When admitted, patient looked healthy. Her appetite was poor. She had no pain in micturition, but she had at times a constant desire to pass water, and had to get up often at night. Bowels fairly regular. The circulatory and respiratory systems were normal.

Examination. Patient had a large tumor in the left hypchondriac and left lumbar regions. It extended from the lower ribs down to a little below the umbilicus. It was as large as a baby's head, and extended a little to the right of the mesial line. The tumor caused a distinct prominence in these regions. Percussion elicited a dull note, but there was no evidence of fluctuation present.

The mass was tender and painful on pressure and immoveable. The muscles over it were quite rigid. The dull note over the mass remained unchanged with the changed position of the patient. She was unable to lie comfortably on the healthy side.

She was kept under observation for ten days during which time the urine was analysed on various occasions. The average quantity passed in the 24 hours was 40 oz. It contained an enormous quantity of pus—fully one-half was pus. Blood and epithelium was also present. The odour was very foul—alkaline in reaction.

On February 28th the patient was anæsthelized with chloroform—the usual incision for lumbar nephrotomy was made and 1½ pints of foul smelling pus evacuated. The secreting substance was apparently all gone. No trace of the origin of the ureter was found and it was not considered advisable to make a long search for it. The contents of the cavity having been evacuated and the cavity irrigated with warm boracic solution, the anterior and posterior parts of the incision were brought

together and a rubber drainage tube inserted. She stood the operation well.

The further progress of the case was uneventful till the 17th of March. Her temperature during this period ranged from normal to 99.5° F., pulse between 80 and 100 and good.

The quantity of urine voided on following dates was Feb. 28th 10 oz., March 1st 33 oz., March 2nd 49 oz.

The pus lessened gradually but never disappeared. The discharge from the wound became less and less until June 26th when it had almost entirely disappeared. On March 17th patient complained of pain and tenderness in right lumbar region. On examination a tumor was felt but on account of the tenderness and rigidity it could not be mapped out. Quantity of pus in urine about ½ in bulk.

On March 28th, just four weeks after first operation, Dr. MacKay performed nephro-lithotomy on right side. Under chloroform the tumor was found to occupy the right lumbar and iliac regions; its surface was smooth and indurated and the mass was three times the size of a normal kidney. The kidney was cut down upon in the usual way for a nephrotomy. The surface of the kidney was smooth and glassy. Its appearance was healthy but larger than the normal kidney and somewhat congested. There was no evidence of adhesions in the circum-renal tissues. On introducing a needle it came upon a firm grating substance. The kidney was then opened by an incision 3 inches in length. The stone removed was 4½ inches in length, 2¾ inches in width, 2½ inches in thickness and weighed 13½ ounces (av.) Considerable bleeding followed the removal of the stone. Besides this stone 28 smaller ones were removed. At this time the patient became collapsed from the loss of blood but rallied. Several stitches were put in each end of the lumbar incision and the wound was dressed. The patient was much exhausted after the operation. March 30th, the packing was removed and cavity irrigated with warm boracic solution.

A large rubber drainage tube was inserted into kidney and iodoform gauze packed about it. This dressing was changed frequently.

Urine examination on April 9th revealed urine acid, sp. gr. 1009, albumen and pus present. Epithelial cells in abundance.

During the month of May and until she was discharged on the 26th of June the average amount of urine passed was 24 oz.

One June 19th she sat up. Urine still came from right side and some pus on dressing of left.

On June 26th she left the hospital looking well and healthy. Her general health was good

In discussing the case Dr. MacKay pointed out three points of interest in it. *First.* The entire absence of the most prominent signs of renal calculus. *Secondly.* The enormous size of the stone, and *Thirdly.* The small amount of healthy kidney capable of performing the functions of these organs.

The secreting substance of the left kidney was to all appearances gone in this case and the amount of healthy secreting substance left of the right kidney was a mere shell. On July 20th Dr. Mackay received word that the patient was still doing well.

The stone was exhibited at the meeting.

After the evening session the members were invited to a reception at the residence of Dr. MacLaren. There was a large attendance and everyone enjoyed himself thoroughly.

The first business taken up at the morning gathering of July 23rd was the election of officers for the ensuing year. The following were elected :—

President, G. M. Campbell, Halifax ; Vice-president for N.S., W. H. MacDonald, Rosebay ; Vice-president for N.B., A. F. Emery, St. John ; Vice-president for P. E. I, A. McNeill, Summerside ; Treasurer, John Sutherland, Bedeque ; Secretary, T. D. Walker, St. John.

The next annual meeting will be held in Halifax.

E. W. Cushing, of Boston, then read a paper on " The latest methods of removal of the uterus for malignant disease," and Dr. James Ross, of Halifax, gave case reports of syphilis.

Dr. McIntosh, of St. John, showed a case of aneurism of the orbit, also one of congenital nasal obstruction.

In the afternoon Dr. Maurice H. Richardson, of Boston, read a paper on " The surgical treatment of diseases of the biliary passages."

A discussion on " Conditions which simulate appendicitis', followed, in which many members took part.

Dr. Dewitt read a paper on "The sanatorium treatment of tuberculosis."

The members then enjoyed a sail on the St. John river. Refreshments were served and the St. John men fully maintained the reputation they have long held as excellent hosts. The gentlemen composing the entertainment committee were Messrs. Christie, Crawford, Skinner Morris, Roberts, Lewin and Corbett.

UNIVERSITIES AND COLLEGES.

THE HALIFAX MEDICAL COLLEGE.

The 35th annual announcement of the Halifax Medical College shows substantial progress. There are six full page photographs in it of the pathological laboratory, the Victoria General Hospital, operating rooms, wards, etc. There were 78 students in attendance last year. Clinical instruction is given in the Victoria General Hospital, the city alms house, the Protestant and Roman Catholic infants' homes. The pathological laboratory has been enlarged and is in an up-to-date condition. The interest of the Cogswell bequest goes to the library, which enables the College to procure all the recent works of reference. There is also an excellent library at the Victoria General Hospital. The five house surgeoncies are filled each spring as the result of an examination, and from graduates of the College. The session commences on September first.

FACULTY OF MEDICINE, McGILL UNIVERSITY.

The annual announcement for this year is as handsome as ever in its beautiful white enamel cover. The coming session is the 72nd in the history of the medical Faculty. Last session there were 435 students in attendance, and, of these, no less than 138 came from Ontario. The ten different endowment funds now make a grand total of $383,406. The total length of the medical buildings is 280 feet, and the minimum width 145 feet. Its cubic capacity is 1,750,000 feet. The library contains at present 24,000 volumes, and has seating room for 200 students. The chemical laboratory is 80 feet by 45 feet and 20 feet high. In the new buildings there are three lecture rooms with a seating capacity of 250 each, and a fourth with seating capacity for 450. There are five museums, namely, for Pathology, Anatomy, Obstetrics and Gynaecology, Pharmacy, and Hygiene. The matriculation fee is $5; when taken as a local examination, $10. The fees for the whole medical course are $500, payable in four annual instalments of $125. The hospital fee is $10 each of the last three sessions, and $12 for the maternity hospital.

The following medals and prizes are given: The Holmes gold medal is awarded the graduate obtaining the highest aggregate marks; the Sutherland gold medal is awarded for the best standing in chemistry;

there is a prize in books awarded in the 1st, 2nd, 3rd and 4th years; and the Clemesha prize for the best examination in clinical therapeutics.

The Montreal General Hospital has 250 beds, and the Royal Victoria 300 beds. A number of graduates are appointed as internes to these hospitals. Graduates of McGill University are entitled to register in the Province of Quebec. Arrangements exist by which students may obtain the degrees of B.A., and M.D., C.M., and also B.Sc. and M.D. after only six years of study. The Medical Faculty of McGill University has a large teaching staff of 24 professors, 21 lecturers, 3 fellows, and 36 demonstrators. McGill University has graduated about 2,200 in medicine.

THE MANITOBA MEDICAL COLLEGE.

This college is located in Winnipeg, and is now in its 21st year. There are in attendance on lectures 94 students. The Winnipeg General Hospital appoints five graduates, and St. Boniface Hospital one, as house surgeons. The fees for the General Hospital are $10, and for the Maternity Hospital, $6. The registration fee is $5, and the college fees are $400, payable $100 a year. Arts graduates who take their course in three years are required to pay $130 a year. The fee for the M.D. degree is $10, and for the C.M. degree $15. There are two scholarships of $80 and $50 awarded in the 1st, 2nd and 3rd years, and a silver and bronze medal for 1st and 2nd places in the 4th year. The Winnipeg General Hospital has 215 beds, and St. Boniface Hospital 200 beds. These hospitals furnish excellent clinical facilities. The course of study for the degree of M.D. in the University of Manitoba is one of four years. Graduates of the university are entitled to register as qualified to practise. The registration fee for the College of Physicians and Surgeons of Manitoba is $75. The list of graduates now numbers 234.

FACULTY OF MEDICINE, WESTERN UNIVERSITY, LONDON.

The Medical Department of the Western University in London will open its 22nd Session on 8th September, 1903. The students in attendance on lectures last session numbered 84. There is a teaching staff of professors and lecturers of 31.

Clinical instructions are given at the Victoria General Hospital of 170 beds, at St. Joseph's Hospital, and also at the London Asylum for the Insane. There are some other charities which the students may attend. The academic course is one of four years, at the end of which

the degree of M. D. is conferred upon successful candidates. A gold and silver medal and several scholarships are open for competition. The fees are : registration, $5 ; matriculation, $5 ; tuition for each of the four years, $90 ; annual examination, $5 ; M. D., $25 ; perpetual hospital ticket, $20. There is a special Natural Science Course that may be taken along with Medical Course Candidates taking the double course may obtain the degree of B.A., in addition to that of M.D. in six years. The list of medical graduates of the Western University now totals 218. The laboratories in connection with the college are :—Chemical, Histological and Pathological, Botanical and Biological, and Bacteriological. The announcement contains an excellent illustration of the Victoria Hospital, St. Joseph's Hospital, and the Medical College.

MEDICAL FACULTY OF QUEEN'S UNIVERSITY, KINGSTON.

The 50th Session of Queen's Medical Faculty will commence on 30th September. The Faculty of Medicine consists of 24 professors, lecturers, or demonstrators. The students receive their clinical teaching at the Kingston General Hospital, which has 200 beds, the Hotel Dieu Hospital, and the Asylum for the Insane. The Academic Course is one of four years, made up of three sessions of six months and one of eight months. But eight-month sessions are given for those who wish to take the Ontario Medical Council examinations. At the end of the Course the degrees of M D., C.M. are conferred upon the successful candidates. There is a combination Course of Arts and Science with the Medical Course, so that students may obtain their B. A., M. D., or B. Sc., M. D. degrees in six years. For those who wish to take it there is a fifth session.

The fees are : M.D., $25 ; C. M., $5 ; Sessional fee, $100 ; fifth year, $50 ; supplemental examination, $10 ; hospital ticket, perpetual, $20 ; first year B.Sc., $55 ; second year, $55 ; third year, $60 ; fourth year, $65 ; matriculation, $5 ; for use of microscope, $5. The following prizes are offered : The Dr. Hagunga Prize of a standard work on surgery for the best dissection of the upper extremity ; at end of 2nd session $25 for highest marks in Anatomy, Physiology, Histology and Chemistry ; at end of 2nd year the Dr. Hagunga Prize of a work on Medicine for best standing in Materia Medica, Therapeutics and Pharmacy ; at end of 3rd session the Dean Fowler Scholarship of $50 for highest standing at all subjects ; the Dr. McCabe Prize of a work on Pathology for best examination on Pathology ; at the end of the 4th session the Chancellor's Scholarship of $70 open to students taking the Council and

who take the fifth session, and awarded for highest marks for the four years; a University medal for Medicine, Pathology, Bacteriology, Sanitary Science, and Jurisprudence; A University medal for Surgery, Obstetrics, Gynaecology, and Surgical Anatomy: A prize of $25 from Dr. C. K. Clarke for best standing in Mental Diseases at end of 4th year, and a prize of a standard work from Dr. D. E. Mundell for best standing in Medical and Surgical Anatomy.

