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EDITORIAL

THE VALUE OF EXAMINATIONS.

Sir William Osler, Regius Professor of Medicine, University of Oxford, gave the opening lecture at the Medical School of St. George's Hospital, London. He spoke freely and with no uncertain sound against two old-time practices in medical education, namely, the lecture and examination.

On the subject of lectures he said: "The lectures ought to be reduced. The day of the lecture is past. It ought to be an offence on the part of a senior student to attend a lecture." There are many experienced teachers who would not go so far as this. Lectures have been greatly overdone in the past, but this does not prove that they have no place in the education of the medical student. Take the subject of pneumonia, for example. If all teaching is reduced to clinics in the wards of the hospitals, some students may not see a case, or may see their cases with different members of a large hospital staff and be taught somewhat at variance with each other. The experienced lecturer covers the ground of the entire class and may help very much to clarify doubtful points.

But there is another aspect of the lecture that should not be lost sight of. If only clinics are given, the student will depend upon some text-book for his systematic information. The well-informed lecturer gathers his material from many text-books and adds his own experience. He is thus a gatherer and collator of information. This is spiced and flavored by the experiences of the lecturer. But this supposes a capable lecturer. This being premised, we still believe that there is much value in the lecture, and should form one of the methods of imparting knowledge to the student. An able lecturer is a guide to the student. We would regret to see the lecture altogether discarded.

With Professor's Osler's remarks that "In the case of inefficient students, parents ought to be told after a year or two they would never make decent doctors," all will agree. It is a most unfortunate thing for a young man to go on for five years, spending money and giving to these studies valuable years, if he has no aptitude for the science and practice of medicine. It would be an excellent thing for the medical profession if a good deal of pruning could be done among the students. Here we agree with Professor Osler.

On another of his contentions, however, we are not quite in accord with him. We think he is too sweeping in his condemnation of examinations. "There ought to be no written papers at final examinations," and, again, "the student needs that the incubus of examination should be lifted from his soul. We make the study of our profession an intolerable burden by examinations." It would not do to sweep away examinations and depend wholly upon the reports from the various clinical teachers. This is most valuable, but we still hold, should not be the sole test. The well-conducted examination is a review test, and should be collated with the report of the teaching staff under whose tuition the student has passed. We believe such an examination is a force of no small moment in making the student get up his work and carry it with him throughout the session. It must be clearly understood from what we now say that we do not regard examinations as the best means of finding out who will make the most capable doctors; or who may know their work most perfectly. Nevertheless, the examination cannot be discarded; for the observation and notes of the teaching during the session is but one phase of examination.

When Professor Osler says that there has been "an enormous expansion of the subjects of the curriculum," there is but little room for difference of opinion. A careful perusal of the announcement of most medical colleges leads one to think that this is true. It is possible that the good old advice, *ne quid nimis,* not too much of a thing, may be forgotten in the making of medical curricula. The student cannot learn everything, but he should learn the essentials thoroughly. In a medical education, anatomy and physiology take first place in the early part of the course. These are vastly more important than chemistry. It must follow that if the chemical end of the course is made very heavy, the anatomy and physiology are apt to suffer; and the loss to the student, in his after life, is very great. In the final years too much attention may be given to the mounting of slides and bacterial straining to the neglect of the bedside work and the actual observation of the sick as they are found in the wards.

PROFESSOR WATSON'S ADDRESS.

Professor B. P. Watson delivered the opening lecture of the medical faculty of the University. He chose his own subject for his text. He traced the history of obstetrics from the earliest times. He paid due attention to aid the study of anatomy had been in laying a correct foundation for the science of obstetrics and its much more modern sister, gynaecology.

He then carried the students through the very interesting and important years when Morton, in Boston, and Simpson, in Edinburgh, were introducing ether and chloroform, respectively. By the aid of these obstetric practice entered upon a new phase of its history.

But not less important was the great work of Semmelweiss, in Austria, and Oliver Holmes, in America, on puerperal sepsis. These two men, especially the former, taught that puerperal peritonitis was the same condition as that of death following an infected wound. Here another great step was taken forward, and means began to be taken to prevent infection being carried to lying-in women.

The next great advance was when Lister introduced his great teachings of making parts clean and keeping them clean in the true surgical sense. Remove infection from old wounds as fast as possible, and keep infection out of new ones. The introduction of Listerian principles in obstetrical, as in surgical, practice, made a new series of operations possible. Cæsarian sections and hysterectomies now came within the range of safe surgical procedures.

Professor Watson's address was worthy the occasion and did credit to the lecturer. All who had the good fortune to hear it were well rewarded for being present. It laid down a high ideal for the students to work up to. There is no branch of the general practitioner's work that will more frequently raise them in the estimation of their clienteles than the successful and humane management of their maternity cases. The students are to be congratulated upon having one so able to direct their studies at the head of obstetrics and gynaecology.

VIEWS ON EUGENICS.

Professor P. Sandiford, of the Faculty of Education, University of Toronto, has been speaking out his mind freely. He has well-defined opinions regarding education and is forceful in the expression of these.

One of the first points he has emphasized is that we should preserve the individuality of the scholar. He condemned the modern tendency to deal with students in groups. This assumes that all are equal

in their mental attainments and can be educated by the same methods. This system was very injurious.

He contended that the size of classes should be reduced as a means of enabling the teacher to come closer to the individual members of the class. This method would come much nearer to the single pupil to a teacher than the present system.

He also thinks that education should become more democratic. We have been devoting too much thought to making our education suit the scholar, the thinker, and the man of leisure; and not enough to making it suit the worker.

It is necessary to teach all that come to schools and colleges. While this is true, it must be admitted that defectives beget defectives with fatalistic certainty. It was not necessary to resort to the lethal chamber, but there should be homes where these mental defectives could be placed and where they could pass a quiet life, but be prevented reproducing defectives. It was along these lines that the true evolution of eugenics must be sought.

THE STUDENTS OF TORONTO.

We have often expressed our opinion that it would redound to the credit of the student body if street parades, hustles, inter-year fights, hazings, etc., were abandoned. These practices do the students no good. In the eyes of the community they very materially lower the estimate placed upon the students as a body of self-respecting persons. There can be no amusement or profit in tearing each other's clothing, painting their faces with shoe blacking, or filling their hair with flour. We would suggest that each year appoint a committee to look into this matter.

COCAINE IN INDIA.

For long enough the use of opium, bhang, ganja, and other narcotics and sedatives were the drugs mainly resorted to by the natives. Of recent years a new habit has become widely spread in the use of cocaine.

This is smuggled into the country with great persistency and in very large quantities. The growth of the habit has become so alarmingly prevalent that hundreds, nay, thousands, are its victims in Calcutta; and the same may be said of many other places. It has now become an organized traffic.

With the increase in the consumption of the drug there is a rapid increase in crime. Petty thefts are the prevailing vice. The cocaine impairs the health, and the men, women and children victims take to stealing.

Those engaged in the traffic make use of children as the agents for the sale of the drug. The habit is rapidly increasing. The number of convictions was 30 per cent. greater than six months ago, and 25 per cent. of the victims are children.

CURES UNDER MENTAL INFLUENCES.

From time to time there is a new outburst of news on the "cures" accomplished by visits to shrines, and by the influence of mental treatment, and all its allies.

Recently some Irish pilgrims visited Lourdes and report very remarkable results. An examination into some of these cases has revealed that there was either no disease, or that these persons thought they had derived benefits which they had not in reality.

If one will only take the trouble to read some of the books published during the fifteenth and sixteenth centuries, such as those by the brothers Bartholomew, Girard, Harrison, and many others, some most astounding examples of cures will be found. Virtues were also ascribed to certain plants and mixtures which we know now they did not possess; but these cures were firmly believed in at that period. We look back upon those days of more than three hundred years ago, and regard these things as superstition and imagination. Three hundred years hence the historian will be doing much the same regarding the "cures" of to-day.

FRESH PROOF OF THE VALUE OF VACCINATION.

Some time ago the State of Pennsylvania appointed a Commission on Vaccination, consisting of Professors W. H. Welch and Jay Schamberg, who hold views in favor of the practice; and Messrs. John Pitcairn and Porter F. Cole, who are opposed to it; and Messrs. Emil Rosenberger, lawyer; Henry C. Lippincott, life insurance manager, and Edward A. Woods, president of a life insurance company, as three independent members of the commission. The commissioners heard evidence for and against the practice of vaccination. Welch, Schamberg, Rosenberger and Woods find strongly in favor of vaccination; while Pitcairn, Cole and Lippincott did not sign the report.

The report states that vaccination protects for a period of about ten years. It also says that if one is vaccinated in infancy and repeated in a number of years the person is immune. It further says that vaccination in infancy and not repeated later in life protects to the extent of greatly reducing the severity of smallpox if contracted.

This report is of much value, as it corroborates the findings of other commissions on the same subject, and that of the British commission of 1896.

ORIGINAL CONTRIBUTIONS

THE CLINICAL SIGNIFICANCE OF THE AUTONOMIC NERVES SUPPLYNG THE VISCERA AND THEIR RELATIONS TO THE GLANDS OF INTERNAL SECRETION.*

(Abstract).

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PROF. BARKER gave a very lucid exposition of the structure of the cerebrospinal and visceral nervous system, and their influence over the various organs of the body. He then passed on to the more practical part of his address. His remarks on the influence of drugs, etc., are given in the following paragraphs.

The Effects of Electrical Stimulation of the Opposing Autonomic Systems.

In the region of the eye, electrical stimulation of the sympathetic causes dilation of the pupil (M. dilatator iridis) and contraction of the orbital muscle, while electrical stimulation of the mid-brain autonomic (N. III) contracts the pupil (M. sphincter iridis) and causes accommodation spasm (M. ciliaris).

In the salivary glands, stimulation of the sympathetic arrests salivary secretion, while stimulation of the hind-brain autonomic (chorda tympani) causes profuse salivation.

In the caradiac area, electrical stimulation of the sympathetic (N. accelerator) causes tachycardia, while electrical stimulation of the hind brain autonomic (N. vagus) causes bradycardia.

In the digestive system electrical stimulation (N. vagus) causes increased secretion and hypermotility, while excitation of the sympathetic diminishes secretion and leads to relaxation of the smooth muscle.

In the pelvic domain electrical stimulation of the N. pelvicus causes contraction of the detrusor of the bladder, while electrical stimulation of the sympathetic relaxes this.

*The address in medicine, delivered at the meeting of the Canadian Medical Association, London, Ontario, June 25th, 1913.

Chemical Stimulation of the Opposing Autonomic Systems.

The effects of chemical substances upon the autonomic nervous system as a whole and upon its various parts have been studied especially by the pharmacologists and experimental physiologists.

Nicotin acts upon each of the two antagonistic autonomic systems, interrupting conduction at the junction (synapse) of the preganglionic fibres with the cell bodies of the neurones which give rise to the postganglionic fibres in the ganglia.

Certain chemical substances, however, show an elective affinity for one or the other of the two autonomic systems. For the sake of brevity the cranio-secral autonomic system is usually referred to as the "vagal system," since it includes the autonomic fibres of the N. vagus, while the cervico-thoraco-lumbar autonomic system is usually referred to briefly as the "sympathetic system."

Epinephrin, or adrenalin, heightens the activity of the organs innervated by the sympathetic system proper, but does not directly affect the functions depending upon innervation by the vagal system. The administration of epinephrin, therefore, is followed by symptoms similar to those yielded by electrical stimulation of the sympathetic (vasoconstriction, tachycardia, mydriasis, dry mouth, glycosuria, gastrointestinal hypomotility); those who believe that adrenalin acts upon the sympathetic nerve speak of it as a definitely sympathicotropic drug; others believing that it may act on the myoneural or adenoneural junction rather than on the nerve itself, prefer the term 'sympathomimetic" to the term "sympathicotropic" or "sympathicotonic."

Certain other drugs act almost as electively toward the vagal system as does epinephrin toward the sympathetic. They are the so-called vagotropic drugs, and include two groups. The members of the first group, including pilocarpin, muscarin, physostigmin, cholin and digitalis, stimulate the vagal system; they are "vagomimetic," producing effects identical with those which follow electrical excitation of this system (miosis, salivation, bradycardia, gastric hyperacidity and hypermotility, pollakiuria). The members of the second or "vagoparalytic" group, including atropin, hyoscin and euphthalim, seem to paralyze the terminals of the vagal system and lead therefore to effects similar to those resulting from electrical excitation of the antagonistic sympathetic system (mydriasis, dry mouth, tachycardia, etc.)

As yet no drug has been discovered which paralyzes the whole sympathetic system comparable with the general exciting effect of epinephrin. A drug known as ergotoxin, which has been studied by

Dale, seems to paralyze especially the so-called favoring sympathetic fibres, but not the so-called inhibiting fibres.

The vagotropic drugs also act somewhat less generally throughout the whole cranio-sacral autonomic system than does epinephrin on the sympathetic proper; thus atropin acts more vigorously on the autonomic fibres innervating the head and the heart than upon the fibres situated more caudalward; it has relatively little effect upon the sacral autonomic fibres innervating the pelvic viscera. Again, pilocarpin exerts its maximal effect upon secretory fibres, having relatively little effect upon cardio-inhibitory fibres. Muscarin, on the contrary, inhibits the heart vigorously and may cause stand-still through vagus irritation.

From what has been said, it is obvious that in studying clinically a phenomenon in autonomic domains, we have to try to find out whether, in the doubly innervated organ, the effect is due to excitation of one system or to paralysis of the other system. A tachycardia, for example, might be due to stimulation of the N. accelerans, say by coffee, or to paralysis of the N. vague. Again, a dilated pupil may be the result either of sympathetic irritation or of oculomotor (autonomic) paralysis.

In addition to chemical stimulation by substances of exogenous origin, the antagonistic autonomic nervous systems are constantly being influenced by substances of endogenous origin originating in the body metabolism. Among the sympathicotropic substances of endocrine origin may be mentioned (1) epinephrin, (2) iodothyrin and (3) pituitrin. Many believe that the epinephrin (adrenalin), which is being constantly formed in the medulla of the adrenals and in the chromaffine system generally, is responsible for a continuous excitation (or perhaps sensibilization) of the sympathetic system proper. At any rate, epinephrin produces effects in the body similar to the effects of electrical stimulation of the sympathetic; it is thus a "sympathomimetic" substance, in the sense of Barger and Dale. The exact place of action is still in dispute, though the evidence favors the view of Elliott that it is neither in the nerve itself nor in the end-organ but in a special structure intercolated between the two—in the case of smooth muscle at the "myoneural junction." Less general in their effects, but also, apparently, sympathicotonic in nature, are the substances iodothyrin and pituitrin. Iodothyrin, a hormone originating in the thyroid gland, has an especial effect upon the thoracic and cervical sympathetic and leads, when present in excess, to tachycardia, widened lid slits, exophtalmos and hypersusceptibility of the pupils to epinephrin. Pituitrin, arising in the posterior lobe of the hypophysis,

causes vasoconstriction (other than renal), polyuria, and vigorous contraction of the bladder and uterus.

Among the vagotonic drugs of endogenous (or endocrine) origin may be mentioned cholin, which is formed in the cortex of the adrenals. Experiments with cholin show that it possesses an action very similar to pilocarpin. It is certainly interesting that one small organ like the adrenal gland manufactures in its medulla the substance epinephrin (adrenalin) which is sympathicotonic (sympathometic) in its effects, and in its cortex another substance, cholin, which is vagotonic (vagomimetic) in its effects. Extracts of the whole adrenal would, therefore, contain two substances which, as far as the two autonomic systems are concerned, tend to neutralize one another.

There are probably other vagotropic hormones formed in the body, but our knowledge of them is as yet very meagre. We know, for example, that the internal secretion of the pancreas antagonizes epinephrin (or the formation of epinephrin), a fact doubtless of importance in connection with the pathology of some forms of diabetes mellitus. Again, in congenial insufficiency of the chromaffine system (status thymico-lymphaticus), or in acquired insufficiency of this system (Addison's disease) the cranio-sacral autonomic innervations are in excess of the sympathetic innervations, many think because of deficiency in the supply of the sympathicotonic hormone, epinephrin.

In how far those sudden and violent excitations of the autonomic nervous system which accompany strong emotions are due to the intervention of the glands of internal secretion, and in how far they depend upon direct neural conduction from the brain, we are as yet but ill-informed. I need only remind you of the vaso-dilatation of the face in the blush of shame, of the stimulation of the lacrimal glands which yields the tears of sorrow, of the palpitation of the heart in joy, of the stimulation of the sudoriparous glands which precedes the sweat of anxiety, of the stimulation of the vaso-constrictors, the pupil dilators and the pilomotors in the pallor, mydriasis and goose-skin of fright, to illustrate some of these violent autonomic excitations. While we do not yet understand the exact mechanisms of association among the activities of the cerebrum, the endocrine glands and the reciprocally antagonistic autonomic domains and their end-organs, we can begin to see the paths which must be followed in order that more exact knowledge may be gained.