A number of appointments are open to the students as dressers in Eye and Ear Department; Clinical Clerks in Medicine, Surgery and Gynaecology: Pathological Clerks; Prosectors to the Chair of Anatomy; Prosectors in Medical and Surgical Anatomy; and Demonstrators in Materia Medica and Pharmacy, and Physiology and Histology. Fifth year students holding these will be exempt from the fee of $50. In this year's announcement there are well executed illustrations of Queen's University, the Medical Building, Kingston General Hospital, Hotel Dieu Hospital, the Fenwick Operating Room; the Physiological Museum, the Lecture Room, the Bacteriological Laboratory, the Dissecting Room, and the Physiological Laboratory. There are about 1,000 graduates in medicine of Queen's Medical College. Last session there were 208 students in attendance.

MEDICAL FACULTY UNIVERSITY OF TORONTO.

The Calendar for 1903-4 is just out. It is noteworthy as being the first of the united faculties of Toronto and Trinity Universities. The Calendar contains a number of illustrations of the various buildings, museums and lecture rooms. These illustrations are:—University College, the New Medical Building, the Biological Building, the Chemical Building, the Library Building, the Biological Museum, the Dissecting Room, and several Block Plans.

The united staff now numbers over eighty persons. Each department of the work is looked after by a number of teachers. The clinical instructions are given at the Toronto General Hospital of 425 beds; the Hospital for Sick Children, 160 beds; St. Michael's Hospital, 160 beds; and the Asylum for the Insane.

The fees are:—Registration, $5; Tuition, each session for 4 years, $100; Laboratory 1st year, $5; 2nd year, $5; 5th year, $50; Matriculation, $5; Each annual examination, $14; Admission *ad eundem statum*, $10; Degree of M B., $20; Degree of M.D., $20; Admission *ad eundem gradum*, $20; Perpetual Hospital Ticket, $34; Annual Ticket, $14; Maternity, $8; And Extra-Mural Class in Psychology, $5.

A number of Medals, Prizes and Scholarships are open for competition. At first examination, $50 and $30; at second examination, $50 and $30; a gold and three silver medals are awarded by the Faculty for competition among honour M. B graduates; the Dr. Daniel Clark Prizes of $30 and $20 in the Department of Medical Psychology; the George Brown Memorial Scholarship, the gift of Dr. A. H. F. Barbour of Edinburgh, namely, the interest on £1,000 sterling, held for one year, by the student ranking highest in Biology, Anatomy, Physiology, Embryology, and Pathology, under the condition of spending a post graduate year in one of the University Laboratories in original research; the R. A. Reeve Scholarship of $250 annually for four years to foster original post-graduate research, and is awarded for the highest standing at the final examination in Medicine, Surgery, Obstetrics and Pathology; and the Starr Medals, one gold and two silver, awarded annually to the candidates for the degree of M. D. for the best theses, showing original post-graduate study in Anatomy, Physiology, and Pathology.

The academic course consists of matriculation examination and attendance upon lectures for four sessions of eight months each, and passing the four annual examinations. At the end of the fourth session, the degree of M.B. is conferred upon the successful candidates. Graduates of the University on the Honour Department of Biology and Physical Science may enter at the beginning of the third session; and graduates in Arts may enter at the second examination. The degree of M.D. is conferred on graduates of at least one year's standing on the presentation of an approved thesis embodying the results of original research; or, having passed an examination in the following subjects: Surgery and clinical surgery, and operations on the cadaver; medicine and clinical medicine; clinical Gynæcology; Operative Obstetrics; Ophtholmology, Otology, Laryngology, and Rhinology; Pathology; Applied Anatomy; History of Medicine; Electro Therapeutics; Life Assurance; and Vaccination.

The Library is in a separate fire-proof building. There are at present 76,000 volumes. There is seating room for 200 persons. The library is supplied with the standard and current literature on all departments.

There are a number of laboratories. The Physical Laboratory is for the study of heat, electricity, optics etc. The Psychological Laboratory is devoted to the study of psycho-physics, psychological optics and acoustics, and time relations in mental phenomena; the Physiological Laboratory affords ample opportunities for the practical study of Physiology, and contains a series of rooms on the "unit" system; and the

chemical laboratory. There are two museums, namely, the Biological museum, and the Ethnological museum.

The new building is a noteworthy feature of the University educational system. It was erected at a cost of $125,000 and $50,000 additional for equipment. It is now completed and ready for occupation. The medical class work of this coming session will be conducted within its walls.

There are several large lecture rooms: one in the Biological Building with seating capacity for 250; and two in the New Building, the larger seating 350, and the smaller, 200; in the chemical building there are two lectures with accommodation for 300 and 100 respectively.

There were 494 students in attendance on lectures last session. On account of the union of the two medical schools, it is more than likely that the above number will be much larger during the coming session.

THE MEDICAL FACULTY, UNIVERSITY OF BISHOP'S COLLEGE.

This Medical Faculty is now in its 33rd year. The Medical College is located in Montreal, and the teaching staff is the Medical Faculty of the University of Bishop's College, Lennoxville. There is a staff of forty professors, lecturers, instructors and demonstrators.

The clinical experience is obtained in the Royal Victoria, the Montreal General, the Western, the Women's, and the Hotel Dieu Hospitals. This gives the students access to hospital work of about 800 beds.

The course consists of a matriculation and four sessions. The degrees of M. D., C. M., are conferred upon successful candidates at the end of the fourth session.

The histological, physiological, bacteriological, and pharmacological laboratories are equipped with all modern and requisite appliances.

The fees are:—Full fees for each session, $100; for M.D., C.M., $30 Montreal General Hospital, 12 months, $5, perpetual, $15, clinical surgery, $12, clinical medicine, $12; Western Hospital, 12 months, $5 perpetual, $12; Montreal Dispensary, 6 months, $3, full course, $8; and Women's Hospital, one year, $10.

Medals and Prizes. The Woods gold medal is awarded for highest standing in primary and final subjects. The Nelson gold medal is awarded for best examination in surgery. The David silver medal is given on best standing in primary subjects. The Chancellor's prize is

given to highest standing in final subjects, next to Wood medalist. Prizes of books for best examination in physiology, best dissection in the first and second years. A scholarship of one-half the fees in all subjects to the candidate taking the highest stand at the Provincial examination. A scholarship of half the fees in all theoretical subjects to the graduate in arts taking highest stand in arts.

The degree qualifies for practice in the Province of Quebec.

There were 65 students in attendance last session.

The university has granted degrees in medicine to some 250 persons since it was established.

LAVAL UNIVERSITY MEDICAL FACULTY.

This medical college is now in its sixtieth year. There is in connection with the college about 50 professors, associates, fellows and pathologists.

The clinical instructions are given at the Hotel Dieu Hospital, 250 beds; at Notre-Dame Hospital, 150 beds; at the Montreal Maternity; and at a number of dispensaries. Mental diseases are taught the asylum St. John de Dieu.

The fees: registration, $2; lectures each session, $80; maternity, $8; Hotel Dieu and Notre-Dame Hospitals, 12 months, $8; dissection, $4. These fees are paid annually for four years.

The academic course consists of a matriculation examination and four sessions of nine months each Those who pass the primary examination are bachelors of medicine; and after the final examination, are called doctors.

There are about 225 students in attendance on lectures. The Laval Degree qualifies for the Province of Quebec.

No medals or prizes are awarded; but students are ranked as having passed, or passed with distinction, or with great distinction.

The various laboratories are in a very efficient condition; and afford the best opportunities for practical study.

THE ONTARIO MEDICAL COLLEGE FOR WOMEN, TORONTO.

This College is now in its 20th year. There were 31 undergraduates in attendance last session. Clinical teaching is given at the Toronto General Hospital and at a Dispensary for Women at the College. The fees are: For the session $100; the Hospital, $30, the maternity, $8. The graduates now number about 100. There is a teaching staff of 34.

DR. C. F. NEU HONORED BY COLLEAGUES OF LONDON MEDICAL COLLEGE.

A pleasant little function took place on the evening of August 13th, at the Medical College, London, being the presentation of a gold watch to Dr. Charles F. Neu, who is leaving the city for Indianapolis, by the members of the Faculty of the medical department of the Western University. Dr Neu, who has been professor of pathology and bacteriology in the medical department at the University, is leaving to take a position in the Government State Asylum at Indianapolis, one of the best equipped institutions in the country.

Dean Moorehouse was unable to be present, and in his absence the chair was occupied by Dr. Wishart. The presentation was made by Dr. English. The gift was accompanied by an address, which was read by Dr. Hodge.

The address to Dr. Neu read as follows:—"Dear Sir—On the occasion of your departure to associate yourself with one of the state institutions of the neighboring republic, the Faculty of the Medical Department of the Western University has requested your presence here to-night to express some sense of appreciation of your long and efficient services in connection with the Western University Medical College and to present to you some token of recognition, of your contribution to the progress and reputation of this institution. We recall your invariable adhesion to high standards and lofty ideals in your work as a teacher and examiner and however severely your decisions may have sometimes borne upon ill-prepared students, neither students nor Faculty ever questioned the honesty of your purpose, or your even-handed justice.

"Yourself an alummus of this university, we shall follow your career with special interest and expectation, assured that with increased facilitites for investigation and research, your studious and diligent habits will reward you with results in the domain of pathology and bacteriology which will not only bring distinction to yourself, but will reflect honor and credit upon your Alma Mater. The Faculty now requests your acceptance of this time-piece as a parting memento, coupled with best wishes and hearty good-will for your future happiness and success, Signed on behalf of the Faculty. "W. H. Moorehouse, Dean; W. Waugh, Registrar."

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EDITORIAL.

EXPERT MEDICAL TESTIMONY.

In many quarters we hear adverse criticism of the medical expert. He is often held up for ridicule, and the differences of opinion between experts are made the most of. Lawyers and judges, all too frequently, comment unfavorably on medical evidence, and sometimes tell juries to ignore it altogether. A little reflection will soon show how unjust all this is

Ordinary evidence, as to facts, is always, or almost always, more or less contradictory. It would then be just as consistent for judges to advise juries to disregard the evidence of fact put in, as there was distinct disagreement. Were this done, there would of course, be no case. But on the evidence of fact, juries are left to themselves. They decide what to believe, and what to reject; and mighty bad judges they often prove themselves to be.

Opinion evidence cannot be expected to agree at all points. The knowledge of several medical gentlemen, gathered from reading, conversation, and experience must differ. This will lead to differences of opinion. Then, again, some are not as close and logical reasoners as others, on the same, or similar, data. But a more serious cause of divergence of opinion is to be traced to ignorance. The witness may be perfectly honest, but not well informed on the matter submitted to him for his opinion. From such opinion as he may give, those more competent to judge will most likely be compelled to differ. But the jury are not always able to distinguish good from poor opinion, and the judge may not be able to guide them. In matters of expert evidence, a simple way out of the difficulty is to reject the whole of it. The fault is here mainly with the court, and not the evidence.

Doctors have been accused of taking sides, and appearing as advocates. Again we think the courts are responsible for this, in so far as it may exist The witness is examined by counsel for the plaintiff. The studied effort of this examination is to obtain from the witness only such statements as may favor the plaintiff's cause. No attempt is made

by counsel to obtain from the witness the *whole* truth. Then follows the cross examination by counsel for the defendant. The object now is the reverse of the former examination. The witness is asked to make admissions which he cannot truthfully make. The counsel insists, and the wrangle goes on. The witness is forced into the attitude of appearing as an advocate, in order that he may defend his position against admissions which are contrary to his belief.

The procedures in our courts are often very unseemly. A judge will allow a witness to be examined in a most unfair manner. Lawyers not only put most irrelevant questions, but take it upon themselves to make the meanest sort of innuendos against the witness. Such questions as "What fee are you getting for this case?" "Were you approached with a view to giving evidence in this case?" "Did you receive any instructions from the lawyer on the other side?" "Is not doctor so-and-so, who gave evidence on the other side, of high standing in his profession?" "How many times have you given evidence?" "Mention another who says such-and-such a thing?" "Tell the court how many cases of a certain kind you have attended?" When interrogations are being put to kill time, or to confuse, or annoy the witness, and when such interrogations have no bearing upon the case, it is the bounden duty of the judge to put a stop to them.

It has been suggested, on a number of occasions, that one or more experts be appointed to advise the court; and that they derive their fees from some source independent of the litigants. This might be a step onwards. It is not well, however, to interfere too much with the right of parties to call witnesses, although the Federal Government has enacted that not more than five experts can be called, unless by the specific permission of the court.

It will not do for lawyers to be too free with their remarks about the divergences of expert medical testimony. Those who live in glass houses should not begin throwing stones. During the progress of a trial there is scarcely a single point of law on which the two sides agree. Law should be definite. It is not like the science of medicine at all, where the subtle forces of nature and the variations in diseases come into play. Law should be a matter of rule. But case law is quoted. One judge decides a case in a certain way, while another judge decides a similar case in another way. These cases are quoted against each other. A gentleman was threatened with a suit. He submitted the facts to five leading lawyers, and received five entirely different opinions. A case is tried and the judge hands out his decision. The case is taken to the divisional court of three judges, where it may be reversed. It then goes

to the court of appeal, and may be reversed again. After having run run the gauntlet of the courts, it stands disposed of, with four or five judges on one side and four or five on the other. It goes no further, because there are no more courts to go to; it has no further *chance* of being changed, because there are no more legal dice to throw.

A DOMINION MINISTER OF HEALTH.

The Dominion of Canada is a large country in area, is growing steadily in population, and has an extended front to guard. The provinces and territories have varied climatic and social conditions; and are exposed in many ways to the invasion of disease from abroad, and to the spread of disease at home. Under all the conditions existing throughout the Dominion, there are very cogent reasons why the Federal Government should seriously take the appointment of a Minister of Health into consideration.

If the position of a Minister of Health is created, the incumbent should have the full status of a member of the Cabinet. It should also be a fixed principle that he should be a doctor of eminence, just as the Minister of Justice must be a jurist of high standing.

There ought to be some strong central authority to deal with all matters affecting the health of the Dominion. With two ocean shores and several thousands of miles of frontier lines to guard, and all the internal conditions of the country to take into consideration, there would be ample work for a Minister of Health. By improved sanitary conditions, and better methods of living, the death rate in Great Britain has been reduced 25 per cent. during the past 30 years. This is equal to a saving to Great Britain on her present population of some 200,000 lives annually. A reduction of 1 in the death rate per thousand means an annual reduction in the mortality of 40,000.

Turning to Canada, we find a country with over 5,000,000 of a population; and, to all appearances, on the eve of rapid growth in numbers. An increase in the death rate of 1 per 1,000 of the population would mean an annual loss of 5,000 from our numbers; or, on the other hand, a decrease in the death rate of 1 per 1,000 would mean a gain of 5,000 to our population.

Taking the average earnings of adults at the age of 35 years as $300 a year, this would mean an increase in the wealth of the country equal to $1,500,000 annually. But, putting the future earning capacity of each adult at 35 years of age as equal to $200 annually, the value of

each such life is at least $3,000. This would give a total value for 5,000 lives at age of 35 of $15,000,000.

Now, what has been done in some countries in the way of a reduction of the death rate per 1,000 is a striking proof of the great economic value of sanitary science and preventive medicine to the State. There is a limit below which the death rate can not be brought; but there is no such fixed limit above which it may not rise. One of the duties of a Minister of Health would be to devise ways and means of keeping the death rate down to the lowest possible level.

A very large number of the deaths in the country is due to tuberculosis, typhoid fever, pneumonia and accidents. In the case of the above causes, the most of the deaths occur under 50, or in the active years of the first half of life. Very much could be done to lessen the death rate from the above causes: for even pneumonia is now being regarded as one of the diseases that should rightly be regarded as preventable to a considerable extent.

It is true, the various provinces are doing useful work; but this would be greatly increased by a central and active Department of Health, under the guidance of a Minister of Health, who was also a doctor of experience and knowledge on sanitary matters. Such a minister exists in some countries.—*Salus populi suprema lex est.*

THE POWER OF OBSERVATION IN MEDICINE.

Dr. Thomas T. Whipham, in a lecture which he delivered some time ago, at a medical college in Britain, made a number of very appropriate remarks, which we take pleasure in reproducing. He referred to the saying of Sir William Gull, as a sort of text for these remarks, "that in medicine we make more mistakes by not looking than by not knowing." The lecturer said this power was not given to all in equal degree, whereas some neither had it, nor could they learn it, and such were not suited for the profession of medicine. He quoted Napoleon to the effect that "the physician, like the general officer, should be a man possessing great power of discernment and observation which will enable him to discover the strength and position of the enemy." It requires teaching and confidence, said the lecturer, to call this power into action. The late Sir George Murray Humphry of Cambridge was wont to say to his pupils, "Eyes first, then hands, tongues last and least." In this Dr. Humphry emphasises the importance of a rapid appreciation of surroundings, rather than too much handling and questioning. The lecturer went on to say that

many look last when they ought to have looked first—at the aspect of the patient. If a student cannot be taught to see, little can be done for him. Like "Ephraim joined to his idols, he must be left alone." He referred to an old nurse in the hospital who was very observant. The students often asked her what ailed some of the patients, when she would often reply: "I don't know what's the matter with him, but I know he's going to die." Sir William Gull once saw a patient in consultation. The attending physician was arguing that it was a case of typhoid fever. Sir William said, "go back to your patient and look at his belly." He had seen that there was no distension and felt no resistance to pressure. The patient died of acute tuberculosis. The words of Sir Thomas Watson that "the patient sinks down in the bed" is a perfect eye picture of of the apathetic, feeble, almost unconscious condition of muscular and nervous prostration which is often met with in the later stages of acute and chronic diseases.

The time for the exercise of the faculty of observation is when danger is impending, and prompt recognition of the first signs of evil to come is of supreme importance to both attendant and patient. The occurrence of a few herpetic vesicles at the angle of the mouth in a patient with high, but no definite signs of any particular disease, are not much to look at, and yet they almost for a certainty eliminate typhoid fever, and rouse the suspicion that in a few hours later the case may prove to be an attack of pneumonia. Or take the case of a person lying in bed with his knees drawn up. This may be a very favorable, or unfavorable sign. It may point to a severe peritonitis, with a likely fatal ending; or it may mean that the patient is recovering from the exhaustion of some fever, and draws his knees up for the sake of the relief the change affords. No observant physician would overlook such a sign. In a moment, the educated eye can detect the sharply outlined features, the pallid face, the flush on the cheek, the bright lustre of the eye, the faintly-blue tint on the lips of tuberculosis. The parchment-like dry skin, the still dryer lips, the emaciation of the body, the wasting of the limbs, makes the presence of diabetes almost a matter of certainty.

It was by careful observation that Harvey made his discovery of the circulation; Jenner of vaccination; Hunter of his surgical achievements; Lister of the use of antiseptics. Quick to see and prompt to act might serve as a good motto for the profession. The words of Sydenham should be borne in mind. "True medicine consists in the discovery of real indications rather than in the excogitation of remedies. Those who have neglected this have put arms into the hands of the empiric and taught him to imitate the physician."

THE PROVINCIAL BOARD OF HEALTH.

The twenty-first annual report of the Provincial Board of Health for Ontario, for the year 1902, is to hand. It is a volume of nearly 200 pages, and contains much useful information on matters of sanitary science and preventable diseases.

Dr. Bryce, the secretary to the Board, in the first two chapters, gives a brief account of the growth of legislation dealing with matters of public health, and a statistical study of contagious diseases in Ontario for the year 1902. It is pointed out that the first action was taken by this province in 1833, when an "Act to establish Boards of Health," was passed. In view of a threatened invasion of the country by cholera, the Parliament of Upper and Lower Canada legislated for the foundation of a "Central Board of Health." In 1881, an Act was passed creating the "Ontario Board of Health." A short historical statement follows of the discoveries of Pasteur, Davaine, Bastian, Tyndall, Loeffler, Eberth, Klebs, Koch, Kitasato and others. In the 2nd chapter, Dr. Bryce, in his remarks on contagious diseases, points out there were in the Province 10,490 cases of smallpox, scarlet fever diphtheria and typhoid fever, with a mortality of 952, or 9.3 per cent. There were 2,797 cases of smallpox and 12 deaths, or a percentage rate of .0042; 3,452 cases of scarlet fever and 290 deaths, or a percentage rate of 8.4; 2,696 cases of diphtheria and 408 deaths, a percentage of 15.1; and 1,542 cases of typhoid fever and 242 deaths, or 15.69 per cent. It will be noted from the above that the death-rate among the smallpox cases was extremely low, due to the fact that most of the cases had been vaccinated. The death rate from scarlet fever is above the average generally experienced. In the case of typhoid fever, various years and epidemics yield death rates running all the way from 5 per cent. to 25 per cent. The death rate of 15.1 per cent, however, must be regarded as rather high. The death rate of 15 per cent. in diphtheria, is also high for our present methods of treatment. One might reasonably conclude that antitoxine has not been used as freely as its merits deserve. This we think is due to the price rather than to a lack of confidence in its curative value. Efforts should be made to furnish this potent remedy at much lower prices, and to furnish it free in the cases of the destitute poor. Upon the whole, Dr. Bryce's statistics are worthy of careful study.

Coming to Dr. C. A. Hodgetts' report of his year's inspections, we find some interesting statements But we think there is none of more importance than the following regarding the protective value of vaccination. He says:—"I have yet to meet with a case of varioloid in one

person well vaccinated or revaccinated within seven years prior to the date of exposure; while many have been the instances where vaccination only once efficiently performed, even 25 to 30 years previously, has given complete protection, and of the modifying power of vaccination only once performed at a still more remote period of time, in one instance being over 50 years." He strongly advocates infant vaccination, and revaccination when the wage earning years are reached. This is sound advice. The German law of vaccination in the first and fourteenth years has abolished smallpox from that great empire.

Perhaps the most important portion of the volume is the report of Dr. J. A Amyot on "Sewage Disposal." We wish to congratulate Dr. Amyot on his very able and lucid report, and express the hope that it will be read by many and carefully studied. He studied the disposal of sewage under the following headings:—(1) as the Indian does by moving his tent away from the accumulation, (2) by throwing it on the soil of the back yard, (3) by discharging it into water courses, (4) land irrigation (5) intermittent land filtration, (6) the septic tank, (7) the chemical treatment of sewage, (8) contact beds, (9) continuous filtration, and (10) the electrolytic method. He then goes on to speak of the work done at Berlin, the composition of the sewage, and the value of the septic tank system and the contact beds there in operation.

Some further reports on enteric fever, sewage disposal, and vaccination are to be found in the present report. As already stated, this year's report reflects much credit upon the Provincial Board of Health and its various officers.