The Tonus in the Autonomic Systems and the Balance Maintained.

While the body is alive there is, constantly, a certain amount of activity in each of the antagonistic systems. In other words, a certain

"tonus" prevails in each system, maintained (1) by stimuli arriving in the autonomic systems through neural paths, and (2) by direct chemical action upon the systems (Hormones). This matter of tonus is very complex, since so many factors, neural and chemical, are involved, and since each system can be acted upon at any one of several points between the cebral cortex and the end-organ (smooth muscle; secreting gland). *[*A distinction must of course be made between tonus and excitability]. The balance maintained normally between the two antagonistic systems is one of the most interesting of physiological phenomena. Think, for example, of the rate of the heart beat —how constantly it is maintained at a given level in each individual when the body is at rest; the impulses arriving through the vagal system just balance those arriving through the sympathetic system, so as to maintain a rate of approximately 72 beats per minute. And a similar balance is maintained in other autonom domains (e.g., pupils, bronchial musculature, gastric glands, gastro-intestinal muscle, sweat glands, bladder muscle, etc.)

This equilibrium is all the more remarkable when one considers how frequently it is temporarily upset in the exercise of physiological function. The play of the pupils with varying light, the watering of the mouth at the smell of savory food, the response of the heart to exercise and emotion, the flow of gastric juice on adequate stimulation, the opening of the bile duct at the call of the chyme, the transport of the colonic contents through one-third of the length of the colon through one vehement contraction every eight hours, the sudden relaxation of the sphincter and contraction of the detrusor of the bladder in micturition, the violence of contractions in the domain of the N. pelvicus in parturition in the female and in ejaculation in the male, come to mind at once as examples of sudden physiological overthrow of balance.

Autonomic Disturbances Met With Clinically.

Since 1910 I have been interested in examining the patients in the medical wards of the Johns Hopkins Hospital with especial reference to pathological disturbances of innervation in autonomic domains. One of my associates, Dr. Frank J. Sladen, the resident physician of the hospital, has been my co-worker in this study and we have already published a preliminary report on the subject in the Transactions of the Association of American Physicians.

Among the patients suffering from so-called functional nervous disorders (neurasthenic, hysterical and psychasthenic states) and from disturbances of the glands of internal secretion (the thyreopathies, diseases of the hypophysis, diseases of the chromaffine system, diseases of

the genital glands, etc.), we have found a material very suited to our purposes, from which we have obtained a rich yield in "autonomic" symptoms.

On this occasion time will not permit of any extensive analysis of these cases. Suffice it to say that we have been impressed by the possibility of enrichment of the clinical histories in patients of these types by careful attention to the symptoms referable to abnormal autonomic innervation. We have been struck with the fact that when one abnormal autonomic sign is observable, a systematic examination of the viscera with autonomic innervations in mind will almost always reveal a number of other deviations from the normal. The kinds of symptoms and signs observable may readily be deducted from an examination of the table given above, in which the effects of electrical and chemical stimulation are recorded. For clinical purposes the following table of the more common symptome resulting from pathological innervation of smooth muscle and secreting glands may be convenient.

A. Symptoms and Signs in the Head and Neck.

(a) *The Eyes.* These include (1) miosis and mydriasis; (2) accommodation spasm and accommodation paralysis; (3) widened and narrowed lid slits; (4) von Graefe's sign; (5) Dalrymple's sign (6) infrequent winking (Stelwag); (7) insufficient maintenance of convergence (Moebius); (8) exophthalmos and enophthalmos; (9) epiphora and dryness of the eyeballs; (10) Loewi's test (positive adrenalin mydrasis); (11) Argyll-Robertson pupil; (12) anisocoria.

(b) *In the Nose and Mouth.* (1)excess of saliva with constant spitting; (2) dry mouth or xerostomia; (3) coryza vaso-motoria.

(c) *In the Skin.* (vide infra).

(d) *In the Meninges.* Pain of vaso-motor origin (cephalalgia; hemicrania).

B. Symptoms and Signs Referable to the Respitary System.

(1) Laryngismus and laryngeal crises; (2) asthmatic attacks; (3) pulsus irregularis respiratorius; (4) Aschner's phenomenon (pressure on the eyeballs stimulating the trigeminus and leading to arrest of respiration in the expiratory phase, with slowing of the pulse).

C. Symptoms and Signs in the Circulatory System.

(1) Tachycardia; (2) bradycardia; (3) changes in conduction time (dromotropic disturbances); (4) pulsus irregularis extra-systolicus; (5) angina vaso-motoria; (6) Aschner's phenomenon (vide supra); (7) changes in blood pressure; (8) peripheral hyperaemias

and anaemias; (9) intermittent claudication; (10) dyspragia intermittens intestinalis; (11) acrocyanosis; (12) urticaria.

D. Symptoms and Signs in the Digestive Apparatus.

(1) Oesophagismus; (2) cardiospasm; (3) gastric neuroses (hyperacidity, achylia, gastro succorrhoea, pyloro spasm, gastro spasm, gastric atony); (4) atonic and spastic constipation, diarrhoea nervosa, colic mucosa, and sphincter spasm.

E. Symptoms and Signs in the Uro-Genital System.

(1) Retention and incontinence of urine; (2) pollakiuria and tenesmus; (3) renal colic; (4) disturbances of libido, of erection, of ejaculation and of orgasm; (5) uterine atony and certain menstrual disturbances.

F. Symptoms and Signs in the Cutaneous System.

(1) Goose-flesh; (2) tricopilar crises; (3) contractions of smooth muscle of tunica dartos and of nipple; (4) hyperhidrosis and anhidrosis (unilateral or bilateral); (5) bromidrosis; (6) vaso-constriction (pallor); and vaso-dilation (erythema); (8) dermographismus.

G. Symptoms and Signs Referable to the Haemopoietic, Metabolic, and Endocrine Organs.

(1) Eosinophilia; (2) eosinopenia; (3) lymphocytosis; (4) status thymico-lymphaticus; (5) the pigmentations; (6) increased or diminished glucose tolerance (glycosuria); (7) increased or diminished fat tolerance (steatorrhoea).

Local and General Forms of Abnormal Vagotony and Sympathicotony.

Dr. Sladen and I in our studies have tried to find out whether or not the conception of a clinical abnormal vagotony or sympathicotony, as postulated by the Viennese clinicians, Eppinger and Hesse, is justifiable. The experimental physiological studies and the pharmacological researches bearing upon the reciprocal control of the two antagonistic subdivisions of the autonomic nervous system to which I have already referred, having yielded such interesting results, an attempt at clinical application was almost certain to follow. For it would seem *a priori* not improbable that neutral and chemical disturbances arising from various natural causes and resulting in increased or decreased excitability or in too high or too low a tonus in either of the two systems could be accountable for recognizable clinical symptoms.

While the writings of clinicians contain many instances of disturbance which we can now see belong to the autonomic domain, it is to

Eppinger and Hess that we owe the establishment of the clinical conceptions of "vagotonia" and of "sympathicotonia"—conceptions which bring symptoms in widely separated parts of the autonomic domain together. They separate a so-called "vagotonic constitution" from an outspoken clinical "vagotonia," the former being characterized by (1) a hypersensitiveness to pilocarpin, (2) a relative insusceptibility to sympathetic stimuli, and (3) various clinical symptoms indicating heightened tonus throughout the cranio-sacral autonomic system. The sympathicotonic constitution, in turn, is characterized by (1) a hypersensitiveness to epinephrin, (2) a relative insusceptibility to pilocarpin and atropin, and (3) various clinical signs of heightened tonus throughout the sympathetic system proper.

Clinically an outspoken case of vagotonia may include a varying number of the following signs (corresponding to stimulations of the cranio-sacral system):—Small pupils, accommodation spasm, wide lid slits, salivation, epiphora, profuse sweating, reddened face, cold and moist hands and feet, bradycardia, pulsus irregularis respiratorius, bronchial asthma, oesinophilia, hyperacidity, gastro-spasm, cardio-spasm, pylori-spasm, spastic constipation, bilitary colic of nervous origin, anal-sphincter cramp, pollakiuria, and priapism.

In the studies made with Dr. Sladen, we found that in a certain number of cases a fairly general vagotonia or a fairly general sympathicotonia may exist, though local vagotonias and sympathicotonias are common; a large number of cases present vagotonic signs in one domain and sympathicotonic signs in another domain; and in some cases mixed signs in a single domain were met with.

We have used the pharmacodynamic method in the control of our cases. As a stimulant of the cranio-sacal (or "vagal") systems we have given pilocarpin hypodermically in doses of 0.01—0.003 grams (grs. 1/6-grs. 1/20), and as a paralysant of the same system, atropin hypodermically in doses of 0.005—0.00065 grams (grs. 1/50-grs. 1/100). As a sympathetic stimulant we have used epinephrin (adrenalin) usually in doses of 1 mg. hypodermically. Some use for these tests 1 mg. atropin, 1 cg. pilocarpin and 1 ccm. of adrenalin solution (1:1000).* *Higier recommens systematic pharmacodynamic testing as follows:

(a) Conjunctival instillation and subcutaneous application of epinephrin;

(b) Subcutaneous injection of epinephrin, 1/10,000 per kg of body weight three hours after swallowing 100 grams of glucose (to determine glucose tolerance);

(c) Subcutaneous injection of atropin sulphate, 1/10,000 per kg. of body weight;

(d) Injection with pilocarpin muriate, 1/1000 per kg. of body weight.]

We found some patients who reacted in an outspoken way to both pilocarpin and epinephrin, each of the two systems seeming to be hypersensitive.

The pilocarpin-sensitive patients react with salivation, sweating, nausea, epiphora, flushing, and a fall in blood pressure. They react to atropin by palpitation, dryness of the mouth and throat, and praecordial oppression.

The epinephrin-sensitive patients on being given epinephrin react with tremor, sense of cold, rigor, glycosuria and rise in blood pressure.

Analysis of the various pharmacodynamis reactions observed in 21 cases studied in this way will be found in our published paper. In six patients who exhibited marked sensitiveness to pilocarpin, the vagotonia varied somewhat in different domains, though, usually, the vagotonic signs were most marked in that portion of the autonomic domain to which belonged the clinical symptom which had first attracted our attention. Thus, for example, in a patient suffering from bronchial asthma, certain other symptoms in the hind-brain domain were conspicuous. In epinephrin-sensitive cases, also, there was no sure way of prophesying in what domains the sympathicotonic signs would be most conspicuous.

We also studied the correlation between clinical symptoms and pharmacodynamic autonomic reactions in another way. Taking the cases which clinically showed various vagotonic manifestations, we found that in 28 instances the responses to vagotropic drugs was positive in 18. Again, in 31 cases in which there were marked sympathicotonic signs of one sort or another observable clinically, 20 yielded a positive reaction on subcutaneous injection of epinephrin. We came to the conclusion, therefore, that a conspicuous vagotonic or sympathicotonic sign, as far as the material thus far studied is concerned, may also be a mark of a pilocarpin-sensitive or epinephrin-sensitive individual in about 64 per cent. of the instances.

As to whether an exaggerated tonus (or excitability) in one of the reciprocal antagonistic systems is accompanied by a diminution of tonus (or of excitability) in the other, our results differ somewhat from those of other workers. We found a harmonious agreement between the pharmacodynamic reactions and clinical manifestations in only 7 of 19 cases. In two patients who exhibited pilocarpin-sensitiveness the sympathicotonic signs were nearly as conspicuous as the vagotonic signs, and in

three patients sensitive to epinephrin the clinical signs referable to heightened tonus in each of the systems were approximately equal. In five patients sensitive to epinephrin it must be admitted that clinically vagotonic signs predominated.

It is obvious, therefore, that the mere demonstration of pilocarpin-sensitiveness or of epinephrin-sensitiveness does not permit, in every case, of an immediate conclusion regarding heightened tonus in the vagal or in the sympathetic autonomic system. Nevertheless, the setting up of a vagotonic type and of a sympathicotonic type as schemata seems to us valuable and stimulating to clinical observation. The whole domain of visceral neurology should from now on be cultivated with more fruitful results, now that we begin to understand the relations of the viscera and their innervations to the central nervous system on the one hand, and to the hormones arising in the endocrine glands on the other. In the pharmacodynamic tests we have, to use Januschke's fine image, tuning keys by means of which we can operate upon the complicated stringed instrument of the body, and voluntarily make one string tighter to increase its vibrations, or another looser to dampen its functions.

Our studies lead us to agree with those who urge that the conception of vagotony be not too rigidly defined; we must be prepared to meet with exceptions as yet difficult to explain, and with deviations from the pharmacodynamical reactions which might be expected. Certain of the hormones may be less elective than the physiologists have taught us to believe; thus the occurrence of vagotonic signs mixed with sympathioctonic signs in the forms of Basedow's disease, accompanied by outspoken psychic disturbances (von Noorden, Jr., and others), demand more careful study. As Higier wisely remarks, the new conceptions of vagotony and sympathicotony will doubtless undergo evolution like the majority of clinical conceptions in neurology. We can, nowadays, make a diagnosis of tabes, Basedow's disease, Parkinson's disease, or of multiple sclerosis, even in the absence of one or more of the original pathognomonic signs, or cardinal symptoms, described by their discoverers.

For therapy, as well as for diagnosis, clinical men will do well from now on to give due consideration to disturbances of the visceral nerves. In no part of internal medicine can more be expected from pharmocatherapy; we have at our disposal a host of agents—nicotine, atropin, pilocarpin, physostigmin, colchicin, adrenalin, cocaine, ergotoxin, calcium, to mention only some of them—which have already been shown to act more or less electively; may we not hope that our clinics may find out how effectively to use them and other still to be discovered, in regulating the functions of the visceral nerves in at least many of the instances when they are disturbed.

CONSIDERATION OF SOME OF THE NEWER OPERATIVE PROCEDURES ON THE FRONTAL SINUS AND ETHMOIDAL LABYRINTH.*

By Perry G. Goldsmith, M.D., Toronto.

MY remarks will be limited to a consideration of Mosher's ethmoidal exenteration and Watson Williams' osteoplastic operation on the frontal sinus. Having had on opportunity of seeing Mosher's experimental work on the cadaver prior to its presentation at the last meeting of the Laryngological Society, I have had a fair opportunity to become familiar with its very great value.

The osteoplastic operation devised by Watson Williams, of Bristol, England, has met with considerable favor from those who have had an opportunity of seeing it performed by the original operator. A written description is difficult to follow. To make the procedure clearer to all, Dr. Williams recently operated on a case before the Royal Society of Medicine. In the discussion which followed, emphasis was given to the value thereby obtained over a difficult description text. I thought it fitting, therefore, that an effort to present his feaure of operative work to you should be made. I cannot give you personal experience, because I have none. I am able, however, owing to the very great kindness of Dr. Watson Williams, to present for your inspection his model, which shows very easily the great advantages this measure affords.

The various operative procedures have for their object the removal of pyogenic membrane and any bony caries which has resulted from long continued inflammatory changes, and to prevent recurrences. The constant tendency in recent years has been to lessen external measures and perfect intranasal drainage. External operations on the frontal taken as a whole are disfiguring, depending on the size and depth of the sinus. Watson Williams' method aims to give a free direct operative field, with almost no scarring. Mosher simply perfects or rather systematizes intranasal exploration of the ethmoidal cells. I am inclined to think that a combination of these two procedures in cases requiring external operation will frequently serve our patients well.

Before one decides to do any operation for suppuration of the ethmoid or frontal sinus, it is of the greatest assistance, in fact, it is absolutely necessary for scientific work, to have a reliable X-ray plate, and to have the same correctly interpreted. A skiagraph is of very great value in determining the extent of the excursion of the ethmoidal cells.

*Read before the American Academy of Ophthalmology and Oto-Laryngology, August 20-22, 1912.

Those who have had an opportunity of studying that excellent work recently introduced by Dr. Logan Turner and W. G. Porter on skiagraphy of the accessory sinuses will agree that we have not yet realized how much information may be gained by proper X-ray work. The appearance of air cells in the Crista Galli have in Turner's collection been found to communicate by a small aperture with an anterior ethmoidal cell. The excursions of the ethmoidal labyrinth over the roof of the orbit are clearly made out, and when present it is useless to attempt to clear them out by any intranasal measure. The anteroposterior depth of the nasal end of the frontal floor is also a matter of importance. Not only the anteroposterior, but the lateral space is important, for with a wide deep space intranasal measures may be successful in permitting a thorough clearing of that region of the frontal floor, so much so that Nature will be satisfied. If, however, an external operation is required, the removal of the ascending process of the frontal bone may not be required, and it is then unnecessary to carry the initial incision down the side of the nose and beneath the inner canthus.

It is not my intention to prolong my paper by taking up all the indications for operation. Having decided on opening up the ethmoidal cells, the question that I wish to enlarge on is what method offers the safest, best, simplest and most efficient way, the patient being the first consideration. We have almost always considered it necessary in the first place to remove a part or all of the middle turbinated body, assuming without thinking that it was necessary. Now this is just where Mosher's method changes our procedure. When we consider the middle turbinal simply as the overhang of the ethmoid, and that it is necessary to go inside (towards the middle line) in order to reach the cribriform area, one can at once understand that a considerable measure of safety ensues if by leaving the middle turbinal he has a good guide or protector to this danger area. We are liable to forget that the roof of the ethmoid is on a higher plane than the cribiform plates. In his anatomical studies, Mosher found a small elevation at the upper part of the agger nasi, the lowest and most anterior of these cells grouped about the upper part of the unciform grove. In certain animals a turbinal runs along beneath the nasal bone and also the maxilla or inferior turbinal bone. This is called the nasoturbinal, attached anteriorly to the inner surface of the ascending process of the superior maxilla. In monkeys and man this is wanting, but a ridge remains to mark the former attachment. In man, about a third of the distance down the unciform grove and in front of it over this ridge above mentioned, the agger nasi, is a cell called the agger nasi cell, draining into the unciform grove and under cover of the anterior attachment of the middle turbinal. This had

not been unobserved by others, but they have not apparently noticed that in this mound were some cells leading into quite a sizable space. This elevation is about on a plane with the attachment of the middle turbinal to the outer nasal wall, and almost opposite the inner canthus.

Having opened these cells (agger nasi) with curette and reached practically with the same pressure this sizable cavity above mentioned, it was found that in nearly all cases one was able to pass a bent probe directly into the frontal sinus. By placing the finger external to the lachrymal bone the pressure is easily controlled. The only time I myself have failed was when an anterior ethmoidal cell projected up into the cavity of the frontal sinus. A careful skiagraph would show this. Only in acute inflammation of short duration will this bother one, as in chronic cases the cell wall has probably disappeared. You can therefore see that one has opened the most anterior part of the ethmoid with the possible exception of some cells lying a little further forward in the agger nasi, and these can be reached by curetting forward until very hard bone tells you you are at the ascending process of the superior maxilla.

This part of the operation has given me very great satisfaction when dealing with acute frontal sinus suppuration. It is rapid, easy and safe. I am sure you have all found it extremely difficult to gain entrance through the fronto-nasal duct; not infrequently it is absolutely impossible, especially when all the tissues are engorged with inflammatory exudate. I am, furthermore, not sure that it is good surgery to try.

The usual mistake I found in opening the agger nasi cell is that I did not go back far enough or high enough. If one measures with his instrument how far back he is and finds it corresponds with the distance from the external nares to the inner canthus, he will be about right. Sometimes one finds very hard bone too difficult to break down, but he is very likely to succeed by going a little further back or slightly behind and above the anterior attachment of the middle turbinal. In one patient, whose skiagraph I show, I was unable to break in the intranasal wall owing to diffuse osseous change in the ethmoid, which in the skiagraph shows almost no cellular structure.

When the first part of the operation is being performed, the patient's head is necessarily tilted upward and backward. In the remainder of the operation it is necessary to have the head level. Before doing so, however, the anterior tip of the middle turbinal may be taken away, as it may be in the line of vision. By pushing the curette straight back through the bulla ethmoidalis the remainder of the ethmoidal partitions are broken through, together with the line of attachment of the middle turbinal, and the large posterior cells entered; this latter procedure frightens one at first, the cells being so large. When one is at the end

of the posterior cells he knows he is at the anterior wall of the sphenoidal sinus. The curette is now forcibly passed to the floor of the nose, carrying away really the floor of the ethmoid. This has been all done outside the middle turbinal, and no danger has ensued to the cribriform plate. Very gentle curettage may now be employed in this outer and upper wall of the ethmoid, care being taken not to rupture the os planum or outer table. The upper and outer angle of the last posterior ethmoidal cell, owing to its relationship to the optic nerve and small veins leading to the cavernous sinus, requires special care. The curette may be passed up in the frontal area, and depending on your skiagram you can readily see how this area may be cleared. Working with Dr. Mosher, I have passed a straight curette into the frontal sinus and then curetted vigorously forward and downward without any danger, as was shown by a subsequent section of the head. In one instance I was in a large frontal bulla thinking I was in the sinus. (This also occurred in one of the specimens operated on at the meeting.) All that remains to do now is to remove the overhang, or what we know as the middle turbinal. This may be done with Cheatels' ring knife or various chonchotomes.

When the turbinal overhang has been removed one often finds the base of the ethmoidal wedge, really the part of the superior turbinal separating us from the spheno-ethmoidal wall; breaking this away exposes to view the anterior sphenoidal wall, operative work on which is then greatly facilitated. I have performed this operation over forty times on the living and I have never until now felt satisfied with my ethmoidal work. Ballenger's operation attacks the ethmoidal labyrinth from behind, but comes forward somewhat blindly. In suitable cases and correctly formed, this operation is excellent. I have been very much impressed with the thoroughness in which I had cleared the ethmoid in some cases when I have subsequently found it necessary to do external frontal sinus operation. The operation may be performed under cocain and hemisine anesthesia, though a general anesthesia may be preferred in many cases. In order that one may be better aware of the position of his instruments, the sitting position is preferred; if one loses himself, so to speak, orientation being imperfect, it is best to stop, blindly going on is to court disaster. (Exhibition of specimens and method of operating shown on the cadaver).

WATSON WILLIAMS' OSTEOPLASTIC OPERATION ON THE FRONTAL SINUS.

1. First skin incision from the outer orbital angle along the upper margin of the eyebrow and curving downwards till it reaches a point at the side of the nose corresponding with the most receding portion of the fronto-nasal junction, and thence the incision is carried transversely

across this most receding line. The skin and soft tissues above the incision are raised, leaving the periosteum intact.

2. The periosteum is divided by a transverse curved line corresponding to the upper portion of the frontal eminence, and above this line the periosteum is raised, the frontal sinus exposed by chisel or trephine, and the whole of the anterior wall is removed above the curved line, which corresponds to the upper margin of Killian's bracelet. The sinus is denuded of mucous membrane and the fronto-nasal duct is enlarged by a narrow chisel, so that a large smooth-walled fronto-nasal opening is formed.

3. Second skin incision from a point about one-half inch below the inner canthus and extending for one-half inch or more outwards and slightly downwards, corresponding with the lower margin of the lachrymal groove, below and to the inner side of the duct, which is thereby turned safely out of the groove. Then a narrow chisel or cutting forceps is driven right into the nasal passage through the thin bone at the bottom of the lachrymal groove. This bone opening into the nasal passage is enlarged downwards and inwards so as to partially divide the nasal process of the superior maxillary bone.

4. A curved saw is passed up through the naris till its tip projects out of the enlarged lachrymal groove opening and the nasal process of the maxillary bone is then divided from within outwards, the superficial soft tissues being left intact. Then the bone above the lachrymal groove is divided from within outwards by means of a Gigli saw passed down through the enlarged fronto-nasal passage so as to emerge at the large opening in the bottom of the larchymal groove. (The passing of the Gigli saw is a simple procedure if the author's flexible copper frontal sinus probe with a hooked end is passed down the fronto-nasal duct, so that the hooked end projects at the lachrymal groove when the Gigli saw is hooked on and drawn up as the probe is withdrawn). The bone is divided from within outwards, leaving the superficial soft tissue intact. In this way the hinge of the osteoplastic "door" has been made and it only remains to divide the bone and soft tissues in the mesial line to form the doorway.

5. Final incision. A longitudinal incision extends from the center of the transverse incision across the rest of the nose downwards as far as the lower free margin of the nasal bone, the periosteum not being divided. The soft tissues are raised for about a quarter of an inch from the mesial line. Finally, by again passing the Gigli saw through the fronto-nasal duct down the nasal passage till it emerges below the nasal bone, just outside the margin of the septum nasi, the bone is divided longitudinally. The osteoplastic flap thus formed is carefully opened outwards like a doorway, the soft tissues left un-

divided by the former saw cuts acting as a hinge. The nasal passage and the whole length of the fronto-nasal duct are in this way laid freely open to view. The anterior end of the middle turbinal and all the diseased ethmoidal cells the cleared away if desirable, right back to the sphenoidal sinus, which may also be freely opened. When the frontal sinus floor and ethmoidal cells have been removed and the whole of the diseased area removed, the osteoplastic flap is carefully replaced and the skin incisions sutured. If both frontal sinuses have been opened, the first incision may have to be extended to the other side. But Dr. Williams now avoids making a second flap by removing not only the frontal sinus septum, but also the corresponding upper portion of the bony septum nasi, thus tnrowing the denuded frontal sinuses and the upper portion of the nasal passage anteriorly into the cavity.

A CASE OF HYDRONEPHROSIS.

By H. C. Burroughs, M.D.,

Swift Current, Saskatchewan.

MISS C. H., telephone girl, age 20, came to me January 3rd complaining of metrorrhagia and enlargement of the abdomen. Without examination, the case looked to me like a pregnancy with threatened miscarriage in about the eighth month. Examined the abdomen and then became almost positive that the condition was that of gestation with a dead foetus. She was advised to go home to bed and a uterine sedative was prescribed. The profuse haemorrhage kept up and I called to see her at her home and told her just what the condition seemed to be, but she denied the possibility of pregnancy. A vaginal examination was made, but there was no evidence of womb enlargement.

The history of the case was then gone into carefully. It was as follows: Father living and in good health. Mother, four brothers and one sister alive and well. No children dead. She was in the hospital May, 1911, with Bright's disease, and had nine aspirations for ascites, three of which were successful, and fluid was only obtained from one side. After being in the hospital five weeks she developed scarlet fever and was in quarantine seven weeks. Had to go back to hospital because feet became infected while being drained for dropsy. Feet have always swollen, but they are improving. Was quite well until three months ago, when she was in a runaway and seat fell across her back. Her back had been sore since. Having ascertained this history I again

went over the abdomen and decided that there was quite a cystic tumor there. It was quite to the left side, extending from the ribs down to the false pelvis. A sample of urine was obtained and found to be loaded with albumen, but there were no coats. A few cylindroids were present and some pus cells. It was decided to aspirate the tumor, and this was done January 6th, and a little better than a Winchester of fluid taken off. Patient ran a temperature of 102 for a day or two, but then recovered from the effects of the puncture. She then felt much relieved as tumor had gone down. She still continued to have haemorrhage, and in about three weeks the tumor was becoming as large as ever. She was sent to the hospital, where Dr. Graham saw her with me. It was decided to wait for a while before anything was done, as it was likely to be a formidable task to remove the tumor. Patient was sent home, but she still remained anxious to have something done, and the tumor was becoming larger daily. It was decided to operate, for by this time I had pretty well decided that the condition was a hypronephrosis, but was not positive.

On January 27, Dr. Graham assisting, the abdomen was opened along the line of the linea semilunaris. The tumor proved to be a hydronephrosis, and was about 12 inches long and 8 inches in diameter. This was aspirated and removed as quickly as possible. There were a number of adhesions, but with patience these were stripped off the capsule. Drainage was resorted to, but the wound healed quickly. For the first day there was retention, but after this patient urinated as usual. Her temperature remained up for about ten days, and the urine remained loaded with albumin, with Sp. Gr. of 1014. She was kept on a milk and starch diet, with plenty of water, and was given as well a diuretic mixture for some time. Also for a time urotropin was administered.

Patient continued to gain in strength and remained in the hospital about a month, when she went home feeling considerably improved. Her urine still contained a large amount of albumin and she was quite amaemic looking. Received a communication from her April 4th, and she claimed to be still improving. Her legs still swelled some and mensturation had not started. Heard two weeks later that she was looking well. Saw her August 5th. She was looking well and felt well. Her feet still swelled some, but not as much as before.

M. Lucas Championniere, the noted French surgeon, died suddenly a few days ago, while in the act of delivering an address. He was seized with an attack of agrcia pectoris.

CURRENT MEDICAL LITERATURE

MEDICINE.

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

SOCIAL PEDIATRICS.

"To teach the medical student pediatrics," says Dr. Ira S. Wile in an article under the above title in the *Boston Medical and Surgical Journal* of June 12th, "is to inform him concerning the care of the class of population which constitutes one-fifth of the total number of persons in the United States, and far more than this proportion of the patients whom physicians are called upon to serve." To teach the student social pediatrics is to make his technical medical knowledge of the subject really effective on a community scale. The medical schools must recognize their responsibility for organizing their pediatric departments so as to give instruction and training in the hygiene of infancy as related to community life.

"When one considers an enumeration of the methods employed by the city of Charlottenburg for reducing infant mortality, one may appreciate the full meaning of social pediatrics. To enumerate all that this little German city does for the purpose of bringing its children safely into the world and safeguarding them through infancy, is to suggest types of pediatric information which at present scarcely creep into any pediatric department in this country. These social plans consist of:

1. Free meals for needy pregnant women.
2. Free board and lodging for needy pregnant women.
3. Free confinement for needy pregnant women.
4. Free housekeeper at home for needy women.
5. Free set of clothes for infant at home.
6. Immediate report of births.
7. Prophylactic babies' dispensaries.
8. Supervision of all boarding houses.
9. Temporary homes for mothers and infants.
10. Observation stations for doubtful social cases at temporary homes.
11. Stopping-over stations between changes of boarding houses.
12. Medical dispensaries.
13. Beds for all infants at four institutions.

14. Beds for convalescent children.

15. Family House.

16. Professional city guardianship of all.—*American Review of Reviews.*

"WHAT FOOLS THESE MORTALS BE!"

Is there any saying of greater truth in the field of medicine? Quackery is faithfully swallowed daily. Any chap who pretends to know it all, and has little conscience, can secure a large following and amass a fortune, even among well-to-do and seemingly intelligent people—at least intelligent about other persons and things. But, let a physician be hard-working, experienced, have plenty of common sense and be thoroughly conscientious, and ten to one, while he may have a moderate, or large practice, he will get small returns pecuniarily, and only the very limited few will have a due estimate of the work he is doing. People to-day, do not want the truth, if it is at all unpalatable in the sense of occasioning any bodily or mental restrictions upon their desires. Fashion, or custom rules,—*not* duty, or hygiene.

Medicine, at present, is handed over, very largely, to the man primarily seeking, in some special branch, his fame and money. Fame indeed, as a rule, should be called more truly, mere notoriety. Personal egotism triumphs all along the line, not service and self-sacrifice.

The noblest of professions is being sacrificed daily, to every new departure in practice or science. Either way, it is passing and not really valuable. The figure head for the while, is the courted consultant. Of course, he has brains and works, or he would not be followed, or attended probably,—but as to whether he is absolutely considerate of the feelings and well-being of practitioner and patient, from the broadest, best standpoint—that is another matter.

Where are we going? Are specialties to be ever on the increase? Are the people's bodies to be check-mated, so to speak, at every turn? Is there no final appeal to which the good, the true, the sane can turn with the assurance that they will get advice which should guide them?

I only see one way clearly; everyone should know and recognize that it is the most valuable and important asset to have someone who can and will act as judge and jury, in every instance, where all the facts are fully and fairly presented—and later, will follow implicitly the advice given. As it is, I see money spent, health and spirits weakened or lost, and faith jeopardized, by notions which now prevail and seemingly are constantly extending.

It is well to speak of the old family physician, trusted and beloved,

but not to regard him as a figment of the imagination and the past. He is not. He must come to life again and exist. He will come into his own in a new era when men and women,—including all physicians, regain their senses. He must be the true, final appeal,—and with increasing years, but trained and clear faculties, he should ever be the Supreme Court in medicine.—BEVERLEY ROBINSON, M.D., in *Medical Review of Reviews.*

RENAL FUNCTION.

DR. WILLIAM S. THAYER, Baltimore: During the past year and a half we have been following many cases of renal disease and cardio-renal disease, under Dr. Rowntree's personal direction. We have studied the renal function in a considerable number of cases; and have already examined about fifty cases which have since come to autopsy. We are compiling these cases, and purpose to tabulate them later. These studies have taken into consideration the intake and out-put of salt, water, the elimination of nitrogen and lactose after the manner of Schlayer, the coagulability of the blood, and the excretion of phthalein. In the absence of chronic disease of the kidney, the lactic acid test is useful, in revealing the disturbance in the vascular apparatus of the kidney. I wish to emphasize the importance of the estimation of the intake and output of salt and water in renal disease. The value of the estimation of the blood-content of incoaguabe nitrogen is of considerable advantage; but the introduction of simpler and more accurate methods of studying our cases has convinced us of the value of the phthalein test of Rowntree and Geraghty. It is simple and easily carried out, and appears to be a really accurate index of the condition of the renal function at the time of its application. The value of the phthalein test, from a prognostic standpoint, is very well known in certain cases. For instance, eight years ago while I was at a medical meeting, a doctor, an old friend of mine, spoke to me about a gentleman whose condition seemed very bad with chronic nephritis. He had albuminuric retinitis, and the doctor did not think it likely that he would live another year. The doctor is now dead of arteriosclerotic and renal changes; but the patient is still living. The prognosis, however, would probably have been very different had they had the phthalein test as we have it to-day.