THE MICROCOCCUS OF ACUTE RHEUMATISM.

Interest has been revived in this subject by a very careful article in the February number of the *Practitioner* (British), by Dr. George Ainley Walker, Gordon Lecturer, Guy's Hospital. He announces the doctrine at once that acute rheumatism is an infective process. This view is borne out by the clinical characteristics of the disease, namely, that it is sometimes endemic and sometimes shows a tendency to become epidemic, and that during its course there are some or all of the following: Fever, rapid anæmia, erythemata and purpura, polyarthritis, pericarditis, myocarditis, endocarditis, albuminuria, pleurisy, pneumonia and nephritis. This view is strengthened by the fact that it runs a definite course, and that there is frequently a tonsillitis. Then there are the frequent relapses. There are also met with, during the attacks, instances of malignant endocarditis. The frequent association of chorea

with acute rheumatism must be kept in mind. In many cases of chorea, without evidence of acute rheumatism, there is definite cardiac affection.

In 1875 Klebs detected miro-organisms in the cardiac valves which were affected with valvulitis. In 1887 Popoff obtained cultures from the blood of rheumatic subjects. Among the organisms that have been discovered at different times may be mentioned the staphylococcus, the sheptococcus and diplococcus, and the bacillus Achalme. It seems now to be pretty well settled that the micro-organism of the disease is a diplococcus similar to that described by Popoff. This appears to be borne out by the more recent researches of Apert, Triboulet, Westphal, Wasserman, Malkoff, Poynton and Paine. The cultures of this diplococcus, obtained from cases of acute rheumatism, produces in animals polyarthritis, pericarditis, myocarditis, endocarditis, pleurisy, nodule formation, and chorea-like symptoms. The micro-organism is found in nearly all these lesions. The writer obtained the organism from fifteen cases of acute rheumatism, and examined the actions of four specimens in rabbits with positive results. These investigations show that the organism in question is a tiny micrococcus, arranged in pairs and chains.

It has not yet been fully determined whether or not the micrococcus of acute rheumatism is a variety of streptococcus. There are some cogent reasons for thinking that it is, as it can be increased in virulency until it becomes a true pyogenetic organism. On the other hand the micrococcus of acute rheumatism will grow in a culture medium which has been used in the growth of streptococci, but which have been filtered out. This would show that the two organisms are not identical. Much work may yet be required before a positive opinion can be pronounced.

OVERCROWDING IN THE MEDICAL PROFESSION.

"There are few countries of the civilized world in which the supply of medical men is not more than equal to the demand. Probably, Russia is almost the only exception. In Great Britain, competition among doctors is painfully acute, and a similar statement applies with equal force to France and Austria. It is notorious that the evil is more accentuated in the United States than in any other part of the globe; and that, unless steps are taken to restrict the output, the situation from being serious will become absolutely alarming." The foregoing statement, coming from the *Medical Record*, of New York, is one that requires careful consideration. "The professions are all crowded." This is the cry we hear everywhere, and we have no doubt it is true

of all callings, as well as of the learned professions. It seems specially true, however, in Law and Medicine, and calls for particular attention by those interested in these professions. What should be done? Some have advocated raising the entrance and registration fees, and although these fees have from time to time been made a little stiffer, the desired result has not been obtained. The Chinese plan of regulating the supply of medical practitioners has for its chief objection, the fact that it lets in men with money and no brains, and keeps out those with brains and no money. We think no intelligent lover of the profession would wish to do that.

If there is too great a number crowding into the medical profession, the true remedy seems to be to raise the standard of the preliminary education required. If there is one calling among men that seems to demand culture and liberal training it is medicine.

The ideal physician should be, above all others, a thinker—quick, accurate and of sound judgment. The kind of training which would develop this power of rapid and accurate thought should be had before a man begins to study medicine itself. Literary and philosophical study gives culture and breadth, while scientific study, particularly laboratory work, fits a man for investigation--gives him power in diagnosis. All this is apart from the practical benefit of a knowledge of chemistry, physics, botany, and kindred studies.

The general trend of medical study, to-day, calls for intelligent investigation. Its possibilities are unlimited. The men who will succeed in the work must be specially prepared. Even in ordinary practice, the work must be of a higher order than in the past.

The requirements of the profession, if met, will go a long way in solving the problem of "too many doctors." Raising the standard will also raise the age limit. The amount of preliminary knowledge required by some medical schools is so ridiculously low that with the present efficient state of our schools and academies many boys of fourteen can with little difficulty pass the matriculation. It would be no great hardship if no one was allowed to begin the study of medicine before twenty. This subject is attracting much attention at present, and it seems as if the day is not distant when a degree in Arts will be the standard required for entrance upon medical study. Two of the leading universities in America, namely, Harvard and Johns Hopkins now demand it and others will no doubt follow their example.

Let us hope that Dominion registration may yet come into force, nationalizing the medical profession. If this were accomplished, there would be a much better chance for the adoption of a higher standard of entrance to the medical profession.

AN ACADEMY OF MEDICINE FOR TORONTO.

The talk of union has been in the air for some months. Now that the two medical colleges have agreed upon the desirability of uniting their forces, there seems no good reason why the medical societies of Toronto should not unite. The Toronto Medical Society, the Toronto Clinical Society, and the Pathological Society are very useful; and have, in the past, accomplished much. But it is always in order to improve upon the existing condition of things.

If the three societies could be joined into one, by a common membership fee, and form an academy of medicine much good would result from the change. It would be an important step towards the securing of a suitable building for meetings and the library. Such an academy would be more attractive and hold out more advantages than any of the present societies. This would have the effect of increasing the membership.

A suitable headquarters for meetings and the library is most desirable, and we feel quite confident that it is attainable. Such a headquarters would be of no small value to the profession of the entire Province. It would be a place of meetings, unions, re-unions. and for the collection and distribution of thought and opinion.

Now that the season for active medical work is again at hand, we hope to see this matter taken up and pressed on to a successful termination.

REDUCTIO AD ABSURDUM.

These words were never used with greater accuracy than when applied to Christian Science. In Christian Science, we have a modern equivalent of the ancient worship of mysteries. Christian Science is interesting because it is a phase of opinion; but, as a fallacy, it is on a level with thousands of other fallacies that have had their day in the past. Mind is known to us only in connection with matter; and matter is known in connection with mind. The Christian Scientist says there is no matter; that there is nothing but mind. This proposition is not thinkable.

But, while Christian Science tells us there is no such thing as disease, that it is only a delusion of mortal mind, and that germs have no existence, it also takes special pains to condemn the use of tobacco and alcohol. It is puzzling to know why these things should have an existence and do harm on an immaterial state of existence, when germs have no existence at all, and cause no disease.

The cures wrought by Christian Science are of the same nature as those wrought by the medicine men of savage tribes, by ignorant hypnotists, and by quacks. These so-called cures are the result of suggestion. It is quite true that the mind has some influence over the body in certain nervous affections; but, on the other hand, the mind has no influence, nor can it have any influence, other than a purely delusive one, over organic diseases in any organ of the body. Some diseases recover by time, and a few conditions are influenced by the mind. This is the field for Christian Science.

Stringent laws exist against homicide, the would-be suicide, or aiding in the death of others through wilful ignorance and neglect. It does seem a marvel that persons who hold that disease is only a delusion of mortal mind should be allowed to treat disease, and so permit the loss of life, the spread of infection, and serious impairment even where the patient escapes with his life. The day is not far distant when legislators, in deference to public opinion, will be compelled to enact such laws as shall put an end to Christian Science as a system of treatment. With the metaphysical or religious side of Christian Science we have nothing to do, much less do we care. It is only when it says that broken legs and cases of small pox are delusions of mortal mind that we think the law should put an end to this form of insanity.

EX NIHILO NIHIL FIT.

This is true of tuberculosis as of all other things. Tuberculosis is the greatest scourge of civilized countries. Wars, plagues, and intemperance combined do not cause as much loss, suffering and death as do the tubercle bacilli. No matter what the heredity may be, there must also be the germ. Every case of phthisis owes its origin to some other case. It matters nothing whether that other case is known or not, "'tis law as steadfast as the throne of Zeus" that a case of phthisis can no more arise *do novo* than can an oak tree.

The bacilli do not grow, nor multiply, outside some animal body. It may be laid down at once that man does not contract the disease from birds, reptiles nor fish. In some instances it may be of bovine origin; but even then it is more than likely to have been from man to the animal in the first place. Destroy the infection as it is produced in man, and tuberculosis will soon be a modern *Prometheus vinctus*. The disease is not obtained from any condition of nature.

The human victim of the disease contracts it by the bacilli entering the system through a wound, by being swallowed, or by being

inhaled. The discharges from tubercular patients, or the spray from the mouth in coughing, contain the bacilli. but nothing else in natu. does except from these sources. Every case of tuberculosis is a possible cause for other cases. The so-called heredity of the disease is in most instances only examples of family infection. And yet some will say that tuberculosis is not infectious in the same sense that other diseases are infectious. Of course it is. It is simply a case of the germs passing from the bodies of the sick to the bodies of the well, and this is what happens in small pox The method of infection may vary ; but the fact of infection remains.

1. The bacilli do not multiply out of the animal body.
2. They do not live long out of the animal body.
3. Man contracts the disease from man in nearly all instances.
4. Without the bacilli there can be no tubercolosis.
5. If the infection of the first case is destroyed, there cannot be a second case from it.
6. Tuberculosis should be reported and proper precautions taken.

DR. JAMES STEWART'S ILLNESS.

There is not a medical practitioner in Canada who will not extend to Professor Stewart, of Montreal, his sympathy in the latter's severe illness, and his best wishes for a perfect recovery. We learn from Dr. C. F. Martin that there is now good hopes of a recovery, though the convalescence will be slow. Dr. Stewart has been suffering from a severe attack of septicæmia following parotitis.

PERSONALS AND NEWS ITEMS.

Dr. Cawthorpe, of Tiverton, has opened an office at Themsford.

Dr. W. R. Coles, a graduate of Trinity and McGill has located in Regina.

Dr. A. Downing, of McDonald's Corners, has removed to Bruce Mines.

Dr. Woods, Inspector of Jails for the Quebec Government has settled in Hull.

Dr. Keith, of Omemee, is now occupying his new residence in the west end.

Dr. Bowman, a graduate of the University of Toronto, has located in Weyburn.

Dr. Benjamin Reeves, of Fort Francis, was recently married to Miss Langstaff, of Emo.

Dr. E. W. Spragge, of Toronto, spent three weeks in Muskoka during July and August

Dr. D. B. Kennedy, of Pembroke, has gone to Great Britain for a post-graduate study.

Dr. R. L. Dudley, of Pembroke, has purchased the practice of Dr. McLellan, North Bay.

Dr. M. C. Black, of Paisley, has been appointed Associate-Coroner for the County of Bruce.

Dr. McKay, lately of Leduc, will probably locate in one of the settlements east of Battleford.

Dr. C. Duncombe, of St. Thomas, returned on 21st August, after his post-graduate course in London.

Dr. Baker, of Keewatin, paid a visit of two or three weeks to his former home at Springfield, Ont.

Dr. A. L. DeMartigny, of Montreal, has been appointed to the Mounted Police at Battleford.

Dr. and Mrs. Bedford Richardson and family of 10 Carlton street, spent August at Bala, Muskoka.

Dr. D. J. Gibb Wishart spent two weeks during August with his family at Bellevue, Go Home Bay.

Dr. J. H. O'Neil has settled in Paisley, County of Bruce. He was formerly with Dr. Hall, of Brampton.

Dr. and Mrs. H. S. Birkett, of Montreal, who sailed for England by the Canada, spent a few weeks abroad.

Dr. Jas. Connell, recently of Spencerville, left on July 22nd, for a year or so in some of the big hospitals.

Dr. Whitely, Londesboro, has bought out a practise at Gorrie, and left for that place to enter upon his duties.

Dr. W. S. Payfair, of London, Eng., died 14th August. He was well known as the author of a work on midwifery.

Dr. J. A. C. Hogan, of Walkerville, was married July 27th to Miss Nellie Large, Daughter of the Rev. R. Large, Cleveland.

Dr. Creighton, who has been taking the practice of Dr. Casselman, has entered a partnership with Dr. Byers of Melita, Man.

Dr. F. H. Bradley, of Compton, Que., sailed last Saturday from Montreal for a visit to the United Kingdom and Ireland.

Dr. Hutchinson, of St. Thomas, and family left on 31st July on a holiday trip to Upper Michigan.

Dr. John W. Russel, for the past six months house surgeon at Victoria Hospital, London, will practice at Highgate.

Dr. R. S. Macalpine has returned from New York, where he took a post-graduate course, and has resumed his practice in Petrolia.

Dr. W. B. Thistle has recovered from the severe attack of typhoid fever which has confined him to his home for some weeks.

Dr. Peake, son of Rev. W. H. Peake, of Campbellford, has settled as a practising physician at Blackfalds, a little town in Alberta.

Dr. Casselman, of Napinka, Man., has returned from Chicago where he has been taking a course in surgery and clinical medicine.

Dr. Thomas A. Moore, who has been one of Stellarton's (N. S.) leading medical practitioners for 15 years, has gone to New York.

The Marriage of Miss Laura Dickie, of Upper Stewiacke, to Dr. MacGregor MacKay, took place at Livingston, Montana, July 13th.

Dr. Rochette, formerly of Windsor Mills and Richmond, who has been living in California for some time, returned again to Windsor.

The funeral of the late E. H. Wells, M.D., took place Monday, 20th July, from the deceased's residence on the Eramosa road, near Guelph.

Dr. J. R. Thomson, of Winnipeg, who was absent for some time in Toronto, owing to the illness of a relation, has returned to his practice.

Dr. W. G. Montgomery, of Gorrie, who was ill at the home of his father, Wm. Montgomery, was not improving when last heard from.

Dr. Patrick, M.L.A. for Yorkton, N.W.T. accompanied by Mrs. Patrick and family, will make an extended visit to London and other points in Ontario.

Dr. Buchanan, of Zurich, took a trip to the Coast, and was absent about six weeks. Dr. Wallace, of Collingwood, attended to his practice in the meantime.

Dr. Percy James, of Galt, left a short time ago for a trip through the Thousand Islands, on his way to London, Eng., where he will take boat for Australia.

Dr. Hodge, of London, has been appointed by the National Sanitarium Company as their local examiner for patients going to the sanitarium at Gravenhurst.

Dr. P. L. B. Ebbett, of Gagetown, who graduated in medicine at the close of last term at McGill, is to be associated with Dr. Nevers, of Houlton, N.B.

A pretty wedding took place at Kildonan, on the 29th ult., when Miss Christiana Helen McBeath, Fort Pelly, was united to Dr. Wm. Sinclair, of Manitou.

The death is announced of Mrs. Thornton, wife of Dr. H. R. Thornton, of Petrolea. Deceased had been ill for about two years, and her death was not entirely unexpected.

Much sympathy is felt for Dr. Joseph Stafford of McGill University, late of Toronto University, in the very sudden death of Mrs. Stafford in Montreal, on the 27th of July.

Charles Harold Dickson, M.D., of Port Hood, and Isabelle Staniland Oliver of Halifax, daughter of the late Captain Frank Oliver, of Sydney, were united in marriage July 28.

Dr. C. H. Vrooman, of Winnipeg, left by the Imperial Limited on Saturday, 8th August, for the east where he will visit the hospitals in Toronto, Montreal, New York and other cities.

Dr. J. J. Robertson, of Montreal, a recent graduate of Queen's College, was married in the latter part of July, in Kingston to Miss Henrietta McDowall, second daughter of Mr. R. J. McDowall.

Dr. Herbert C. Ina Featherston, of Bedford road, sailed per ss. Corinthian on 22nd July for Glasgow. He intends taking a post-graduate course in the Royal College of Physicians and Surgeons.

Dr. J. M. Piper, of South London, was confined to his room for some time. He was suffering from blood poisoning, caused by a slight scratch received on one finger. At one time his condition was critical.

Dr. Norman D. Buchanan and Dr. Frank C. Neal, recent graduates of the University of Toronto, have gone to Europe, where they intend remaining for two years, studying in London, Berlin and Vienna.

The marriage took place at Toronto on Wednesday, the 22nd July, of Miss Marion S. Longworth, to Dr. D. J. McDonald of Toronto. Mrs. McDonald graduated from the Mt. Allison Ladies' College in 1899.

Dr. George Villeneuve, medical superintendent Longue Point Asylum spent his holidays at St. Irenee les Banis and Murray Bay. Dr. F. E. Devlin, assistant medical superintendent, was in charge during his absence.

Dr. Corbett, of Winnipeg, had an extended holiday during the month. He visited all the principal towns and cities in Ontario, Port Hope, his old home, and which he has not seen for 18 years, being one of the points in his itinerary.

Dr. Lorne Robertson, son of Dr. J. A. Robertson, of Stratford, and President of the Ontario Medical Council, passed the examination for the Fellowship of the Royal College of Physicians of London, recently, and has returned home.

Dr. D. G. Revell, a Canadian and a member of the staff of Anatomy, University of Chicago, was offered the position of assistant professor in the University of St. Louis. He declined the offer. He is a graduate of the University of Toronto.

Dr. Geo. T. McKeough left on July 16th, for Munich, Germany, where he will meet his daughter, Miss Mary. Subsequently the doctor will visit the hospitals of Vienna and Berlin, later sojourning for a while in Paris, London and Scotland.

Dr. and Mrs. Moore, of Brampton, left about the middle of July, for a two months' trip. They will visit different places in Michigan and Wisconsin. Dr. Moore has been in ill health for some time It is hoped this holiday will renew his strength, and that he will return fully restored.

Dr. C. F. Neu, of London, has given up his practice there, and will remove to Indianapolis, where he is to be the superintendent in the laboratory of a large asylum for the insane. Dr. Neu practised in London for upwards of ten years and was a member of the Medical School staff.

Dr. W. Edgar Robertson, son of Dr. D. Robertson, of Milton, graduate of the University of Toronto, has passed the conjoint examination in Edinburgh for the triple qualifications of L.R.C.P., Edin., L.R.C.S., Edin., and L.F.P. and S., Glasgow. The doctor intends to continue his studies in London, Paris and Vienna before returning to Canada.

The marriage took place at Newark, New Jersey, recently of Dr. William L. Ellis and Miss Mildred Frost, of Hampton. Miss Frost had been studying nursing in the hospital at Newark. Dr. and Mrs. Ellis will return to Quebec where Dr. Ellis's work as medical officer of the Department of Interior requires his attention during the summer.

OBITUARY.

— DEWITT H. MARTYN, M.D.

Dr. Martyn, of Kincardine, died on Sunday, 19th July, after a long illness, at the age of 66. The late Dr. Martyn was a striking figure in Kincardine affairs for a great many years.

C. E. MORIN, M.D.

The many friends of Dr. C. E. Morin, of Thetford Mines, Que., were greatly surprised to hear of his death, which occurred on 24th July at Thetford Mines. The deceased gentleman who was only 37 years of age, was one of the most popular medical men of the district. His death is understood to have resulted from blood poisoning.

DONALD MACLEAN, M.D.

Dr. Donald MacLean, a noted surgeon in the State of Michigan, died July 24 at his home in Detroit from gastro enteritis. Dr. MacLean was born in Seymour township, Ont., in 1839, and graduated from Edinburgh University in 1862. He practised medicine in Kingston, Ont. until 1870, excepting the years 1863-64, when he was a surgeon in the United States Army. In 1870 he became professor of surgery at the University of Michigan, and held the chair until 1889. He was for a number of years chief surgeon of the Michigan Central and Grand Trunk Railroads, and in 1894 was President of the American Medical Association.

W. J. NEILSON, M.D.

Dr. W. J. Neilson, ex-M.P.P. for North Winnipeg, died on Friday, 17th July, in the Winnipeg Hospital, after an illness of considerable length, owing to a piece of gum lodging in a bronchial tube about twelve months ago, setting up inflammatory symptoms and causing him great pain. An operation was performed, but the relief it afforded him was slight, and his general health suffered. Two months ago he was removed to the hospital, where he died. Dr. Neilson was one of Winnipeg's most popular city physicians. He came to Winnipeg in the days before the boom. He was a keen politician, the first president of the Maple Leaf Club, and in 1899 was elected for North Winnipeg. He was born in Perth, Ont., March, 1854, and was thus only 49 years of age. He was educated in Ontario, and finally graduated in medicine from McGill University, taking the degree, both as a physician and surgeon.

JAMES W. McLAUGHLIN, M.D., L.R.C. & S., EDIN.

Dr. James W. McLaughlin, Registrar for West Durham, died 10th August in his 63rd year. He had been in very poor health for two years; and, a month prior to his death, went to Guelph for a change, and was thought to be benefited, but he was taken suddenly ill on the even-

ing of the 9th. The funeral took place from the family residence, Rathskamory. Deceased was the son of John and Eliza McLaughlin of Tyrone, Darlington township, and was educated at Tyrone Public School. After a brilliant medical course in the University of Toronto, he graduated in 1864. He was a gold medalist in his class, and was subsequently appointed an examiner in the university. He became a licentiate of the Medical Council of Ontario the same year. In 1872, after practising medicine at Enniskillen seven years, he went to the old country and successfully passed the examinations of the Royal College of Surgeons and the Royal College of Physicians of Edinburgh, taking the L.R.C.P. and L.R.C.S. diplomas. He was for many years a member of the Medical Council of Ontario, and was looked upon as one of the most skilled physicians and surgeons in eastern Ontario. Just 28 years ago he came from Enniskillen to Bowmanville, where he enjoyed a very extensive practice till his health broke down. Dr. McLaughlin represented West Durham in the Ontario Legislature for three Parliaments. Deceased was a capital debater, having few equals as a political platform speaker, and his voice was often heard in the legislative halls. He was twice married, his first wife being Ida Ella Gross and his second wife, who survives him, Sarah J. Wilkinson, youngest daughter of the late Captain Neil Wilkinson. He leaves also two sons, Arthur E., who practises law in Bowmanville, and Norman, residing at Dunkirk, N.Y. His eldest daughter is the wife of Mr. B. B. Cronyn, Toronto. The second daughter, Mary, lives at home. Deceased was a great temperance advocate, and took an active part in every campaign against the liquor traffic during the last quarter of a century. On retiring from the Provincial Parliament, he was appointed Registrar for the West Riding of Durham, an office which he held up to his death. He was superintendent of the Presbyterian Sunday school at Enniskillen and Bowmanville for some thirty-five years, and was for a long time an elder and member of the board of managers in St. Paul's Presbyterian church. He was also an active member of several fraternal and benevolent societies.

LUCIUS S. OILLE, M.D.

Dr. L. S. Oille died at his home in St. Catharines on August 15th after an illness of several weeks. Deceased was born in 1830, and was educated at the old Grantham Academy in St Catharines and at Toronto University, from which he graduated B.A. in 1855 as a gold medalist, and M.A. in 1856. He then took up the study of medicine in the same institution, and in 1859 graduated M.D.

again winning the gold medal. He then settled in St. Catharines, and began practising his profession. He took a very prominent part in all matters pertaining to the city's welfare. He represented the city as a member of the council, deputy reeve and mayor. He took an active part in establishing the city water works system, and was a commissioner for many years. He started the first street railway between St. Catharines and Thorold, and was also the chief promoter of the St. Catharines and Niagara Central Railway. He was president of the Board of Trade for a number of years, and a member of the board of trustees of the High school. He was high up in the Masonic order.