We are concerned here very largely with a chronic progressive disease, the etiology of which is still, in many instances, very uncertain, and to combat which we have, at present, very few weapons of decisive value.

We cannot always test the exact limitations of the functional capacity of the kidney, any more than we can test the limits of the functional capacity of a weak or diseased heart muscle. These tests are of importance in instances of slow chronic nephritis. I think of one instance in which the phthalein test remained unusually high until a period not so long before the fatal outcome. Unfortunately in that instance, the tests were not made with all the accuracy that one might demand.

Owing to the revival of the study of renal function, we are able to distinguish early disease of the kidney with greater accurateness, to estimate its extent more surely, and to prognosticate its future course more safely. We have learned to better treat our patients and to increase materially their comfort and their chances of survival.

Damage may be done at times by the undue pushing of the use of diuretics in renal disease. We have always known this; but not until recently did we realize to what extent their use might be dangerous.

NOTES ON RHEUMATISM.

The following ointment is efficacious, when applied with liberal massage, in rheumatic joints:

℞ Salicylic acid	2½	drams
Lard	3	ounces
Turpentine	3	drams

In the use of salicylates in rheumatism, it is to be remembered that acute and not chronic rheumatism is the indication. The iodids, and especially the sodium salt, alone, or combined with colchicum, is indicated more especially in the chronic forms.

Lemon juice, freely, and without sugar, is a homely medicament which has unquestionable power in rheumatism. It is too often omitted, and the place given to more powerful and less efficacious remedies.

The following prescription furnishes salicylic acid and iron in a compatible form:

℞ Salicylic acid	20	grains
Iron pyrophosphate	5	grains
Sodium phosphate	1	grain
Distilled water	½	ounce

Mix, and direct one such dose every three hours.

It is asserted that acute articular rheumatism may be differentiated from gonorrheal rheumatism by application of a honey bee to the affected joint, and provoking it to sting. In the true rheumatism, "a vesicle is produced, and this vesicle has no inflammatory area"; where-

as in the gonorrheal form the sting produces the usual inflammatory zone. [We have not tried this method of diagnosis, but would not hesitate in case of a doubt.—ED.]

The following preparation is advised by Levi in arthritism and allied diseases:

℞ Sodiumchlorid	10	grams
Sodium sulphate	1	gram
Calcium phosphate	¾	gram
Magnesium phosphate	¾	gram
Sodium carbonate	2-5	gram
Sodium phosphate	½	gram

Mix, and place in 13 capsules, of which one or two are taken daily. —*Medical World.*

PRESCRIPTIONS FOR DYSMENORRHEA.—Fritsch recommends the following:

℞ Tinct. opii,
Tinct. belladonnæ,
Tinct. hyoscyami,
Tinct. stramonii,
Tinct. valerianæ, aa. 3 grams.
M. et Sig: Twenty drops three or four times a day.

Chrobak favors the use of the following simple formula:

℞ Tinct. castorei, 10 grams,
Tinct. nucis vomicæ, 3 grains.
M. et Sig: Ten drops t. i. d.

Fellner has reported good results from the following:

℞ Fl. extr. hydrastis canadensis,
Malaga wine, aa. 30 grams.
Syr. cinnamon, 10 grams.
M. et sig: One teaspoonful every two to four hours.—*Medical Record.*

RENAL TESTS.

J. T. GERAGHTY and L. G. ROWNTREE, Baltimore (*Journal A. M. A.*, September 20), report on the value of the various functional tests of the kidney, considering them in relation to three great types of renal disease: (1) unilateral and bilateral diseases calling for ureteral catheterization; (2) bilateral surgical diseases following obstruction in the lower urinary tract, and (3) medical diseases of the kidney. In the first group it is desirable to have information in regard to (a) the total or combined renal function without ureteral catheterization; (b)

the relative function, and (c) the absolute functional value of each kidney. The phenolsulphone-phthalein test is incomparable as far as total function is concerned and where leakage and inhibition are absent it gives all the necessary information. In cases where its excretion is markedly decreased, one or another of the retention tests should be employed. Two difficulties in certain cases make it impossible always to obtain all desirable information from any one test, viz.: inhibition of function and leakage. Inhibition discrepancies may be detected readily by the determination of total renal function without catheterization. Unfortunately inhibition is not always equal on each side and in this connection diastase and urea percentage together with the intensity of urinary pigment and a consideration of the total phenolsulphonephthalein are of value. When inhibition occurs the urea percentage and diastase have equal significance; but when secretion is free and leakage occurs, diastase is more reliable. Phloridzin has proved of comparatively little value in the authors' experience. In the bilateral surgical diseases following obstruction, information concerning the total function alone is needed and the phenolsulphonephthalein test is sufficient so far as excretory functions are concerned. It will aid the surgeon to determine whether and when to operate. Tests of retention should be employed in every case in this group of cases, at least one of them when the phenolsulphonephthalein excretion is low. Urea and total incoagulable nitrogen parallel each other so that only one need be employed, preferably urea determined by Marshall's method. It would seem probable that the blood-urea will give earlier evidence than cryoscopy. Studies of renal function in medical cases fall in two great groups: (a) those attempting to differentiate between tubular and glomerular involvement, and (b) those attempting to determine total function. The authors' studies have lead them to conclude that the potassium iodid test of Schlayer for indicating tubular functional capacity is unreliable. So little is positively known or proved concerning the specific function of any individual part of the kidney that any attempt of this kind to divide nephritis is, in their view, premature. As regards the total functional value of the kidneys in medical cases the authors divide them into: (1) cases suspicious of nephritis; (2) mild cases without cardiac decompensation; (3) advanced nephritis without cardiac decompensation; (4) cardiorenal cases; and (5) chronic passive congestion in cardiac cases without nephritis. In the first group all tests showing a normal function need reconsideration of the diagnosis. In the second group a practically normal phenolsulphonephthalein is sometimes encountered together with a delayed lactoose excretion, but this is also met with sometimes in mild

passive congestion of the kidneys. The lactose test may be accepted as indicating vascular disturbance but not necessarily a glomerular nephritis. With a normal phenolsulphonephthalein output, tests of retention are not needed. In advanced nephritis the phenolsulphonephthalein test is decreased according to the severity of the lesion. Lactose is invariably delayed in those cases and its total suppression is of considerable prognostic importance. The salt test should be utilized in all severe cases with or without edema to determine the capacity of the kidney to excrete salt but it should be used cautiously. In cardiorenal cases, combined functional and renal tests are needed to determine the relative responsibility of the heart and the kidneys and repetition of the tests is almost always necessary . A normal phenolsulphonephthalein with cumulative phenomena absent points to the heart as the responsible factor, and a low output after marked improvement of cardiac conditions indicates serious renal disease. In broken compensation unassociated with nephritis, lactose is always delayed and diastase in the urine is low. In severe cardiorenal disease the application of the salt test is of great importance as there is an exceptional type of case showing edema, albumin and casts with general function normal except for salt. The authors give the symptoms of approaching uremias from these tests. It must be remembered that like functional pictures have a different prognostic significance in different clinical and pathologic associations. Extremely low functional capacity in chronic nephritis means death, whereas in obstruction in the lower urinary tract the injury may be mostly functional or temporary.

ILEOCOLITIS.

C. G. Grulee, Chicago (*Journal A. M. A.,* September 27), discusses the causes and theories of the conditions in the later stages of the acute attacks of summer diarrhea which are generally understood by the term ileocolitis. He questions the value of the bacterial theory and holds that more evidence must be afforded before we can be sure that the organization of doubtful pathogenicity, like the colon bacillus, can be considered as the cause. Exception, of course, is made of certain epidemics due to the Shiga bacillus, *B pyocyaneus,* etc. The second theory that the toxic decomposition products of bacterial action are the cause is also considered as insufficient. The clinical studies are not convincing. The third theory advocated chiefly by Finkelstein—that of a metabolic disturbance produced by either too great absorption of normal elements or of elements which as absorption products may be regarded as abnormal is also not entirely acceptable. The fourth

cause, which probably affects rather the initial stage than the later condition, is heat. Just what part heat plays as an etiologic factor of summer diarrhea is by no means definitely determined. Some cases are probably heat stroke, but he cannot go much farther than this. It possible to decide definitely between these various processes, and he seems to Grulee that in the present state of our knowledge it is im- says this leaves us with little more than a theory, championed most earnestly by Czerny and Keller in the discussion of the nature of "toxicosis," and which has little experimental support, but against which few objections can be raised. In considering the condition as an intoxication, more account must be taken than has been in the past of the intestinal mucus as a medium for bacterial growth and a source of decomposition products. Theoretically, it seems that anything tending to increase the flow of the mucus ought, if possible, to be eliminated. Perhaps of all the foodstuffs the protein is least irritating and easiest absorbed, and for this reason, if for no other, it would seem that when food is given to infants with ileocolitis a properly dosed protein food should be first tried.

DIARRHEA IN ADULTS.

R. C. Cabot, Boston, and Haven Emerson, New York, (*Journal A. M. A.*, September 27), have studied the necropsy records of Bellevue Hospital and the Massachusetts General Hospital searching for lesions that are supposed to produce diarrhea and tracing the cases showing these lesions back to the clinical records to see whether diarrhea was actually produced and in what proportion of cases, and whether any special type of symptoms or discharges is associated with special lesions of the intestines so as to separate clinical types if possible. Finally, they reviewed the results of treatment, both in necropsy cases and in a considerable series of cases that did not come to necropsy, so as to estimate the value of the different methods used. Certain diseases often associated with diarrhea were excluded, typhoid for one, the parasitic diarrheas of which few cases were available, the mercurial or arsenical poisoning cases and those due to organisms of Shiga type, and all cases occurring in persons under 16. Leaving out these, they have studied and tabulated 640 cases. Special difficulties were met with in distinguishing acute from chronic cases, or organic from so-called functional ones. Indiscretions in diet have been exaggerated, they think as causes, as almost any patient will admit such to close questioning. There were but few cases in their series, offering convincing evidence that such was the cause. Ptomain poisoning, a favorite diagnosis with

some, will also seldom stand criticism, and they have not found a single case deserving the name. They have merged under a single head a large number of cases designated on the records as dysentery, gastro-enteritis, enteritis, eterocolitis, colitis, etc. Sometimes one of these is applied, sometimes another according to the physician's taste. In a very small number of cases individual idiosyncrasies to certain foods seemed accountable. Passive congestion of the intestine is not a cause of diarrhea, as shown by the necropsy records. Tuberculosis of the intestine is hardly ever warranted according to their experience, and when there is demonstrable tuberculosis of the intestine they find diarrhea only in one case out of three. Cancer of the intestine is in about the same proportion, and there seemed to be no difference whether the cancer was in the lower or upper part of the intestines. Their studies did not confirm the existence of compensatory diarrheas in chronic renal disease, nor did they find that intussusception was always associated with a bloody diarrhea. The records did not show mild cases of so-called morning diarrheas which have been recently associated with achylia gastrica. They are ordinarily too mild for hospital treatment, but their experience in private practice confirms the view that they are associated with absence of HCl in the gastric contents, and the cases of so-called nervous diarrhea are closely associated with these. An important group of cases, not very numerous, but very obstinate and mysterious, are those associated with intestinal ulceration of unknown cause. Many of them are demonstrably non-amebic or not due to infection by any known organism. Some of them bear the marks of infectious disease-fever, leukocytosis and albuminuria; others not. Ulcerative colitis may be associated with constipation and not always with diarrhea, and the diagnosis is often impossible without proctoscopy. The authors lay special emphasis on the fact deduced from their study that in many, and perhaps most cases, of diarrhea, the cause is unknown. As regards the part of intestine involved, they have not been able to identify any diarrheas originating in the small intestine, and as regards the colon they can only say that marked tenesmus points almost certainly to rectal inflammation. The study of the stools is of much prognostic importance. Blood and pus almost certainly indicate ulcer of the large intestine and a more chronic course. Fat, starch or protein in excess is of much less importance. Proctoscopy is of great importance in the prognosis, and enables recognition of ulceration, thickening and infiltration, etc. Diphtheritic colitis causes no characteristic symptoms, either in the stools or otherwise. Mucous colitis is, they believe, not a colitis at all, but a neurosis associated with constipation and sometimes with starvation. Chronicity is not neces-

sarily of bad prognostic import. The fatal cases found were not as a rule those of long duration. Ulceration belongs largely to the intractable cases. It is a common experience that a patient comes to the hospital with a history of chronic diarrhea of months' or years' standing, and before his case has been thoroughly studied for treatment the diarrhea has ceased and does not reappear, and finally the bowels have to be moved by enemas or laxatives. When the patient resumes his ordinary occupation, however, the diarrhea reappears and its disappearance must be interpreted as due to the remarkable effect of lying in bed. How far this may act by its effect on the splanchnic circulation they do not attempt to say. The good effects of purgation in acute and benign cases are familiar, and castor oil or magnesium sulphate seem secondary only to rest in bed. In acute cases starvation with cathersis is the ideal treatment. Warm normal saline solution irrigations seem to be of value in some obstinate cases and olive oil is useful in long-standing cases. Psychic influences are also mentioned as sometimes successful when other methods fail. As for drugs, the subcutaneous use of emetin in amebic dysentery, as advised by Rogers, seems one of the most brilliant therapeutic results in the history of medicine, and their experience confirms that of others in the few cases tried. Nothing new is added as regards opium, but large doses of bismuth are sometimes useful. Cecostomy and irrigation of the lower bowel through the appendix does not impress the authors favorably.

"SIGNE DU SOU" IN PLEURAL EFFUSION.

New physical signs tend to multiply like the lower organisms, and are almost as objectionable when they require great technical skill, and when their significance is ambiguous. A sign, however, which can boast an uninterrupted existence of a decade and more deserves study, especially when two recent and independent publications show that it is easy to elicit and interpret. This sign, called *signe du sou,* by Professor Pitres in 1898, has been tested in many cases by Slatowerchownikow, who adopt the following procedure: An assistant presses firmly on the chest with a copper coin, on which he taps with a second coin; the physician applies one ear to the opposite side of the chest, and stops his other ear with one of his fingers. The percussion note is dull and non-metallic when spongy or alveolar tissue occupies the space between the points of percussion and auscultation, and it is loud and metallic when between these points there is a gas-containing cavity. It is also metallic when a homogeneous substance, either solid or liquid, is interposed. On the other hand, it is dull and non-metallic when heterogen-

eous substances, such as a fluid and alveolar tissue, are interposed. The sign is termed positive when the note is metallic. When a dull area of the chest is detected by percussion, and fluid is suspected, an assistant percusses with coins over this area, while the physician auscultates on the opposite side, his ear travelling downwards till, if fluid be present, he detects a metallic sound at the upper level of the fluid. Slatowerchownikow has tested this sign in 28 cases of pleurisy with effusion, in 11 cases of pneumonia, in 2 cases of dry pleurisy, and in 1 each of pneumothorax, apical phthisis, miliary tuberculosis, and peritoneal tuberculosis. The sign was positive in all the cases of pleurisy with effusion and in the case of pneumothorax; it was negative in the rest. It indicated the upper level of fluid as higher by one to one and a half finger-breaths than percussion or vocal fremitus, and exploratory puncture confirmed the accuracy of the new sign. It is said to be particularly useful in children when, as often happens, vocal fremitus cannot be tested; and inspection, percussion, and auscultation leave the diagnosis uncertain. Slatowerchownikow describes two cases in which the observations made by percussion, auscultation, and vocal fremitus were identical, but the *signe du sou* was positive in the one, negative in the other. Here again exploratory puncture confirmed the accuracy of the sign. It is therefore not only more accurate than others, but gives definite information when all other tests save exploratory puncture are ambignous. Its utility is, however, confined to the chest, for the abdominal cavity contains too many heterogeneous media for the presence of fluid in the peritoneal cavity to be thus demonstrated. The reliability of the sign is also extolled by Geza von Hainiss, who has tested it for five years in several hundreds of cases. He describes two forms of metallic sound: the one being heard in hydrothorax, the other in hydropneumothorax; in the latter the sound is vibratory, as when a bell has been lightly struck and then held firmly. In healthy lungs he found that the percussion note was most dull when much lung was interposed between the coins and the ear, and that it became metallic, but never ringing, when only a thin layer of lung, such as exists at the apex, was interposed between the two points. In one of his cases, the ordinary physical signs were not indicative of fluid, which was, however, demonstrated both by the *signe du sou* and exploratory puncture. The presence of only a few cubic centimetres of fluid in the chest is sufficient to make the sign positive; in one case the sign was limited to so small an area that its significance was questioned, but an exploratory puncture yielded a few cubic centimetres of serous fluid. The note now became only faintly metallic, and next day it was dull. When another exploratory puncture was made five days later, no fluid was found. Hainiss also emphasizes the value of this sign in children.—*British Med. Jour.*

BLOOD-PRESSURE.