JAMES McGARRY, M. D.

Dr. James McGarry, of Niagara Falls South, a coroner and one of the most prominent physicians in this district, died 13th August, aged 69 years. He was a prominent Mason, Workman and Royal Templar, and was widely known and respected. The doctor had a foot amputated a few days ago on account of gangrene setting in, and did not rally.

FIFE FOWLER, M.D., L.R.C.S., EDIN.

Dr. Fife Fowler, of Kingston, died on 3rd August, at the advanced age of 80. Dr. Fowler was born in Elgin, Morayshire, Scotland, in 1823, and received his preliminary education at the grammar school, Aberdeen. At the age of 14, he matriculated in arts at King's College, Aberdeen, where he attended lectures for two years. He was then apprenticed for four years to the late Professor Pirie of Marischal College, Aberdeen, from which institution he received his M.B. in 1843. Three years later, he took his M.D. from the same college, and his L R C.S. from Edinburgh.

He spent two years in Greenland, and practised for some time at Aboyne, near Balmoral. In 1854, he came to Canada and located in Kingston. About the time of his arrival in Kingston, efforts were being made to establish the Medical Faculty of Queen's University. He was asked to take the chair of Materia Medica and Therapeutics, which he did, filling the chair till the retirement of the late Dr. Yates, in 1878, when he became professor of Medicine and dean of the Medical Faculty. He was a charter member of the Royal College of Physicians and Surgeons, Kingston Dr. Fowler survived all his early associates in the Medical College. For forty-six years he was actively identified with the staff of the College, enjoying the confidence of both colleagues and students. He was dean of the Medical Faculty for a quarter of a century.

He was a member of the Ontario Medical Council for many years, and its president in 1892.

On his retirement from active work, the faculty and graduates, from all parts of the Dominion and the United States, felt that he should not be permitted to retire without some tangible expression of their appreciation of his faithful services to the College and the profession. It was agreed to found a scholarship in medicine, to be known as "the Dean Fowler Scholarship." With much promptness the funds were raised.

Dr. Fowler was ever the friend of the student, and especially the deserving student, who, though poor in money, was rich in grey matter. To such his generous sympathies ever went out. It is safe to say that, in the hearts of all the medical graduates of Queen's, he will ever retain an affectionate place.

Advancing years having compelled him some time ago to resign the active duties of his appointments on the College and hospital, and to relinquish the cares of practice, he lived in comparative, but easy retirement, esteemed by all, and in the full consciousness that his life had not been in vain, nor his efforts unappreciated.

His widow, one son, a barrister in Toronto, and four daughter survive him.

Dr. Fowler lived true to the words of Horace :—

"Keep Nature's great original in view,
"And thence the truthful images pursue."

STUART McARTON, M.D.

Dr. McArton, a prominent citizen of Paisley, died at his residence on Monday, 3rd August, after a brief illness, at the comparatively early age of fifty-one years. Dr. McArton served in the County Council for a number of years, and was a highly esteemed member of that body. He was also physician for the Grand Trunk Railway Co. The doctor was personally a gentleman of kindly disposition and of warm genial humor. He leaves quite a large family. Mrs. McArton is Vice-President of the Ladies' County Hospital Association. Her many friends in the county will be grieved to hear of her bereavement. Dr. McArton was a native of Carleton Place, Lanark Co., to which town his remains were taken for burial. His death is a distinct loss to the best elements of the community in which he lived.

BOOK REVIEWS.

A THESAURUS OF MEDICAL WORKS AND PHRASES.

By Wilfred M. Barton, M.D., Assistant to Professor of Materia Medica and Therapeutics, and Lecturer on Pharmacy, Georgetown University, Washington, D. C. ; and Walter A. Wells, M.D., Demonstrator of Laryngology and Rhinology, Georgetown University, Washington, D.C. Handsome octavo of 534 pages. Philadelphia, New York, London: W. B. Saunders & Company, 1903. Flexible Leather $2.50 net; with thumb index, $3.00 net. Toronto: J. A. Carveth & Co.

This work is the only Medical Thesaurus ever published. It performs for medical literature the same services which Roget's work has done for literature in general; that is, instead of, as an ordinary dictionary does, supplying the meaning to given words, it reverses the process, and when the meaning or idea is in the mind, it endeavors to supply the fitting term or phrase to express that idea. To obviate constant reference to a lexicon to discover the meaning of terms, brief definitions have been given before each word. As a dictionary is of service to those who need assistance in interpreting the expressed thought of others, the Thesaurus is intended to assist those who have to write or to speak to give proper expression to their own thoughts. In order to enhance the practical application of the book, cross references from one caption to another have been introduced, and terms inserted under more than one caption when the nature of the term permitted. In the matter of synonyms of technical words, the authors have performed for medical science a service never before attempted. Writers and speakers desiring to avoid unpleasant repetition of words will find this feature of the work of invaluable service. Indeed, this Thesaurus of medical terms and phrases will be found of inestimable value to all persons who are called upon to state or explain any subject in the technical language of medicine.

THE MEDICAL EPITOME SERIES.

Microscopy and Bacteriology, a manual for students and practitioners. By P. E. Archinard, A. M., M. D. Demonstrator of Microscopy and Bacteriology, Tulane University of Louisiana, Medical Department. Series edited by V. C. Pedersen, A. M., M. D. Illustrated with seventy-four engravings. Lea Brothers & Co. Philadelphia and New York. Price in cloth $1. net.

The object of this little book is to give everything that is essential in microscopy and bacteriology without padding and at a very moderate price. In these respects the author and editor have succeeded very well. The various books of this series are got up in a very neat form. The mechanical make-up of these books is all that could be desired. The illustrations in the present number are excellent. This little work can be highly commended.

THE MEDICAL EPITOME SERIES.

Medical Jurisprudence, a manual for students and practitioners. By Edwin Welles Dwight, M. D., Instructor in Legal Medicine, Harvard University. Series edited by V. C. Pedersen, A. M., M. D., Lea Brothers & Co. Philadelphia. Price, cloth, net $1.

In the 250 pages of this little book, the subject of medical jurisprudence is carefully reviewed. There are some books we can read, some we cannot read, and others we cannot help reading. Dr. Dwight's little manual is one of the latter. When one begins reading it he keeps on reading it because it proves to be so interesting. The arrangement is simple and scientific, the statements clear and brief, and the matter accurate. This is just the sort of book every physician should have, as he could find at once what he requires to know. This book is a genuine multum in parvo.

THE WELCOME PHYSIOLOGICAL RESEARCH LABORATORIES.

Founded 1894. Walter Dowson, M. A., M. D., Director—Brockwell Hall, Herne Hill, London, S. E.

This is a very handsome brochure of 36 octavo pages, neatly bound and well illustrated. The booklet gives an account of the laboratories, the stables for the animals, and the various methods of research. The subjects of the standardization, and diphtheria antitoxic serum are taken up fully. Much evidence is submitted of the value of the serum in the treatment of diphtheria. It is clearly proved that when the antitoxin is used early and freely, the mortality is greatly reduced. The statement is made that, as the disease is severe on very young children, these ought to receive larger doses than the adult. Prophylactic doses of 1000 units are of decided utility. The dose for an ordinary case should be 2000, units and in severe cases at least 4000 units. The statement is made that so far researches have failed to make any substantial headway in typhoid fever, leprosy, pneumonia, and tuberculosis. In tetanus the serum is antitoxic in its action. In order that the serum treatment in tetanus may be useful, it is necessary to commence it at the earliest possible moment. The symptoms are due to the action of the toxin on the central nervous system. This toxin is produced by the growth and multiplication of the baccilli in some local lesion. The serum is an antitoxin. In the case of streptococcus poisoning, the serum has proven of much value in some cases, and appears to have failed in others. This is due to the fact that there are several distinct varieties of pathogenic streptococci. It is suggested that much of the research of the future will be along the lines of discovering bactericidal sera, and not merely antitoxins. Considerable attention is given to cancer. It is laid

down as the main feature of this form of growth that the vegetative functions of the cells dominate all their other functions. The reproductive activity overpasses that in any other direction. These tumors never reach maturity: they are never fully developed tissues, structurally or otherwise. Degenerations are extremely common and testify to the unstable nature of the new growth. Stimulation of the cell nuclei may be capable of causing these variations in the life of the cell. It has been shown that stimulation of the ova of lowly-organized animals will cause the development of larvae without fertilization by spermatozoa; but adults do not develop from these. Some such cell activity may be the cause of cancer growths. This vegetative activity may be excited by a parasite, or some chemical irritant acting upon the cells. Which one of these views is the true one has not yet been settled. The peculiar frequency of cancer in organs once active but now undergoing involution is noteworthy. The overproduction is in the epithelial cells which invade the surrounding connective tissue. The little book is a very interesting one.

DIETOTHERAPY AND FOOD IN HEALTH.

Vol. VI. of A System of Physiologic Therapeutics, a practical exposition of the methods, other than Drug Giving, useful in the Prevention of Disease and in the Treatment of the Sick. Edited by Solomon Solis Cohen, A.M., M.D., Professor of Medicine and Therapeutics in the Philadelphia Polyclinic; Lecturer on Clinical Medicine at Jefferson Medical College; Physician to the Philadelphia Hospital and to the Rush Hospital for Consumption, etc. Present volume by Nathan S. Davis, jr., A.M., M.D., Professor of the Principles and Practice of Medicine in the Northwestern University Medical School; Physician to Mercy Hospital and Wesley Hospital, Chicago, etc. Philadelphia: P. Blakiston's, Son & Co. Toronto: Chandler and Massey. Price per volume,

Volume VI. of a System of Physiologic Therapeutics is devoted to the consideration of the 'general principles of diet in health," and "diet in disease." Under the first division the following subjects are discussed, namely, *food in health, the uses of water in dietetics, the elements* of food, quantity and kinds of food needed in health, animal foods, vege table foods, beverages, diet in health, infant feeding, and food as a cause of disease. In part two of the volume the following topics are considered: feeding the sick, diet in infectious diseases, diet in diseases of the stomach, diet in diseases of the blood, diet in diseases of the intestines, *liver, and peritoneum. diet in diseases of the respiratory organs,* diet in diseases of the circulatory organs, diet in diseases of the kidneys, diet in diseases of the nervous system, diet in diseases of the skin, diet in disorders of nutrition. It will be seen from the above that the scope of the author

is a comprehensive one. Throughout the 370 pages of the book, the author keeps up a well sustained effort to elucidate the difficulties of the dietary of health and disease; and we wish to congratulate him on the large measure of success he has attained, the advice being sound on all subjects. This is a genuine work on therapeutics—foods being the remedial measures. Until one reads this book, it would not likely occur to him how much there is in the subject of dietetics.

GENITO-URINARY DISEASES.

The Surgical Diseases of the Genito-Urinary Organs, by E. L. Keyes, A.M., M.D., LL.D., Consulting Surgeon to the Bellevue and the Skin and Cancer Hospitals; Surgeon to St. Elizabeth Hospital; formerly Professor of Genito-Urinary Surgery, Syphilology and Dermatology at the Bellevue Hospital Medical College; and E. L. Keyes, Jr., A.B., M.D., Ph.D., Lecturer in Genito-Urinary Surgery, New York Polyclinic Medical School and Hospital; Surgeon to the Out-Patient Department, St. Vincent's Hospital; Physician to the Venereal Clinic, Out-Patient Department of the House of Relief of the New York Hospital, etc. A revision of Van Buren and Keyes Text-Book, with one hundred and seventy-four illustrations in the text and ten plates, eight of which are colored. New York: D. Appleton & Co. Toronto: N. Morang & Co. Price in cloth, $7.00 net, 1903.

The late Dr. W. H. Van Buren began in 1867 to write his book on "Genito-Urinary Diseases with Syphilis." The present edition is the direct descendant of the above work of 35 years ago. In the present edition syphilis has been eliminated, as the authors regard it as a general disease, only being contracted usually through the genital organs.

In speaking of gonorrhœa, the authors state that, so long as gonococci are found in the discharge, the patient is infectious. This is the only test that is absolute. Clinically, however, the person is not free from the infection so long as pus is discharged from the genital tract.

In the treatment of gonorrhœa, sandal-wood oil is spoken of as the best internal remedy, and irrigation with permanganate of potash as the best local measure. The treatment of chronic urethritis and prostatis is discussed in a very able and satisfactory manner.

Coming to the subject of spermatorrhœa the statement is made that "improved methods of modern diagnosis, aided by a broadened common sense, justify the surgeon, I believe, in dismissing spermatorrhœa from the catalogue of diseases. There is no such disease as spermatorrhœa." To this opinion we give our most cordial assent.

The chapter on "Extra-Genital and Metastatic Gonorrhœa" is well worthy of careful study. Cystitis, pyelitis, conjunctivitis, proctitis, and rheumatism are taken up, and the treatment gone into very fully. In the gonorrhœal form the usual remedies for acute rheumatism are of no use. The treatment is tonic, hygienic and dietetic, and an alkali if the

urine is acid. "The sooner the uretheal discharge is controlled the quicker will the rheumatic symptoms cease." In gonorrhœal ophthalmia cold applications are of the utmost importance. The nitrate of silver treatment is condemned. Instead, cleanliness and drainage must be constantly assured by gently separating the lids and freely instilling with a dropper or an irrigator either chlorin water, or 4 per cent. boric acid solution, or weak permanganate-of-potash solution. These solutions are made freely to the entire conjunctivial sac about every two hours.

Another section of the book of the utmost importance is that dealing with organic stricture. This chapter, however, is so full that it is quite impossible to go into any details further than to say that indications for the various methods of treatment are well laid down. Excellent directions are given when to cut, and to what extent.

Hypertrophy of the prostate is an important subject, and receives accordingly extended consideration. The hygienic, general, local, and operative methods of treatment are reviewed with great care. Of the perineal operations the authors recommend intra-vesical perineal prostatectomy.

It would be impossible to mention all the good features of the book. It is the honest and lucid statement of authors of wide reading and much experience in the subjects dealt with in it. Genito-urinary diseases by Keyes should be read by every medical practitioner. The publishers have done their share splendidly.

INTERNATIONAL CLINICS.

A quarterly of Illustrated Clinical Lectures and especially prepared original articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopedics, Pathology, Dermatology, Opthalmology, Otology, Rhinology, Laryngology, Hygiene, and other topics of interest to students and practitioners by leading members of the medical profession throughout the world; edited by S. O. J. Kelly, A.M., M.D., Philadelphia, with the collaboration of Drs. W. Osler, J. H. Musser, Jas. Stewart, John B. Murphy, T. M. Rotch, John G. Clark, James J. Walsh, J. W. Ballantyne, John Harold, Edmund Landolt, Richard Kretz, with correspondents in Montreal, London, Paris, Berlin, Vienna, Leipsic, Brussels and Carlsbad. Vols. I and II, Thirteenth series, 1903. Philadelphia: J. B. Lippincott Company. Montreal: Charles Roberts, 1324 Ontario street. Price, $2.25 per Vol.

International Clinics are well known to the medical profession. The publication is now in its thirteenth year. These volumes are issued quarterly and average about three hundred pages. The paper, printing, binding and illustrations are of the very highest quality. The range of subjects covered in these volumes is as wide as the practice of the healing art permit of. Clinical lectures and special papers are to be found from the best known teachers and writers. In these volumes there is the happy combination of the original articles

and the digest of quarterly progress, and each volume contains a carefully prepared resumé of medical science for the quarter. These volumes are of much value as works of reference, as the articles are all of such a character as to render them authoritative. The volume for July contains a symposium on the summer diarrhoeas of children, and furnishes the reader the latest views upon these disorders and the best methods of treatment. These volumes of lectures and special reviews of medical literature will well repay a careful study of their contents. It would be impossible to review all the lectures; but one instance may be selected Dr. Alexander Haig, of London, contends that a common cold is due in nearly all cases to the presence of an excess of uric acid in the blood, or a condition of collaemia, as he calls it. When this condition is present the cold acts, and then the germ. Dr. Haig would define a common cold as collaemia, plus the local action of cold, plus a microbe. We can commend "International Clinics" to our readers.

WOOD'S REFERENCE HANDBOOK.

A Reference Handbook of the Medical Sciences embracing the entire range of Scientific and Practical Medicine and Allied Science. By Various Writers. A new edition, completely revised and rewritten. Edited by Albert H. Buck, M.D., New York City. Vol. VI. Illustrated by chromolithographs and seven hundred and sixty half-tone and wood engravings. New York: William Wood & Company, 1903. Price, in cloth, $7.00.

This volume, the sixth in the work, is a mammoth one, consists of 1004 pages, has 153 well known contributors to it, and begins with mass and ends with rye. Like the previous volumes of the set it is a handsome one—being well bound, printed, and illustrated. The very best of material is used. It is a credit to the publishers, the editor, and the contributors; and will prove of the utmost use to those who consult it. Six volumes of this mounmental work have now been issued. It can be said that it is a unique work in many ways. The entire range of subjects of medical and allied sciences are included in the scope of this work. The amount of space accorded to the various subjects is carefully allotted. While all prolixity is avoided, the more important topics are fully discussed. These volumes constitute a complete medical library in themselves. The alphabetical arrangement of the articles permits of very ready reference to any one. In all cases where the same subject has several names, they are all given with the statement under which one the subject is discussed. Thus, under "ovulation," the reader is told to "see menstruation"; and under "osteosarcoma" to "see sarcoma." In this way all confusion and difficulty in finding the articles are avoided. We can recommend the Reference Handbook of the Medical Sciences as a most valuable publication.

MANUAL OF MEDICINE.

By Thomas Kirkpatrick Monro, M. A., M. D., Fellow of, and Examiner to, the Faculty of Physicians and Surgeons, Glasgow, Physician to Glasgow Royal Infirmary, and Professor of Medicine in St. Mungo's College; formerly Examiner to the University of Glasgow, and Pathologist to the Victoria Infirmary, London. Bailhère, Tindall & Co., 8 Henrietta Street, Covent Garden, 1903. Price, cloth, 15s.

This volume is a solid crown octavo one of 900 pages. It appears for the first time. The work claims to be specially written for senior students and junior practitioners. It appears to strike a happy medium between the manuals that are too small for the student and those text books that are too large.

The subjects discussed in works on the practice of medicine find a place in this manual. The classification is particularly happy. In the arrangement of the affections of the several systems, the author has followed mainly such well-known writers and teachers as Sir. W. R. Gowers, Sir W. H. Broadbent, and Professor Osler. But he has introduced his own views on the grouping of diseases.

Each disease is succinctly, but clearly, discussed under the headings definition, etiology, morbid anatomy, pathology, symptons, diagnosis, prognosis, and treatment. The statements under each heading are brief, clear and reliable. Indeed, it is a big book so far as the amount of really useful matter is concerned, all padding being studiously avoided.

It is a matter of no small pleasure to read the sections on treatment. There is no difficulty in understanding what the author means. He gives his opinions on treatment with that decision that leaves no doubt. Upon the whole, the author is an optimist in treatment. He has considerable faith in the value of drugs in the treatment of disease. The perusal of this work cannot fail to have a stimulating influence upon the reader. Personally, we dislike a pessimist in theraputics. It affords us much pleasure to recommend this work of Professor Monro.

THE REFRACTION AND MOTILITY OF THE EYE.

For students and practitioners, by William Norwood Suter, M.D., Assistant Surgeon Episcopal Eye, Ear and Throat Hospital, Washington, D.C., illustrated with 101 engravings in the text and 4 plates in colors and monochrome. Lea Brothers & Co., Philadelphia and New York, Publishers.

In presenting this small book to the profession the author has endeavored to please and instruct both the beginners and advanced students and practitioners. The first part of the book treats very fully of the theory of refraction and gives prominent space to the mathematical formulæ A little less of the mathematical formulæ would not detract from the work.

The methods of determining the errors of refraction occupy 36 pages,and the author has written on this topic with very great clearness and simplicity. In referring to the treatment of astigmatism by surgical measures Suter says: "The impossibility of regulating the result renders it improbable that this method will come into practical use." In the chapter devoted to Disorders of Motility the author has made the subject read in a very entertaining way. The various muscle tests are fully illustrated as well as some of the commoner operative measures. The make up of the book is in the usual excellent style that marks Lea Brothers' publications.

MISCELLANEOUS.

THE VALUE OF ANTISEPTIC DOUCHING IN GYNECOLOGY AND OBSTETRIC WORK.

BY C. H. POWELL, A.M., M.D.

Professor of Physical Diagnosis and Clinical Medicine, Barnes Medical College, St. Louis, Mo.

THE systematic treatment of both lying-in patients.as well as those who so frequently come to the physician for a long and complex line of disturbances referable to the uterus and its adnexa by the application of various agents in the oft-used and oft-abused douche, is a fact well known by all physician, but like all good things many abuses have crept into this time-honored custom. In this article I will at first call attention to the indications for the douche, and then secondly give the class of agents most frequently used, with special reference to what, in my experience approximating a period of twenty years, has been the most satisfactory. In obstetrical work the douche is usually ordered during the nine days confinement to the bed, and also subsequently until conditions satisfy us that the uterus has returned to its normal size, and further evidence of the lochial or other discharge has entirely ceased. Corrosive sublimate, one to three thousand, or carbolic acid, one dram to the quart, are the agents usually employed, but in the practice of a very great many physicians the temperature of the water itself receives but little consideration. It goes without saying that in order to receive the best results obtainable the water should be as hot as can be borne, as the well-known antiphlogistic property of hot water will have a most salutary influence on the hyperæmic sensitive areas. In the application of a douche also for the relief of a discharge due to a sub-involuted uterus we must not lose sight of the causes of this abnormal condition, there may be placental tissue in the uterus or a lacera-

tion of the cervix, or a tubal abscess, or an adjacent inflammation directly responsible for the difficulty, and in the application of our douching we must not hesitate to satisfy ourselves in every essential particular regarding the possibilities in the premises. Douching, it is true, will constitute a very valuable means for curing these cases, but we cannot rely upon this remedy alone, and to the exclusion of other things. Glycerine has been recognized the world over for its potent hygroscopic properties, and of this class of cases in particular it is found valuable as an efficient application on absorbent cotton made into a tampon not too large, and around the absorbent cotton some antiseptic wool or sterilized non-absorbent cotton be enveloped. This arrangement prevents the absorbent cotton from collecting the secretions, which not only reduces its size but thereby materially lessens the efficacy of the glycerine therapy. Now, in the selection of corrosive sublimate, or carbolic acid three serious problems at once confront the physician. In the first place both of these agents have a most pernicious influence upon the kidneys. Secondly, both drugs are quickly absorbed into the system, notably corrosive sublimate, and I can well recall in this connection when an Interne in the St. Louis Female Hospital fourteen years ago that the systematic custom of douching lying-in cases with a 1 to 3000 corrosive sublimate solution had to be changed to a 1 to 5000 owing to the development of fever, diarrhœa, and other indications of a toxic nature. Thirdly, corrosive sublimate and carbolic acid are dangerous drugs, and should not be placed in the hands of the patient or her family, as many grave mistakes are reported. The most deplorable accidents belong to carbolic acid which burns the fingers of the attendants, or if ignorantly or carelessly poured into the douche bag and an injection forthwith given the patient Carbolic acid is heavier than water, and settles in globules in the bottom of the bag. With the first exit of the water the acid escapes in its nascent state unmixed and burns the patient severely. Now it is not my intention to censure these useful drugs, for there is no doubt of their value in the treatment of septic cases. But with a long continued observation as to the aforementioned objections I looked around me for an antiseptic agent in my obstetrical and genecological work that could be relied upon to bring about the desired results, and that was minus the serious objections. The market, it is true, is flooded with antiseptics, but I must confess in my experience failure has been my lot. I almost felt like the man who was shipwrecked and cast adrift upon the sea, whose urgent thirst tempted him to cry out, "Water, water everywhere, but none nowhere to drink." In my predicament I used Glyco-Thymoline, and the following cases have induced me to conclude that the remedy is par excellence the best and safest antiseptic to be obtained.