L. M. Warfield, Milwaukee, Wis., (*Journal A. M. A.*, October 4), says that with all the data that has been accumulated on the value of systolic-pressure readings, hypertension has become a word which is in danger of becoming a fetish. It seems to him that much of the hypertension seen is a compensatory effort on the part of the heart to maintain the circulatory equilibrium and should be considered physiologic. Successful attempts to reduce it not infrequently cause unpleasant results. Too little phenomena of blood-pressure, the diastolic pressure and the difference between the systolic and diastolic pressures—the pulse pressure. Perhaps it is due to the differing methods of measuring and the consequent varying results that no conclusions can be drawn. His intention is to point out a reliable and uniform method of determining the point at which diastolic pressure should be taken. The auscultatory method of measuring blood-pressure is admittedly, he thinks, the most satisfactory and accurate. The systolic pressure is to be read when, with a gradually decreasing pressure in the arm-cuff, a clear clicking tone can be heard. This does not complete the blood-pressure determination. It seems logical to believe that the pulse pressure, the actual head of pressure driving the blood into the peripheral vessels, should be most important in cardiac prognosis, and this cannot be determined unless we measure the diastolic pressure. The knowledge of the amount of blood an organ receives in a unit of time, more than the knowledge of the pressure under which an organ receives its blood, is what enables us to judge of fractional capacity. Within very small limits there is a relationship between the pulse pressure times and the pulse-rate. But there are, however, too many disturbing factors in the circulation to permit us to use this simple formula in many cases. In general, Warfield believes a diminution of the pulse pressure means lessened velocity of blood-flow, but the reverse does not hold good. He gives the results of experiments carried out in the physiologic laboratory of the University of Wisconsin, using the Erlanger instrument to sharply record the diastolic pressure. In normal persons this is not difficult, but in many cases of decompensation with intermittent or irregular hearts it is impossible to determine either the systolic or diastolic pressure. He finds from both clinical and experimental evidence "that the point at which diastolic pressure should be read, when using the dial instrument, is at the point where the fling of the lever during the gradually lowering of pressure suddenly become sless, or, better, with the auscultatory method, where the clear sharp third tone suddenly becomes dulled."

HIGH AND LOW PRESSURES.

W. J. Stone, Toledo, Ohio (*Journal A. M. A.*, October 4), reports the study of pulse-pressure observations in 170 persons to determine what clinical significance was to be attached to certain high and low auscultatory readings. The subjects were both normal and pathologic, including cases of acute infections, those with arterial hypotension and hypertension and various compensated and uncompensated cardiac lesions. The results are summed up as follows: "1. The determination of systolic and diastolic pressures by the auscultatory method is to be preferred to the palpatory method for systolic and column indicator oscillation for diastolic, because of greater accuracy. 2. The readings are slightly higher by the auscultatory than by the palpatory method. 3. The pulse pressure measures the energy of the heart in systolic in excess of the diastolic pressure. For clinical purposes it represents the load of the heart. Under normal conditions it is approximately 50 per cent. of the diastolic pressure. The myocardial load may, therefore, be expressed by the fraction

$$\frac{\text{pulse pressure}}{\text{diastolic pressure}} \quad \text{or} \quad \frac{\text{P.P.}}{\text{D.P.}}$$

4. Since the diastolic pressure measures the peripheral resistance it is a better index of hypertension than the systolic pressure. A sustained diastolic pressure of from 100 to 110 signifies hypertension. The diastolic is less influenced by physiologic factors than the systolic pressure. 5. The comparison of systolic, diastolic and pulse pressures is of clinical value in the interpretation of circulatory changes and of more importance than the estimation of systolic pressure alone. 6. In arterial hypertension and myocardial decompensation, in a broad sense, the pulse pressure and heart-load are increased, as a rule, the overload factor varying greatly, from 50 to 175 per cent. in this series. The greater the overload factor, the greater was the danger of myocardial exhaustion. 7. In circulatory failure, due to shock, to many acute infections and to hemorrhage, the pulse pressure is low. This is the result, it is believed, of factors which have influenced arterial tonus and peripheral resistance with rapid pulse rate, increased respirations and lowered venous pressure. 8. In acute infections a sustained pulse pressure warrants a more favorable prognosis as a rule than a low pulse pressure, other things being equal, although the change from normal to a low pulse pressure in circulatory failure may occur very rapidly. As a rule, the lower the pulse pressure, the greater is the danger of circulatory failure. 9. From this point of view low pulse pressure in circulatory failure involves the consideration of complex peripheral

changes in addition to the myocardial factor. 10. The pulse-pressure multiplied by the pulse-rate does not give a reliable index of systolic output in circulatory shock, since the pulse-rate clinically increases out of proportion to the fall of pulse pressure. This shortens the time during which the left ventricle is filled during diastole and lessens the systolic output, although by the formula, pulse-rate multiplied by pulse pressure, the unit volume output may appear to be increased. 11. The pulse-pressure estimations in this series did not show marked variations from day to day except in neurotic persons."

HYPERTENSION.

The clinical aspects of hypertension are discussed by J. L. Miller, Chicago, (*Journal A. M. A.*, October 4). Arterial and renal changes have always been considered the most important factors, but as our knowledge has increased the renal factor is made more important. It is possible that with better methods many so-called normal kidneys may be found to be pathologic. He goes over some of the literature which emphasizes the kidney factor in the production of hypertension. In a few cases aortic regurgitation may be explanatory as well as arteriosclerosis of the splanchnic arteries, but there are a few cases which at present he calls idiopathic. How the hypertension is produced by renal changes is still to be found out and Miller reviews the various theories. He thinks that it is possible that some changes in the adrenal secretion may account for it, but at present the nature of the process is undetermined. He gives an analysis of 100 cases with fairly complete histories from his office records, and the frequency of renal involvement in this series corresponds very closely with that reported by others. It is probable, he thinks, that if urinary examinations were made with greater frequency, many of the patients with apparently normal urine would reveal albumin and casts. The prognosis of high blood-pressure is of special interest as the laity has become concerned as to its possible serious consequences. Cerebral hemorrhage, cardiac incompensation (including angina) and uremia are the most frequent causes of death. It is often exceedingly difficult to make a prognosis on account of our ignorance of the strength of the arterial wall and the working power of the heart muscle. The functioning power of the kidney and danger of uremia can be determined by the phenolsulphonephthalein test, an outwithin the first two hours of less than 25 per cent., indicating grave renal involvement. Men are less liable to show symptoms of hypertension than women, especially obese women. Transitory cerebral disturbances are ominous and moderate edema of the feet is of graver sig-

nificance than when due to cardiac disease. The care the person can give to himself as regards mental or physical overexertion, chilling, habits, etc., is of extreme importance. Drug treatment is of much less importance than attention to elimination, dietetics, and general hygiene. When cardiac incompensation develops, digitalis should be used just as in any other form of cardiac incompensation. There is no good evidence that the iodids are of any special value except in syphilitic cases. The carious vasodilators have a very limited field of usefulness.

MENINGITIS OF THE EPIDEMIC TYPE IN CHILDREN BELOW TWO YEARS OF AGE.

Dr. Henry Koplik (*Journal American Med. Assn.*, June 7, 1913) in discussing the subject of meningitis in young children, calls attention to the fact that below the age of two years children often present symptoms which are misleading and therefore the early diagnosis is not made in a number of cases.

Dr. Koplik says that the diagnosis is often masked, the physician not even considering meningitis and in no other way can he account for such a large number of infants being sent to the hospital quite late in the disease without any diagnosis having been made. Even in the hospital with the patient under direct observation it is not easy to come to a conclusion before lumbar puncture is made. The pneumonia cases which are complicated with meningitis are particularly difficult to diagnosis, as many cases of pneumonia are complicated with cerebral symptoms. Restlessness, rigidity, retraction, of the head and fever which continues a long time past the initial phase of the disease are symptoms common in pneumonia which may or may not be complicated with meningitis.

In some cases the initial symptoms of fever are restless—but are not combined with any other symptoms such as rigidity. They may be a slight concomitant otitis to mislead us at first into feeling that we are dealing with a purulent ear instead of meningitis.

The remittance or intermittance of a high temperature with increasing restlessness and finally the appearance of the neck rigidity then shows us we have had a meningitis from the outset. Dr. Koplik says that many diseases of infancy, even a simple intestinal disorder, are so often combined with milder forms of cerebral symptoms that we can easily explain how a meningitis in younger children and infants is often overlooked. Kernig's sign is often absent in many infants and is of little value in the diagnosis of meningitis.

It is rash to diagnose meningitis when the outset of the disease has

been ushered with convulsions or repeated convulsions. When an observation period is assumed valuable time is lost. The possibility of meningitis must not be lost sight of in the very young if the diagnosis of that disease is to be made early. A delay of a day in the diagnosis of meningitis in an infant may mean its loss, a delay of a day in older children is not so dangerous.

Dr. Koplik says that the stress of diagnosis must be placed on the persistence of cerebral symptoms, high fever and what is of greatest importance and scarcely appreciated at its full value Macerneris percussion note over the fronto parietat juncture as a sign of increasing fluid in the head.

The younger the child, the more difficult will it be to come to a definite conclusion as to the increase of fluid in the ventricles. In rachitic infants Macerneris percussion note over the front-parietal juncture is normal. A tense fontanelle is of some value. The mortality in young infants in cerebro-spinal meningitis is quite high.

In statistics by Flexner of his serum cases of infants below one year of age considering 125 cases treated by serum 63 recovered and 62 died.

Five infants injected in the first three days of the disease recovered and of 16 injected during the first week 12 or 15 per cent. recovered. The earlier the injection the more certain the therapeutic effect. Other reports give a mortality of 50 per cent. Dr. Koplik makes the following interesting statement regarding the service at Mount Sinai Hospital: "Fifteen patients below one year of age were treated with a mortality of 10, or 66 per cent. Of the fifteen patients two injected on the fifteenth day recovered, one injected on the seventeenth improved (discharged) and one on the twenty-first day was cured, one on the twenty-ninth day was cured. None of the remaining came before the second week of the disease. Not all of the patients that came early recovered, for one on the third and another on the fourth day of the disease died. Between the age of one and two years the mortality was less. Of 12 patients, 6 recovered. Some coming as late as the twenty-ninth day recovered, while one patient coming on the second day of the disease died."

Difference of virulance of the various strains of meningococci plays a most important role.

In an attempt to save cases in which the subarachnoid space was closed off from the spinal comal and simple lumbar puncture was fruitless and the serum could not be introduced by this route, ventricular puncture has been resorted to, the ventricle being punctured on one or both sides, a certain amount of fluid withdrawn and the serum introduced.

This method was not successful and some better process has yet to be devised. The infants do not tolerate the operation.

Dr. Koplik has contributed a very valuable article on the treatment of meningitis by serum.

RESORPTION OF FLUID BY THE PLEURA.

T. naegeli (*Zeitschr. f. d. gasamte Exp. Med.*, March, 1913) says the rate and mechanism of the absorption of fluid in the pleural cavity is not yet known, although it is important to know how fluid is drained from the cavity, and whether a drainage tube, or merely a tampon, should be used after operations on the chest. To compare the rates of absorption of fluid by the pleura and peritoneum respectively, an isotonic saline solution containing 0.1 per cent, of potassium iodide was injected into the pleural and abdominal cavities of rabbits. The fluid was injected at the body temperature, and the rabbits were kept in a uniform temperature. The urine was pressed out of the bladder just before the injection, and was subsequently examined every half hour for iodide, quantitatively and qualitatively. After an intrapleural injection reaching its maximum in an hour. Iodine was no longer found in the urine after thirty hours. Injected into the peritoneum, the iodine appeared in the urine in half an hour, but its excretion was more rapid than in the former case. From this the author concludes that the peritoneum absorbs fluid more rapidly than the pleura. The question was raised whether the lung and visceral pleura, or only the parietal pleura, absorb fluid. A pneumothorax was induced and the lung collapsed. The solution of potassium iodide was then introduced into the pleural cavity, the opening in which was closed. The appearance of iodine in the urine did not begin till two hours later, and did not reach its maximum till six or seven hours after the injection. It was not at first clear whether this diminution in the absorption of fluid was due to the cessation of movement of the lung or to lessened absorptive power of the lung. To decide this point the arteries, the veins, or both the arteries and veins supplying the lung, were ligatured, the lung not being collapsed. The absorption was now reduced to the same extent as by a pneumothorax, and the rate of absorption could be regulated according to the number of branches of the arteries ligatured. It was therefore assumed that the mechanical movements of the lung have little to do with the rate of absorption. The conclusion was also drawn that the lung plays an important part in the absorption of fluid from the pleural cavity, and that increased circulation through the lung favors the rate of absorption of fluid from the pleural cavity.

ANGINAL PAINS.

C. L. Greene, St. Paul, Minn., (*Journal A. M. A.*, July 19), says that cardiac pains of the most severe type, closely mimicing true angina pectoris, may occur in various conditions, and quotes Head and McKenzie to this effect. As a result of his studies, he believes that the chief factor in all cardiac pain, unassociated with pericarditis or aneurysmal pressure, intense or mild, transitory or persistent, is to be found in the strain imposed on a weakening and laboring heart, often combined with a degree of individual hyper-sensibility and heightened reflexes. The treatment will be greatly simplified if we consider it as representing impaired tonicity and contractility induced by cardiac fatigue. In the treatment he specially warns against the routine methods of certain sanitaria, followed without consultation with the attending physician. His summary of his paper is as follows: "1. While recognizing its wide variability, we should assume the unity of pain of cardiac origin and found our therapy on the one chief causative factor—cardiac exhaustion. 2. The wide distribution of cardiac pain in the superficial sensory areas has led to misinterpretation of the lesser degrees of pain of the same origin, and hence too much neglect and diagnostic error. 3. The efficient treatment of cardiac pain in the broader sense resolves itself into the management of an insufficient, overfatigued heart muscle. 4. Mental and physical rest and regulated exercise afford the best means of restoring a proper circulatory balance. 5. A proper valuation of the subjective symptoms of cardiac overstrain, early oversight and the timely and judicious treatment of cardiac lesions is quite as important as is the early recognition and treatment of tuberculosis."

RELATION OF INFLUENZA TO BRONCHITIS AND TUBERCULOSIS.

A. J. Jex-Blake (in *The Lancet*, June 28th) concludes that one should be slow to content oneself with diagnosing any acute febrile catarrh of the respiratory system as "influenza" unless the disease is about in epidemic form, or unless the patient's discharges show a pure culture of the bacillus influenza. Unless these precautions are observed it is probable that the attack will in all probability be an acute infectious catarrh due to other microbes as the tubercle bacillus, the pneumococcus, *micrococcus catarrhalis*, staphylococci, and streptococci. The second conclusion to be drawn is far more important than this form from the practical point of view. It is this: that to diagnose "influenza" rashly and readily entails a great risk of overlooking the early stages of pulmonary

tuberculosis—a most serious matter for the health of the patient and for the credit of the medical practitioner. The outlook and prospects of recovery in tuberculosis of the lungs depend very largely on getting suitable treatment applied at the earliest possible moment, before the pulmonary lesions have advanced far. The author's figures show that in no less than 112 out of 416 unselected cases of tuberculosis of the lungs the onset of the disease coincided with an attack of "influenza"; the frequency with which this occurs shows that it cannot be a mere coincidence. It is obvious that to make a diagnosis of "influenza" when the case may very well be one of pulmonary tuberculosis—as, indeed, it appears to have been in 264 out of my 1,058 instances—must give a false sense of security to both patient and medical man, and must make the latter prone to overlook the more serious disease. Yet the two can be distinguished from one another with certainty, if not by the physical examination of the patient, at any rate by the examination (or by repeated examinations, if need be) of the sputum for tubercle bacilli. In other words, one ought to make sure that pulmonary tuberculosis has been excluded before resting satisfied with the diagnosis of "influenza" or "influenzal bronchitis."

THE TREATMENT OF ARTERIOSCLEROSIS.

At the recent meeting of the American Therapeutic Society (New York Med. J.), the following discussion took place on the Treatment of Arteriosclerosis.

Dr. Louis F. Bishop, of New York, stated that most cases of arteriosclerosis could be traced to the substances derived from food proteins. It was the reaction of the individual to the proteins that caused the disease. Arteriosclerosis set in when something occurred in the individual to make him more susceptible to damage by protein material. Accordingly he had adopted a system that he called the "few protein diet." All eggs, fish, meats, fowl, and soup were excluded. Cheese was allowed as furnishing protein in a safe form, and later chicken was added tentatively. An ounce of castor oil was ordered every forty-eight hours for three doses, then another dose at the end of the week, and later, a dose not less than a month. Nitroglycerin was the great symptomatic remedy for all emergencies, whether dyspnea, pain, vertigo, or even edema of the lungs. Exercise and out of door life were essential. For the cure of the arteriosclerosis the underlying causes should be removed, and among these mental stress was important.