Case First.

Retained Placenta Giving Rise to Severe Toxic Phenomena.

I was called in great haste to see a Mrs. H., who was taken with a severe chill, and whose headache was so severe as to necessitate her giving vent to the most piercing shrieks A hypodermic injection of morphia at once relieved this system, and a few questions forthwith led to the fact that no menstruation had been in evidence for two and a half months up to four days previous, when blood passed in considerable quantities in the shape of clots and liquid, and after persisting for three days ceased. I found the belly swollen, and tympanitic, very sensitive as to palpation. An examination disclosed the uterus soft and boggy, the os patulous, and a softened breaking down placenta extremely foul presenting itself. With the patient in Sim's position and using Sim's speculum I completely curetted the uterus, removing every vestige of the placenta, following which I washed out the organ with a Glyco-Thymoline solution, consisting of two teaspoonfuls of Glyco Thymoline to a pint of hot water. The following morning the temperature had fallen from 104 to 99. I placed the lady on hot douches of Glyco-Thymoline in the same proportion as above and dismissed her in three days entirely recovered. As a matter of course the decomposition of the placenta with saprophytic and other septic absorption was the cause per se for the chill, fever and other phenomena, and the removal of this was of prime importance, but the efficient antiseptic Glyco-Thymoline was quite a factor in the quick return to health.

Case Second.

Sloughing Uterine Fibroid.

A few weeks ago I was consulted by Mrs. McL., aged 47, widow, for a continued fever with persistent metrorrhagia. An examination showed the presence of a sloughing uterine fibroid. This growth was firmly attached to the uterus, non-pedunculated, and the discharge was extremely offensive. Under chloroform enucleation with the curette and scissors was attempted with but partial results. An hysterectomy was subsequently advised but refused by the patient, who was given hot Glyco-Thymoline douches twice daily, mainly to correct the fetor. The result of this was most decided, but the septic processes were so much in evidence that the patient finally submitted to an hysterectomy. Death occurred on the day following, and on post-mortem multiple abscesses were found in the liver, and parenchymatous changes in heart muscles, and kidneys. The entire uterus was transformed into a sloughing mess. The potent influence of the Glyco-Thymoline, in correcting the obnoxious odor, was very pronounced in this case

CASE THIRD.

Adherent Placenta in Multipara, Rupture of Labial Abscess during Delivery.

The subject of this report was a very corpulent mulatto woman whose weight approximated 225 pounds. Labor was very slow but the child was born in a normal state. During its birth, however, the woman complained a great deal of a sharp pain around the perineum, and as the head cleared the orifice a labial abscess gave way emitting, fully a tablespoonful of very foul smelling pus. This was not all, but the placenta was firmly attached and suddenly a great gush of blood welled from the vagina. Crede's method failing to detach the placenta, and the uterus being greatly relaxed, the case was a desperate one, for to introduce the hand into the uterus was a serious menace under the circumstances. Still no other alternative presented itself. The hand was introduced into the uterus, the placenta removed and the entire uterine canal irrigated with Glyco-Thymoline, in this case a 50 per cent. solution being used. Subsequently the patient was douched twice daily with the weaker solution. Suffice to say that the temperature never went above normal during her lying-in, and she arose up on the tenth day free from any complication whatsoever, which speaks volumes for the antiseptic and prophylactic properties of Glyco-Thymoline.

CASE FOURTH.

Occiput Posterior Position with Delivery From Superior Strait with Forceps.

On the night of October 21st last I was called in great haste to see Mrs. W. J. S——, in her first confinement. Os dilated slowly, owing to premature rupture of bag of waters. Patient was hard to control. Under anæsthesia child was found to be at superior strait, and with great difficulty engagement was effected. Following engagement delivery was readily effected, child was alive and active, cervix lacerated and perineum torn to sphincter ani. Repair of both structures was done forthwith, the cervix with silver wire and the perineum with silkworm gut sutures. Glyco-Thymoline douching was then begun, and complete repair of the injured structures was the final outcome, with the entire absence of fever and other complications. Without elaborating further on the conspicuous characteristics of Glyco-Thymoline in obstetrical work I wish to point out its value in the treatment of woman's diseases generally. In order to carry out my intention I will refer to the follow-memoranda taken from my case record.

A Large Erosion in a Lady 52 Years of Age—Mistaken for Cancer.

This case was sent me from Calloway County, Missouri, and was diagnosticated as malignant. It certainly looked suspicious, considering the age of the lady together with her anæmia, and the further fact that she had an enlarged gland on the left inguinal region. I at once applied equal parts carbolic acid and tincture iodine to the eroded *os uteri*, then applied a tampon of glycerine and glyco-thymoline equal parts. I gave iron, quinine and arsenic internally, applied a sand-bag over enlarged gland instructing the lady to remain on her back. Glyco-thymoline was used to this erosion in its pure state daily on a tempon except every fourth day, when the iodine-carbolic acid combination would be applied, followed immediately thereafter with the 50 per cent. glycerine and glyco-thymoline solution. Under this treatment, the condition promptly disappeared in three week's time, and the old lady returned to her home in splendid physical condition.

A Case of Irritable Bladder from Antiflexion of the Uterus

We physicians come in contact with so many cases of this character of bladder disturbances, due to mechanical and neurotic manifestations in women, as to render discussions particularly interesting. My time will hardly permit me to expatiate extensively on cases of this nature, but I wish to state that hyperacidity of the urine, and bacteria in the bladder are responsible for a large proportion of suffering in subjects. I find a solution of bicarbonate of soda, a teaspoonful to a pint of lukewarm water, to which a tablespoonful of glyco-thymoline is added, a most valuable combination to wash out the bladder with and obtain most prompt and permanent results. Even in cases where the uterus is turned over against the bladder, the salutary influence of cleansing out the viscus with this efficient alkaline and antiseptic solution will be found attended with merit second to none else. In concluding my article, I will suggest a few "don'ts" that may be valuable to busy practitioners.

Don't prescribe a daily or twice daily douche for a patient without giving implicit instructions, as the usual way ladies take a douche in the upright posture conflicts with the ends aimed at.

Don't expect a douche to cure a patient of an offensive discharge unless you are aware of the cause of the discharge.

Don't prescribe carbolic acid without first giving implicit instructions as to first preparing the solution in a pitcher, and not in the syringe as is often done.

Don't prescribe a continuous douche for any patient. Think of the Irishman who you sometimes order a dose of salts for. If you do not see Pat for a year, the chances are at your first introduction Pat tells you he is still taking salts. Injections in contact with the uterus for a prolonged period, as with salines are injurious, and assist materially in the production of *prolapsus uteri.*

Don't forget, in treating woman, that she has other organs beside her uterus.

Don't think yourself "the real thing" if your patient recovers from an acute disease. Remember the maxim, "*Natura curat, medicus senat morbus.*"

Don't perform too many ovariotomies. Your future wife might be one of your patients, and a fruitless union is a sad commentary on the present century.

Don't expect too much from trachelorrhaphy. The best gynecologists are relegating the operation to the past, save in exceptional cases.

Don't, last but not least, fail to bear in mind the value of recognizing a valuable and trustworthy antiseptic, and use glyco-thymoline when such an agent is indicated.

A REPORT OF TWO CASES OF SEPTICÆMIA SUCCESSFULLY TREATED WITH H_2O_2 MEDICINAL.

By E. J. MELVILLE, M.D., Bakersville, Vt.

CASE 1—Feb. 6th, 1894, was called to see Homer B., aged 14, who had been ill with a swelling in right groin for three weeks. Had been treated with hot applications, etc., but during that time abscess continued to grow, and at the time that I first saw him fluctuation could easily be made out. Temperature 102.5°F. Pulse 120. Great emaciation. Constant vomiting. Daily chills followed by copious sweating, denoting pus absorption. Diagnosed appendicular abscess and advised operation. This was done the same day under local anesthesia.

Much pus escaped, and several small portions of fecal matter, denoting an opening into the gut.

Temperature remained high, and sweats continued for three days following operation, indicating the presence of pus. I then began the use of Marchand's H_2O_2 medicinal, (15 vol.) so as to destroy the pus and morbid element which were still there. I injected 4 oz. of H_2O_2 with a glass syringe slowly, while the patient was in the Trendelenburg position, and allowed it to remain about 15 minutes. The boy was then lowered and laid upon his right side, when large quantities of pus, broken tissue and gas flowed from wound. By gentle compression and massage of

abdomen, much more was obtained. Large quantities of sterilized gauze were packed over the opening in right side.

The flushing out with $H_2 O_2$ etc., was repeated every twelve hours.

The improvement was prompt. Temperature reached normal, and remained so after 48 hours.

Wound was now washed out with the $H_2 O_2$ daily for four weeks, after which time the abdominal wound and fæcal fistula were entirely healed. Patient has since developed into a full grown laboring man, and has had no hernia, nor any outward symptoms of his severe illness.

CASE 2.—March 2nd, 1897, was called to see George T., a farmer, aged 38 years, who had been in the care of a Christian scientist for four weeks for a large swelling in the right side. The treatment consisted in endeavoring to persuade the man that he was not ill, and insisting that he take active exercise. Found patient in recumbent position with knees flexed upon abdomen, and suffering intense pain over sides of abdomen, which was filled with a soft fluctuating mass. Temperature 103.8°F. Pulse 130. Opened abdomen under local anesthesia and evacuated three quarts of foul smelling pus.

Used 4 ozs. $H_2 O_2$ full strength, slightly warmed, after pus had ceased to flow, and repeated procedure every twelve hours.

This caused cessation of all untoward symptoms for eight days, when chills and fever returned.

Another swelling was then noticed in the right lumbar region, which, upon opening, gave one quart of pus.

Flushed this second abscess in same way. The temperature soon reached normal, and the patient made an uneventful recovery, with exception of swelling of inguinal glands in left groin, which yielded in three days to hot fomentations.

For conclusion I might say, that in the above cases I used no medicines internally, and nothing externally but clean linen, plain gauze and $H_2 O_2$ (Marchand's).

The operations performed were simply opening abscesses, no drainage tubes, no flushing with salt solution or water, and no packing of abscesses.

Though I used the $H_2 O_2$ in large quantities, and made no especial effort to see that all the solution returned, and though it was used over a period of several weeks, no untoward symptoms developed from its use.

The above gratifying results induced me to use Hydrozone (which yields 30 times its own volume of nascent oxygen instead of 15 volumes) in other cases where a large amount of pus was present, with such good results that I am now giving the preference to this very strong solution.