Dr. J. Madison Taylor, of Philadelphia, spoke of the importance of the early recognition of the disease. Doctor Bishop had said in a former

paper that there were practically no manifestations in the early stages to bring the case to the attention of the physician. This being true it was fortunate for the individual if he had some other form of breakdown, because then the arteriosclerosis might be recognized and treated in its incipient stages.

Dr. Edward D. Fisher, of New York, spoke particularly of the etiology. Arteriosclerosis was not a general disease of the whole body but primarily a diseased condition of the vessels. At first it did not affect the body as a whole, but was a localized condition. Gradually, however, it might affect one organ or part, after another, the heart, kidneys, nervous system, until the body as a whole suffered. Alcohol, overeating, gout, etc., were only predisposing causes in most cases. Laboring men were especially susceptible to arteriosclerosis, but as a rule they were neither excessive eaters nor drinkers. But they were hard workers, and work and heredity were important factors in the etiology, whether the individual was a laborer or a financier at his desk. Everyone was furnished with vessels good for a given time under proper conditions. If he used them conservatively, he might live out his allotted time. If he did not his life was shortened. Treatment must of necessity be symptomatic only. The best that could be hoped was to stay the progress of the disease. A proper diet, open air exercise, a quiet life and freedom from worry and care—all of these were important factors. The diet should be regulated to suit the need of each individual patient. It should not be too strict where the patient was weak or where his occupation required great exertion. In case of a laborer, for example, it would not do to take away meat. General principles of treatment should be broken as conditions necessitated.

Doctor Morris suggested that the response of the blood pressure to certain proteins might be utilized as a test for arteriosclerosis in its early stages.

Doctor Blackader said that he always hesitate dto say that a drug was a specific, and in the same way he hesitated to accept the statement that there was only one cause for a disease. He could not help feeling that Doctor Fisher's point about heredity was well taken. It was, however, a depressing view. If we felt that a man's arteries were destined for a certain length of life we were apt to do less for him in the way of tratment. He preferred to think that some individuals were more susceptible to certain poisons than others. Such substances should be excluded from the diet of those susceptible to hardening of the arteries. Until the things causing the disease were removed, treatment would prove unavailing. He agreed with the previous speakers that all protein food could not be excluded. Alcohol and tobacco were conducive

to arteriosclerosis in a certain proportion of cases. What would hurt one man, however, would not necessarily hurt another. The treatment should be primarily directed toward undue susceptibility of the tissues—the heart, kidneys, liver, nervous system. He commended the use of castor oil and salines in these cases.

Doctor Osborne emphasized the danger of changing the diet suddenly or radically. The same was true of exercise and other factors ordinarily employed in the treatment. He had obtained good results from the use of potassium iodide.

Dr. Spencer L. Dawes, of Albany, said that the salines or calomel were preferable to castor oil. He had found the constipating after effect a decided objection to its use. He agreed with Doctor Fisher as to the span of life of the vessels. The same might be said of the heart.

Dr. George Herbert Evans, of San Francisco, said that greater efficiency in treating the condition must be based upon a better classification of the patients along etiologic lines. He had been impressed with the frequency with which syphilis occurred in arteriosclerotic patients, and he did not believe that the Pacific Coast was worse than the Atlantic Coast in this regard. Cases ascribed to overwork, overeating, etc., were not infrequently the result of syphilis. The disease should be eliminated as an etiological factor before treatment was instituted.

Dr. F. M. Pottenger, of Los Angeles, said that Doctor Taylor had asserted a few years ago that typhoid fever was not infrequently followed by hardening of the arteries. In his own work he had observed that some hardening was usually present in tuberculous patients after two years.

Doctor Kinyoun said that in the post mortem examination of tuberculous subjects he had found marked arterial changes in forty per cent. of the cases. They must have been due to causes like alcoholism, syphilis, etc., as they antedated the tuberculosis.

Doctor Bishop said that in his own experience no cause could be assigned in about nine-tenths of the cases. In the remaining one-tenth the causes were alcohol, lead, syphilis, or one of the other causes ordinarily cited. Too much attention was paid to the advanced cases, and not enough to the incipient cases, although the latter were the most important. Bacterial arterosclerosis was due to protein poisoning, as suggested by Doctor Morris. Heredity was only a matter of susceptibility after all. He commended Doctor Osborne's definition of iodine as a thyroid stimulant rather than an alterative in these cases. He did not believe in excluding all protein from the diet. The efforts should be to ascertain the particular protein causing the trouble and eliminate it. It was revealed by the special craving of the patient for it when it was

withdrawn. As to laborers, many of them had syphilis, and all of them overate. As to salines: A circular issued by the physicians of Carlsbad advised against sending patients with advanced arteriosclerosis there as they did not do well. It was the custom to send them to Nauheim—in other words, to put the patient into the mineral water and not the mineral water into the patient. Table salt and all salts were unfriendly to arteriosclerosis. He saw many patients who had taken salines for years and it was necessary for him to overcome the prejudice in their favor.

TREATMENT OF CHOREA.

J. Comby, in *Bulletins et mémoires de la Société medicale des hôpitaux de Paris*, February 7, 1913, points out that by giving arsenic in large doses for a short period only, therapeutic results are obtained with much less danger of toxic phenomena than when small doses are given for weeks and months. He advises the following measures for chorea:

1. Rest in bed for two weeks, with relative isolation; no playing with other children or mental work.

2. Milk diet, consisting of 200 grammes (six ounces) of milk every two hours. This facilitates the taking of the arsenic. Vegetable foods should be added after the ninth day.

3. Arsenic in the form of Boudin's solution (one to 1,000 arsenic trioxide in water), given in a flavored gummy mixture, of which one tablespoonful is given every two hours, with the milk. Each day a new mixture is made, the successive preparations containing, respectively, 5, 10, 15, 20, 25, 20, 15, 10, and 5 grammes of the Boudin solution in admixture with 120 grammes of the gummy menstruum. The entire arsenical treatment thus takes up only nine days. In children, five to seven years old, the amounts of Boudin's solution employed are reduced from the scale mentioned, ranging from three to fifteen grammes, while in those under five years the amounts are from two to ten grammes.

If vomiting should appear, the arsenic is left off for one-half to one day. If it still recurs after this, arsenical treatment should be abandoned. In this way all possibility of serious toxic effects is eliminated. Among over 300 cases treated with arsenic in the last thirty years, but one case of arsenical polyneuritis—with subsequent recovery—occurred; in this patient, a little girl, seven years old, treated nearly twenty years ago, the dose of Boudin's solution had been carried up to thirty-five grammes a day. As a rule, the remedy is well borne and the effects are promptly manifested. The choreic movements stop in a week, and in two weeks the chorea is cured. Among 175 children treated since 1906, 135 were given the arsenic, the remaining forty being milder cases. The

average stay in the hospital of the arsenic treated cases was twenty-eight days.

Albuminuria and very hot weather contraindicate the arsenical treatment. In hot weather the copious perspiration and diminished urinary flow decrease the tolerance for arsenic, as well as for antipyrin or any other active drug. In such periods hydrotherapy, especially the cold pack, should be relied on to subdue the nervous excitation.—*New York Medical Journal.*

TREATMENT OF WHOOPING COUGH.

Renigio, in *Lyon médical,* April 27, 1913, is credited with the advice to place in various parts of the sick room four or five grammes (one drachm to seventy-five minims) of the following mixture:

Methyl salicylate..... 2 parts;
Eucalyptol..... 1 part.

This should be done twice during the daytime and also once in the evening.—*New York Medical Journal.*

SURGERY

UNDER THE CHARGE OF A. H. PERFECT, M.B., SURGEON TO THE TORONTO WESTERN HOSPITAL

MODIFIED TECHNIC IN APPLICATION OF THIERSCH GRAFTS.

P. Hardouin (*Presse Medicale*) advises waiting, before applying Thiersch grafts, until the surface to be covered shows reddish granulations, bleeding readily, and the discharge has been reduced to a slight serous or seropurulent oozing. A few days before grafting, moist dressings should, if necessary, be applied to soften crusts; a one in 1,000 solution of potassium permanganate is recommended. On the day preceding operation, a dry dressing should be applied. In preparing the surface for the grafts, the entire layer of fleshy granulations should be removed with a curette, until a firm stratum of tissue, with a whitish, fibrous appearance, is exposed. After rubbing this surface with a gauze compress, bleeding can be immediately arrested by placing dry gauze over it. The area from which the grafts are to be taken, usually the thigh, should then be strongly rubbed for three or four minutes with a pledget of gauze saturated with alcohol, until the skin has assumed

a reddish color. After allowing the alcohol to evaporate, one next washes the area with warm normal saline solution. In removing the grafts, which should be as thin as possible, the razor should be see-sawed tangentially to the skin, and the grafts kept on the blade throughout, i. e., not transferred, as is sometimes done, to a spatula and spread out before application to the open surface. When the latter has been completely covered, the surrounding skin should be carefully cleansed with dry or slightly moistened tampons, and a large compress consisting of six or eight thicknesses of dry gauze bandaged tightly over the area. No impermeable covering should be used. The gauze should be left on six or seven days. Its removal without injury to the grafts, the use of a spatula for the purpose of separation being sometimes required about the edges, can usually be accomplished easily. Where this is not the case, bathing in boiled water for an hour or two will be sufficient to liberate the adherent gauze. A fresh, similar dressing is then applied. With this technic, perfect healing is not uncommonly observed when the first dressing is removed, and in any case, the desired result is obtained much more quickly than after the use of impermeable dressings.—*New York Medical Journal.*

SURGICAL ASPECTS OF FURUNCLES AND CARBUNCLES.

P. G. Skillern, Jr., says that to incise a boil in its hard stage is merely to carry the virulent, infecting bacteria through the barrier of leucocytes into healthy tissues and is wholly illogical. A most successful treatment in the hard stage is to shave the skin wide of the boil and without abrading it. Then bathe the area thoroughly, first with benzin and then with alcohol. Paint with strong tincture of iodine, or three per cent. alcoholic solution of picric acid. Now scratch the cap off the vesicle with the point of a knife, boring a little into the centre of the boil if the exposed orifice is not larger than the shaft of an ordinary pin. Next secure gentle suction with a Bier cup for three minutes. Repeat in four hours. This withdraws some of the infected fluids and bathes the boil with fresh blood. Dress with a drain poultice made of gauze saturated with an isotonic solution, which prevents the clotting of blood or serum in the pit at the centre. Wright's solution is suitable, and consists of sodium citrate, 1 per cent. ,and sodium chloride, 2 per cent. Cover with waxed paper to retain the moisture; apply a cotton compress over this to make the pressure uniform and secure with a muslin bandage. Have the patient keep the gauze wet with the solution. The boil will expel its core under this treatment in from one to four days, and, thereafter, heals rapidly, leaving a minute scar

which is scarcely visible. If the boil has been squeezed, or if there is fluctuation due to free pus, it should be incised. In every case treat with an autogenous vaccine to prevent furuncular recurrence.—*New York Medical Journal.*

ADVANCES IN THE TREATMENT OF SYPHILIS.

Bering (*Berlin Klin. Woch.*) refers first to the fact that salvarsan has now been in use for four years. He refers to the old diagnostic difficulties which still prevailed, notably in the first days of the primary lesion, until this discovery of the spirochete by assuring the diagnosis, furnished a great addition to the management of the disease. In fact, we now have a true abortive treatment, not necessarily because of salvarsan, for even an intensive Hg. cure is possible if the diagnosis is made sufficiently early by the discovery of spirochetes in the chancre, at a stage when the Wassermann is still negative. We now know that the residues of the chancre and secondary lesions may contain living spirochetes which may not manifest their presence until years have elapsed. The chief value of the Wassermann reaction is in the recognition of latent syphilis. As yet we know nothing of its nature, and there is some doubt as to its exact value as an index of successful treatment. The older the disease the greater the difficulty in obtaining a negative reaction. When we come to paresis we learn that the reaction practically always persists in the negative. After the provocative use of salvarsan without special classification as to age over 75 per cent. of the cases show the negative phase, and many among them had received unsatisfactory treatment. When a patient has been properly and thoroughly treated, has remained free from symptoms, and has had a persistent negative reaction, absence of the provocative reaction from salvarsan should mean a permanent cure, provided also that the lumbar punctate is normal. The latter fluid if it show formed elements, etc., must be reckoned as indicating some form of syphilis of the central nervous system.—*Medical Record.*

A THEORY OF TUMOR GROWTH.

Dr. Martin J. Sgier concludes his article in the *Long Island Medical Journal* as follows:

1. Healthy, inactive tissue is isoelectric, because the equilibrium is perfect and complete.

2. Whenever the vitality of a part is lowered, or its metabolism altered even in the slightest degree, by injury or action, a current is generated.

3. These currents are due to chemical changes, taking place in the area of altered metabolism, whereby it becomes negative to the healthy part.

4. These currents cause tissue metamorphosis. (Cell proliferation, etc.)

5. The chemical constitution of the human body is altered gradually as the individual grows older, and eventually becomes such that the equilibrium is very easily destroyed and very difficult to restore, hence the prevalence of cancer after middle life.

6. Cancer is neither infectious nor contagious; nor do I believe that heredity has any part in the causation, excepting possibly the influence of certain inherited peculiarities on the metabolism and chemical composition of the individual, relative to the above mentioned senile changes.

7. Treatment of this most terrible and fatal of human diseases should be directed to overcoming these currents (neutralizing or destroying them by X-ray, fulguration, violet ray, radium, etc.) or in an attempt (by means of enzymes, sera, etc.) to alter the chemical composition of the negative pole.

ACUTE APPENDICITIS AND THE SUMMER DIGESTIVE UPSET.

That the diagnosis of acute appendicitis should offer more difficulties at one season of the year than another perhaps seems strange, but second thought will prove the correctness of the statement. We refer to the atypical attack of appendicitis with some of the cardinal and classic symptoms lacking, which stimulate so closely the summer digestive upset. It is in such cases that the practitioner must be argus-eyed and view the case from all standpoints.

In summer time there is, at least in temperate countries an almost universay carelessness or at least variety in the diet not present at other times. Sea foods, such as clams, lobsters and other shell fish, corn and berries of various sorts are eaten, and often the unusual food, or excessive amounts of it, cause the "cholera morbus" attacks of the older text-books. The wise practitioner knows that any one of these attacks may be an acute appendicitis and will treat them with respect. With any suspicion of involvement of the appendix the usual cathartic should be withheld, the stomach washed out if necessary, and the bowels moved

by enema at first, if possible waiting twenty-four hours, as the increased peristalsis caused by the enema might be harmful in case of appendix trouble.

EXPERIENCE WITH SALVARSAN.

W. T. CORLETT, Cleveland, Ohio, (*Journal A. M. A.*, September 20), remarks on the great changes that have been made in the therapy of syphilis due to the discoveries of late years and says that, as might be expected with the powerful new remedies in use some unpleasant occasional effects might be observed. In this second series of 250 cases in which salvarsan or neosalvarsan has been employed, he calls attention to the fact that in no case in addition to the salvarsan or neosalvarsan injection was the intramuscular administration of mercury, preferably in the form of grey oil, forgotten. Thus used in conjunction with mercury, the salvarsan and neosalvarsan treatment has given most excellent results, especially in the early primary and secondary lesions. In several cases of tabes and one in particular, the results have been very striking. In the first cases treated with salvarsan there were frequently marked symptoms of gastric disturbance, chills, fever, etc., but as time passed the toxic qualities of the drug seemed to lessen and the same can be said as regards neosalvarsan. He believes that the heroic combined treatment is the quickest way to render patients harmless to the community. He has had, however, some unpleasant experiences and he gives more or less detailed reports of these. One was a case of Herxheimer reaction followed by neurorecurrence after a chancre had been treated with salvarsan, the patient recovered. The other case was an old case of syphilis, resistent to mercury, in which arsenical intoxication occurred, due to idiosyncrasy or more properly to lack of elimination. All symptoms of lues disappeared, including the positive Wassermann. The third case reported symptoms like those of typhoid following the first dose of neosalvarsan, but a later dose gave no unpleasant symptoms. In three other cases jaundice occurred after neosalvarsan administration and in one case of pemphigus foliaceus no results followed the treatment. Corlett goes at some length into the literature of the subject and that of the fatalities reported due to salvarsan, of which 134 have been recorded. There may have been many others which have not been reported, but some of these are probably not due to the drug. In two cases the patients died suddenly after the injection, but more commonly the symptoms are of a subacute type coming on in a day or so with headache, weakness, vomiting, spincter weakness, coma, dyspnea, cyanosis and death in three or four days. In this

type there is generally found a serous meningitis and often some small ruptured vessels at the base of the brain. There is certainly an idiosyncrasy to the drug in some of these cases, of unknown nature, and in some cases, both fatal and non-fatal, the symptoms can be explained by an acute arsenical poisoning. Unwise selection of cases and overdosing are probably the cause in some instances. The accidents can be generally classed, he says, as, first, such as one finds in experimental arsenic poisoning; second, those due to the Herxheimer reaction, explained by the too sudden killing of the spirochetes and losing their toxins with resultant edema and pressure symptoms; and, third, those coming on later after weeks or months, with symptoms of nerve paralysis and lightning up of the disorder. To insure against bad results, careful selection of cases should be made and too large doses avoided. He would prefer to start with a small dose and gradually increase, injecting not oftener than once a week and taking the greatest care as to the sterility and purity of the water used. In cases of cephalic chancres, salvarsan therapy should be undertaken only with the greatest caution. With precautions the results will be most gratifying, especially if used in conjunction with mercury, without which many obstinate cases will not recover.

THE SURGEON'S RESPONSIBILITY.

J. C. Bloodgood, Baltimore (*Journal A. M. A.*, September 20), says that as a rule in surgical conditions the easier the diagnosis the worse the prognosis and that this is especially true of malignant disease. The prognosis is best in malignant disease when the clinically difficult condition is correctly diagnosed by an exploratory operation and followed immediately by the complete eradication of the disease. When the disease is not recognized, however, and removed at once, and later after microscopic examination the complete operation is performed, the probability of a cure is distinctly less. In the earlier stage of surgical lesions the diagnosis is the most important, in the later the operative skill; but the results, both immediate and permanent, are worse. The more one observes, the more he is impressed with the fact that surgery in the hands of the majority of operators is usually a little behind the disease. There is no doubt but that the best opportunity for a cure is in the early stages. We have, however, sufficient evidence that radical operations, properly performed under improved anesthesia and technic, have caused cures and there is no reason why these should not be increased in number. We should not be satisfied with our results or continue to follow routine methods of diagnosis and treatment unless

it is constantly controlled by evidence of the ultimate condition of the patient. Few surgeons, he thinks, really know their immediate mortality, and fewer still have an accurate and comprehensive knowledge of the ultimate results of their work. Our available means of diagnosis are not always employed. The clinical diagnosis is imperfect because the patient cannot always give a history of his earlier symptoms. A clinical history cannot be taken at one sitting. In retaking the histories of patients returning for examination, he has been surprised at the frequency with which additional important data have been obtained. At present the easier and more available laboratory methods of diagnosis are not employed, as a routine but are used only in special cases. He is convinced that many of them, such as the Wassermann test for syphilis and some exact tests for tuberculosis should always be in the routine examination. In addition to the ordinary urine examination the test of kidney function should be employed, as it is one of the most important in estimating the vital resistance of the patients before operation. In bone lesions the test for Bence-Jones bodies is usually neglected. The test for pancreatic function is not yet conclusive and the test for diacetic acid and acetone should be a routine procedure both before and after operation. A complete blood-count should seldom be neglected. The x-ray findings before operation and those of the operation itself should be brought together, and the pathologist should know the clinical symptoms as well as the surgeon. Lack of mutual knowledge in these respects is bad. Other omissions are mentioned, and Bloodgood says the majority of mistakes in diagnosis are due not to poverty of means, but to neglect or ignorance of well established clinical and laboratory tests. The question is, shall the people force the profession, or shall the profession educate itself to meet the added responsibility caused by our increased knowledge of the conditions and processes of disease. He is confident that the added responsibility of the surgeon will force on him not only improved methods of diagnosis and operative treatment, but also of anesthesia and technic. The best educated surgeons in his opinion are those that have observed most the work of others, for each surgeon has his points of excellence in diagnosis or treatment. Reading is valuable but visiting surgical clinics is more so. Bloodgood goes over in detail a number of surgical conditions in which questions arise bearing on the points he makes in this article, and gives evidence showing that the surgeon's responsibilities are greater when he is called on to treat surgical diseases in their early stages.

BONE TRANSPLANTATION.

Murphy says the practical application of bone transplantation is to the following conditions:

To correct deformities resulting from defects of development, as aplasic extremital bones—radius, ulna, humerus, tibia, fibula, and femur and congenital saddlenose, aplasis mandible, etc.

To reproduce union in ununited fractures.

To replace bone removed by destructive infections, osteomyelitis, tuberculosis, lues, etc.

To restore or supplant fragments dislodged by fractures, as the head of the humerus, head of the femur, shaft of tibia.

To replace bone removed for non-malignant neoplasms, cysts, myeloma, osteitis fibrosa, etc.

To replace bone removed for encapsulated malignant disease, as giant-cell and chondral sarcoma, etc.—*Medical Times.*

PITUITRIN IN SURGICAL SHOCK.

Hill (*Boston Med. and Surg. Journ.,* May, 1913) has used pituitrin successfully in 800 abdominal operations. In only two or three cases was there a subsequent condition of heart exhaustion, possibly due to over-stimulation; this disappeared when pituitrin was stopped and other stimulant treatment substituted. His hospital patients are treated thus: 15 minims of pituitrin are given hypodermically before the patient leaves the operating room, usually before closure of the abdominal wound. After recovery from the anaesthetic, the head of the bed is raised 15 in.; enteroclysis is used, the glass nozzle having two or more openings; 15 minims of pituitrin are given hypodermically every three hours for four doses; ice-caps are applied to the abdomen; sips of hot water and hot tea are given, but no cracked ice or cold water for the first twelve hours; morphine one-sixth grain, and physostigmin one-seventy-fifth grain are given hypodermically for pain or restlessness, to be repeated in three hours if needed; if the blood pressure be below normal pituitrin is continued, and hypodermics or camphorated oil are added, 2 grains every three hours; if blood pressure be high, pituitrin must be stopped; catheterization every eight hours only, if necessary; before the first action of the bowels, water, tea, coffee, orange juice, meat juice, and broths are allowed; after first action, milk and soft diet. Some other points are mentioned by Hill. He finds, as other surgeons have found, that pituitrin is very useful in eliminating gas from the intestine, and in increasing peristalsis.—*British Med. Jour.*

REMARKS ON TREATMENT OF BRAIN TUMOR.

Charles A. Ballance (*Lancet*) holds that brain tumor should be regarded in much the same light as any other tumor, particularly when it is malignant, except that destruction of considerable areas of brain tissue leads to more permanent and disastrous results than similar injury to neighboring tissues elsewhere in the body. Early diagnosis is the prime essential for the welfare of the patient. One important difference does exist between infiltrating tumors of the brain and infiltrating tumors in other locations due to the fact that we cannot remove large areas of the brain substance as we can remove a breast or a uterus, and we are therefore limited in our treatment in such cases to the operation of decompression. This operation should be done before the symptoms have become more than barely sufficient to enable a probable diagnosis to be made; certainly one should never wait for pressure symptoms in the eye to develop, for these symptoms are associated with lasting damage to vision. Ballance contends that the great value of radical decompression is not appreciated as it should be by the practitioner. It has given more relief from pain and distress than almost any operation in the entire realm of surgery. It should be undertaken in the very earliest stage of the disease, and the decompression should be adequate in extent. It is insufficient to do a boneflap operation; a large area of bone on one or both sides should be removed completely. It is equally essential to open the dura and relieve tension. A cerebral hernia is the result desired. This is usually the only operation which can be resorted to in cases of malignant disease of the brain.—*N. Y. Med. Jour.*

GYNÆCOLOGY

UNDER THE CHARGE OF S. M. HAY, M.D., C.M., GYNAECOLOGIST TO THE TORONTO WESTERN HOSPITAL.

DIAGNOSIS AND TREATMENT OF ECLAMPSIA.

Kosmak (*Bulletin of the Lying-in Hospital, New York,* June, 1913) urges the importance of the prophylaxis of eclampsia by the recognition of any signs which usher in the prodromal stages. Headaches, slight nausea, dizziness, or visual disturbances slight enough to be considered by the patient as probably digestive in origin, are significant when occurring during the last two months of pregnancy, and proper treatment will usually cut them short temporarily, though they

are very likely to recur. When, however, a convulsive seizure, or a state of coma, occurs during pregnancy the condition is usually due to the presence of a toxic state rather than to epilepsy, cerebral irritation, or uraemia, though these latter must not be forgotten. The previous history will assist in diagnosing the first two, but as a matter of practical experience if a patient in pregnancy or labour has a convulsive seizure without previous warnign it may be assumed that one has to deal with a toxaemia of pregnancy. Albumin is usually present, but it may not appear in some cases for a considerable time after the convulsion, and a toxaemia may be present without convulsions. As a routine treatment in a case of a toxaemia of pregnancy in the later months accompanied by convulsions, ¼ grain of morphine should be immediately injected, after which preliminary cathartics and enemata may be administered, together with the abstraction of blood in suitable cases. The indiscriminate use of chloroform is deprecated because of its dangerous effects from late chloroform poisoning. Hot packs at intervals every two or three hours will be useful to promote elimination from the skin, and dilution of the blood stream may be brought about by colonic irrigation with not less than 4 gallons of normal sugar solution at 115 degrees F., provided that there is no considerable amount of œdema. After irrigation 30 to 40 grains of chloral may be given per rectum. If not in labour, or not more than seven or eight months advanced in pregnancy, conservative mainly sedative and eliminatory measures should be adopted before resorting to any radical operative interference. When, however, labour is imminent, especially at term, it should be completed rapidly by rupture of the membranes, manual dilatation of the cervix, version, or forceps, unless there is some indication for more radical operative delivery. The occurrence of one convulsion only should not be accepted as the criterion for radical surgical interference.—*British Medical Journal.*

DIAGNOSIS OF CANCER OF THE UTERUS.

R. B. Hall, Cincinnati (*Journal A. M. A.,* October 4), emphasizes the importance of educating the laity as well as the family physician to notice the early signs of uterine cancer. It is desirable to consider the cancer of the cervix and of the body of the uterus separately. He says: "The early symptoms of cancer of the cervix which I have observ d in the order of their importance, are: (1) a watery discharge; (2) an irritable bladder; (3) a little irregular bleeding, and (4) a disagreeable odor. In reference to the watery discharge, I do not mean the ordinary leukorrheal discharge that women frequently complain of, but

a watery discharge not unlike beef brine in its appearance. It may not be very profuse, but enough to stain the linen brownish. It irritates the vulva. It is more or less constant for a varying period of from five or six weeks to three or four months, before the patient considers herself ill. This is a most important symptom." Slight irregular bleeding should be immediately investigated, but it is not especially an early symptom. Hemorrhage and pain come late in the disease. Cancer of the cervix should be differentiated early from erosion, laceration with inflammation, cystic degeneration, tuberculosis ulcer, and chancre. If malignant disease is present a small nodule is to be found. As regards the first three, no examination will be complete without microscopic scrutiny. Tuberculous ulcer and chancre are rare and there should be no very great difficulty in their diagnosis. The early diagnosis of cancer of the body of the uterus is also much neglected. Its approach is insidious and, unlike cervical cancer, it may occur in the maiden as well as in the woman who has borne children. It is comparatively rare before the menopause and the earliest symptom, Hall says, is a watery discharge with slight irregular hemorrhage gradually increasing, and pruritus. Pain comes on later in the disease when the uterus has become enlarged by the new growth and is endeavoring to rid itself of the foreign body. The diagnosis of cancer of the body of the uterus is not at all difficult with the clinical history. The physician will find the uterus enlarged, freely movable, and more sensitive than normal, with no perceptible disease of the cervix. In advanced cases a probe gently introduced may show a depth of three inches or more and cause a discharge of bright red blood. If the first examination does not give a positive diagnosis the uterus should be curetted under an anaesthetic and microscopic examination of the scrapings made. Only rarely has Hall had to make a secondary curetting.

CANCER OF UTERINE CERVIX.

Emil Ries, Chicago (*Journal A. M. A.*, October 4), says that in the beginning when there is no cancer in the body except at the original focus we ought theoretically at least to cure by its removal *en bloc*. In the later stages much wider limits must be given and we must include in the cancer block all the lymph vessels between the original focus and the metastatic foci in adjoining lymph-nodes, We have to consider risks here of leaving behind infected portions or wandering cancer cells in still uninvolved lymph channels. The observation of these at a distance, however, i.e., of carcinoma in transit, is practically unknown. The improvement in results of operations for cancer in any

part of the body can be shown to depend on the continuous rather than the discontinuous dissection out of the morbid growth. Where the dissection is discontinuous the results are most unsatisfactory. The operation for cancer of the cervix involves greater risks than that of cancer of some other portions of the body, that of the breast, for example. The accessory risks from anaesthetic or infection carried in from the outside are the same in carcinoma of the cervix as in other cancer operations. The gravest accessory risk is that of sepsis from the infected primary tumor by the much-dreaded tearing of the cervix or infection of the field from crumbling lymph-nodes, which, in addition to the carcinoma, have been loaded with virulent germs from the primary focus. Ries has little doubt that virulent germs may lurk not only in suppurating lymph-nodes, but in lymph-vessels in their neighborhood as well. The enlargement of the block to the limits indicated by Ries in 1895 has greatly improved the remote results, but at the cost of increased inherent risks from hemorrhage, injury to ureters, and large wounds in the connective tissue. The dissection of the ureters out of the broad ligaments unavoidably breaks the rule of continuous dissection, and this is another point of weakness. It could be eliminated if we could include the ureters in the carcinomatous block and resect them every time, but there is a limit to the tolerance of the patient and also of the operator. The operation for cervical cancer is the most extensive he knows of in surgery and there is no means of which he is aware by which we can determine the limits of this tolerance in individual cases.

A CONTRIBUTION TO THE STUDY OF ECLAMPSIA AS A TOXEMIA OF POSSIBLE MAMMARY ORIGIN.

Wilson's paper is suggested by the recent papers occurring in regard to "Parturient Paresis of Cattle," the clinical and pathological picture of which shows an astonishing similarity to human eclampsia.

Wilson, reviewing this disease of cattle, defines it as a disorder of the cow occurring only in association with pregnancy, labor or the puerperium, usually in the first few days post partum . It is characterized clinically by paresis of the limbs, convulsive attacks, prolonged coma, by albuminuria, tube casts, glycosuria, and changes in the nitrogen partition in the urine. Pathologically it shows hemorrhages in the liver and occasionally in the central nervous system and by parenchymatous degeneration of the liver, kidneys and to a much less degree of the heart and other viscera. The predisposing factors in the etiology of this condition are all associated with the greatest development of milk production. Multiparity plays an important part, the disease being very rare in primiparae. It apparently occurs after easy normal

births, rarely after difficult ones or where there was much hemorrhage.

Milk and colostrum from cows sick with this disease Healy and Kastle injected intraperitoneally into guinea-pigs and these pigs invariably became sick and died in a few days with characteristic lesions.

But little pathological research has been done by the veterinaries to clear up this condition. Delmer reports ten of his own in which he says the most constant and serious lesions were those of the liver. Invariably were found hemorrhagic extravasations under the liver capsule and into the gland substance. The kidneys show constant lesions.

Preceding the onset of the attack various prodromal symptoms appear; later there is considerable restlessness, twitching of the muscles, and the hind legs begin to appear weak. Coma follows, and is often preceded by convulsions.

Urinary findings show albumin to be present in the great majority of cases. Sugar is usually present. Nitrogen in the form of ammonia is increased. The amount is decreased and casts are present.

Prior to the so-called new treatment by injection of the udder with air the maternal mortality was from 50-70% but now the mortality of this disease is only 1%.

The treatment now given is to distend the udder with air. The degree of distension results in a diminution in its circulation and a consequent decrease in the supply of toxins going to the general circulation.

Wilson mentions the cases of eclampsia which have up to the present time been treated as a possible mammary toxemia. Up to the present time Wilson has found twenty-nine cases so treated, including the case of Selheim's, where the breasts were amputated. The other case of breast amputation reported by Herrarschneider simply shows how much malpractice the patient may survive.

Wilson ends his article with the following points for consideration:

1. Parturient paresis is a disease of the parturient cow, and undoubtedly due to the circulation in the blood of a powerful toxin having its origin in some perversion of the mammary secretion.

2. The mammary theory of eclampsia is based almost entirely on the practically complete pathological and clinical similarity of the two diseases.

3. There are, however, the following important differences:

(a) Parturient paresis rarely attacks primiparous animals, while primiparity markedly predisposes to eclampsia.

(b Parturient paresis occurs almost entirely post-partum; eclampsia shows no special predilection for this period.

(c) Parturient paresis increases in frequency in direct ratio with

increased power in milk production. No such finding has been noted in eclampsia.

(d Sugar is an almost constant ingredient of the urine of parturient paresis but is rarely found in eclamptic urine.

4. The mammary theory of eclampsia is probably merely specious.

5. An investigation should include

(a) A careful pathological and clinical study of parturient paresis.

(b) The determination of the toxic or non toxic character of the colostrum from eclamptics.

(c) A tentative trial in properly selected cases of eclampsia of the treatment by air or oxygen injection of the breasts.—*Boston Medical and Surgical Journal.*

"SPONTANEOUS" RECOVERY FROM CANCER OF THE UTERUS.

Hess (*Deut. med. Woch.*, May 29th, 1913) records the case of a married woman, aged 41, who in 1909 complained of anorexia and loss of weight and strength. There had been irregular haemorrhage from the vagina for three months, and latterly an offensive discharge. She suffered no pain, and there were neither vesical nor rectal symptoms. She had aborted twice, and had given birth to a child ten years earlier. An internal examination showed no abnormality, but, when the interior of the uterus was scraped, and a microscopic examination was made by Hansemann, an unmistakable adeno-carcinoma was found. The patient refused a radical operation, as it had failed on her sister who had died of cancer. No other treatment was adopted. When seen by the author four years later she felt and looked perfectly well, she had gained weight, and the haemorrhage and discharge from the vagina had ceased. The consistency and mobility of the uterus were normal. The parametrium was healthy, and the only demonstrable abnormality was a long cervix. Discussing this case, the author is convinced of the existence of a malignant growth in 1909, but he is doubtful as to its subsequent fate. From a clinical point of view recovery was complete; but it is not certain that the disease had disappeared in a pathological, anatomical sense. It is possible that it was latent, as may be the case in tuberculosis. He also suggests that the exploratory curetting of the uterus removed all or part of the growth, the vitality of the remainder in the latter case being effectively destroyed. Another possibility is the destruction of the growth by the hyperaemia which the curetting induced. At all events it has often been noticed that permanent re-

coveries have been effected after operations accompanied by great loss of blood. The author holds that many factors may have been responsible for this recovery, and he adds that the therapeutic success in this case of exploratory curetting is far too rare to warrant its adoption as a substitute for a radical operation. This view is also emphasized by D. V. Hansemann (ibid.), who, while admitting that the recovery in this case was probably permanent and due to the curetting, considers the possibility of thus removing a malignant growth of the interior of the uterus is most remote. He has, however, seen a similar case. The patient was a girl, aged 17, whose uterus was curetted for the purpose of diagnosis. Squamous epithelioma of the body of the uterus was found. This was therefore removed, but the microscopic examination of serial sections of the uterus, which was somewhat enlarged, showed not a single carcinomatous cell. The uterus was somewhat enlarged, but the mucosa which had not been removed by the curette was perfectly healthy. The microscopic examination of the muscles of the uterus was also negative. The exploratory curetting had therefore clearly eradicated the disease. He adds that a colleague has told him of another similar case, but he regards these three cases of recovery from cancer as exceedingly rare. As for the many cases recently recorded of spontaneous recovery from carcinoma and sarcoma he is very sceptical, for such growths may be latent in the body for as long as twenty-one years and may then grow actively. The only new growth to disappear altogether by itself is chorion-epithelioma, and even this is rare.—*British Medical Journal.*

LARYNGOLOGY

PERRY G. GOLDSMITH, LARYNGOLIST TO TORONTO GENERAL HOSPITAL

TONSILLOTOMY AND TONSILLECTOMY.

Dr. J. L. Goodale, Boston, has an article in the *Boston Med. and Surg. Jour.* of 2nd October, on "Indications for the Relative Values of Tonsillotomy and Tonsillectomy." His conclusions are thus summed up:

1. It has not been demonstrated that complete removal of the tonsils is followed by harmful effect upon the general system.

2. Tonsillotomy involves usually less trauma than does tonsillectomy, but in the latter the method of removal is of primary importance, a sharp dissection down to the tonsillar artery, with snaring of the vessels giving the least amount of inflammatory reaction.

3. Of the two operations, tonsillectomy shows a larger percentage of septic complications, due both to the greater trauma usually occasioned, and also the relatively larger number of septic conditions where of late years an operation is undertaken.

4. The relative frequency of post-operative hemorrhage is not definitely established, but in view of the available methods of treatment it is no longer a serious complication if dependent upon local causes.

5. While gross deformities of the parts involved are not likely to follow tonsillotomy, yet cicatricial occlusion of the lacunar orifices is frequent, and may lead to an intensification of the original chronic inflammation. Tonsillectomy in unskilled hands may be followed by marked and injurious distortion, but with good technic should have no other alteration than an approximation and occasionally a partial fusion of the pillars.

6. The indications for operation should be determined by the pathological changes of the tonsils, which are actually a detriment to the individual.

7. Simple hyperplasia, if obstructive or favoring catarrhal conditions, and if persistent, may be sufficiently treated by a tonsillotomy, especially in children.

8. The systemic ill effects of chronic tonsillitis may be increased by a tonsillotomy. Complete removal is here preferable to a partial one, although mild cases of chronic inflammation may be sufficiently relieved by appropriate treatment without excision.

PERSONAL AND NEWS ITEMS

Ontario.

The condition of Dr. W. H. Lowry, the well-known eye specialist of 102 College street, is so much improved that the authorities at the General Hospital stated that it is expected that he will soon be able to leave the institution and resume his practice. Dr. Lowry sustained injuries to his spine when he fell from a horse at the Niagara camp some months ago.

The secretary-treasurer of the Muskoka Free Hospital for Consumptives has received from the executors of the late Mr. Joseph Edward Westcott, hardware merchant, Ailsa Craig, $150 in full payment of a bequest under deceased's will.

The will of the late Dr. Frederick Fenton, of Toronto, disposes of an estate valued at $23,100.

The late Mrs. Dinisha Michael left to the Home for Incurables $1,000; the Sick Children's Hospital, $2,000 for the endowment of a William D. Michael Cot; the Muskoka Free Hospital for Consumptives, $300; the Toronto Hospital for Consumptives, $200; Home for Incurable Children, $500; the Methodist Hospital in Chenk Tu, China, $500.

Dr. Hastings, Medical Officer of Health for Toronto, was elected vice-president of the American Public Health Association, which met recently at Colorado Springs.

Thirty ladies, headed by Dr. Margaret Patterson and Mrs. A. M. Huestis, waited upon the Board of Control, Toronto, a short time ago to ask that a home be provided for feeble-minded women. Rev. Dr. W. H. Hincks and Rev. S. W. Dean accompanied the deputation. Mayor Hocken said that his sympathy was with them but that the co-operation of the Government probably would have to be sought. A conference between the Board and the deputation was arranged for a later date.

Dr. Charles Gandier, of Toronto, and Miss Constance Helen Christian, were married three weeks ago in Toronto.

A deputation of parties interested in the establishment of a hospital in the eastern portion of Toronto, waited on the Board of Control recently. They were asked to show what progress they had made as a justification for the city giving assistance in any way.

The splendid new Nurses' Home for the Brantford Hospital was opened on 19th September. Dr. Bruce Smith, Inspector of Hospitals, was present. There was a large and influential gathering of Brantford citizens.

The Industrial Home Commissioners of York have awarded the contract for the erection of a new Isolation Hospital, a short distance from the large central building at Newmarket. The contract was given to W. B. Graham, of Toronto. The new building will be of brick.

In Toronto during September there were 1,183 births, 635 marriages and 654 deaths. Scarlet fever caused 2, diphtheria 2, whooping cough 5, typhoid fever 9, and tuberculosis 26 deaths.

Most of the wells in Mimico are badly polluted, and the whole village is in need of a long-due cleaning up. This is the verdict of Dr. R. W. Bell, Provincial Inspector of Health, as a result of a visit to the village lately to investigate the typhoid epidemic there. Dr. Bell's examination satisfied him that stringent measures are necessary to prevent the spread of infection, and he will recommend that Dr. McClenehan, district officer of health, be sent to the village to make a more thorough search for the sources of infection, and take such mea-

sures as he considers necessary to have things cleaned up.

The Joint Ministerial Association and the Anglican Association at their regular meetings each passed resolutions approving of the work of the National Sanitarium Association, and endorsing the holding of Tuberculosis Sunday in the churches throughout the province on 30th November.

The following have been elected officers of the Walkerville General Hospital Association: President, Hiram H. Walker; Vice-President, Gordon N. McGregor; Treasurer, Major F. C. Robinson; Secretary, J. W. Coatesworth; Property Committee, W. E. Seagrave, A. L. Colby, J. H. Coburn, and Mrs. N. C. Ortved; Finance Committee, J. C. Robinson, G. N. McGregor, Mayor Revell, Mrs. W. M. Boomer, and W. E. Seagrave; House Committee, Mrs. Ortved, Mrs. Boomer, J. H. Coburn, and A. M. Colby.

Dr. Neil Colville, of Orono, has been appointed a magistrate for the village of Orono, Ontario.

The Medical College in Kingston has been merged financially with the Queen's University. This is the last step in complete affiliation.

The Western Medical College, in London, has definitely affiliated with the Western University.

On the appearance of two cases of smallpox in Hamilton, it was found that the Isolation Hospital was in a very dilapidated condition and really not fit for use.

Three hundred medical students did their best a short time ago to disfigure each other's appearance in a strenuous hustle. The freshmen, being in the majority, did their full share of the hustling.

J. P. O'Connor, Hamilton, has written the Board of Health, threatening an action for $869 for damages because he was quarantined at his place of business and not sent to the Isolation Hospital.

The second annual banquet of the St. John's Ambulance Brigade was held recently in the Waldorf Hotel, Hamilton. The work is carried on under the Canadian Westinghouse Mission.

Dr. Frederick W. Marlow, F.R.C.S., has been appointed Associate Professor in Gynaecology in the Medical Faculty of Toronto University.

Dr. J. W. S. McCullough, secretary of the Provincial Board of Health, left on 18th October for Washington to lay before the International Waterways Commission the report on the pollution of boundary waters, based on the investigation carried on during the past summer. Dr. McCullough will be joined in Washington by Dr. Morris McLaughlin, who has had charge of the work on the American side, and together they will present their findings to the international body.

Quebec.

The course of instruction at Laval University for those wishing the diploma of hygienic expert, commences in January.

The Hotel Dieu, Quebec, cared for 2,780 patients last year, of whom 611 were medical, 1,587 surgical, and 582 ophthalmic. The death rate was 4.4 per cent.

The City of Quebec has been considering for some time the advisability of establishing a civic hospital.

Dr. W. A. G. Bauld is acting as superintendent of the Montreal Maternity Hospital, in place of Dr. McEachern, who went to British Columbia as superintendent of the Vancouver Hospital.

Three new wings are being added to the Children's Memorial Hospital, in Montreal. This will double the accommodation and provide an infants' ward.

Hugh Watson, of Maisonville, has left in his will a bequest of $5,000 each to a number of Montreal hospitals and charities.

Dr. Eugene Puquet, Conservative member for L'Islet, reports that he was robbed of $70 in cash, $160 in cheques and his member's certificate, which is equivalent to a railway pass.

Maritime Provinces.

Nastin has been employed successfully in the treatment of leprosy in the institution at Tracadia, N.B. One patient received twenty and the other sixty injections. These cases have been examined since their discharge and they appear to remain well.

Dr. A. F. Miller, of the Kentville Sanatorium, has been invited to assist in the selection of a site and the erection of a tuberculosis sanatorium for Prince Edward Island, the money for which has been provided by the Hon. Charles Dalton. This institution will be a great boon to the Island.

New Brunswick has now recognized British registration, and so there is reciprocity between Britain and that Province in the practice of medicine.

The meeting of the Nova Scotia Medical Board of Education has decided to raise the standard of preliminary education, especially in the languages. It also decided to accept the certificate of those holding Dominion registration, whether by the ten-year proviso, or by examination. There were ten additions to the register of the Province and ten erasures by death. The number of practitioners is now 671, of

whom 440 live in Nova Scotia. The treasurer reported a balance on hand of $1,470. Dr. John Stewart was again elected president, and Dr. Lindsay, registrar.

Western Provinces.

The Third Annual Congress of the Canadian Public Health Association was held in Regina during the latter week in September. It was well attended by those interested in health questions from all over the Dominion. The papers and discussions were of a most useful character.

Dr. J. W. MacNeil, of Hanley, has been appointed medical superintendent of the Provincial Asylum at Battleford, Sask.

The Dominion Government has let the contract for a school and hospital for the Indians at The Pas, at a cost of $76,000.

The hospital at Camrose, Alta., is going to make an addition to its accommodation, at a cost of $5,000.

Dr. Glen Campbell has been elected president of the British Columbia Medical Association.

The Sisters of St. Joseph are going to erect a hospital at Comox.

From Abroad.

Professor Emil C. Hansen, of Copenhagen, has left a sum of money to award a gold medal and about 2,000 kroner every two or three years to the author of the best work on microbiology. Information may be obtained from Prof. Sorensen, of Carlsberg Laboratory, Copenhagen.

In the Orange River Colony there is proposed legislation that debars members of the medical profession being on the managing boards of hospitals. It will also provide that all deficits in these institutions shall be met by the Government paying two-thirds and the municipality one-third of it.

The widow of the late Dr. Edward Adrian Wilson, who died along with Scott in the Antarctic expedition, has been awarded $8,500 out of the Mansion fund.

Legislation has been introduced in the Paris Chamber of Deputies requiring that chauffeurs must have their eyes tested, and furnish a certificate of normal vision and hearing.

With the object of advancing surgical practice, clubs have been formed for the purpose of visiting surgical clinics and seeing the technic and methods of operating of noted surgeons.

Dr. Edwin Candee Baldwin, State Bacteriologist at Quarantine, and one of the leading authorities in the United States on contagious diseases, died at his home at Fort Wadsworth, Staten Island, a few days ago. He was 48 years old.

A public bequest amounting to £750,000 has been made by the will of Sir William Dunn. This includes £2,000 to the institute of medical science of the University of London, and £2,000 to the London School of Economics.

Madame Curie, the discoverer of radium, who attended the meetings of the British Association at Birmingham, spent much of her time in England with Dr. Rutherford, Professor of Physics, at Liverpool University. This is explained by the fact that Dr. Rutherford has been carrying on certain experiments in radio-activity from which Madame Curie expects great things. In this connection she said recently: "Dr. Rutherford is the one man living who promises to confer some inestimable boon on mankind as the result of my discovery of radium. I would advise England to watch him. His work in radio-activity has surprised me. Great developments are likely to transpire shortly to which the discovery of radium was only preliminary."

Professor His, of Berlin, who was asked to accept the appointment of director of the medical clinic, at Vienna, as successor of Professor von Noorden, has declined.

In Germany from 1896 to 1908, there were treated in the state hospitals and sanatoria, 200,000 persons. In 1908 alone there were 36,133 treated. All these came under the working of the National Health Insurance Act, at a cost of $2,350,000. The Act has now been in operation for 25 years.

On 12th September there was a death near San Francisco, in the town of Martinez, and on the 23rd of September a death was reported at Yokohama, both being due to bubonic plague.

Come cases of poisoning have occurred in Norway from eating American apples that had been sprayed with Paris green, after the fruit began to form.

There are about 700 lepers at Molokai, and 100 in the hospital at Honolulu. These patients are mostly Hawaiians.

The Public Health Committee of Greenock, Scotland, has purchased 25 acres of land on which it is intended to erect a number of Swiss cottages or chalets, for the isolation and treatment of consumptive patients.

The Warren Tri-ennial Prize of $500 has been awarded to Prof. Arrigo Visentini, of Pavia, Italy, for his essay on "The Functions of the Pancreas and Its Relationship to the Causation of Diabetes."

A Jewish hospital is to be built in Boston, as a cost of $125,000.

In the State of New York from 1st January to 7th November, 1912, there were 297 definite cases of poliomyelitis.

Judging by recent reports a good deal is being done for the sanitation of many cities and districts in India. Cawnpore, Allahabad, Rangoon, Assam are receiving special attention.

The great University of Vienna appears to be losing prestige. Professors Strumpele and Von Noorden resigned some time ago from the medical faculty, and Professors Abderhaden and His have refused chairs.

Prof. Poncet, the noted surgeon, of Lyons, who saw President Carnot shot, and made an effort to arrest the hæmorrhage from the torn liver, has recently died at the age of 67.

Reginald Heber Fitz, of Boston, died on 30th September, after an operation on his stomach. He graduated from Harvard in arts in 1864 and in medicine in 1868. He filled several chairs in Harvard, namely, Pathological Anatomy, Pathology, and Practice of Medicine. He retired in 1908.

The suffragettes of London paid a visit to Harley Street a short time ago, and smashed the windows of many of the doctors' offices .This action was due to the order of the Home Secretary, Reginald McKenna, to resume forced feeding in the event of hunger strikes.

Sir Frederick Treves claims that radium is of undoubted value in the treatment of hardening of the arteries. The emaciations of the element is instilled into pure water, which is used as any ordinary mineral water would be.

OBITUARY

JERROLD ROSS WADDELL.

Dr. Waddell, of St. Catharines, died there in his 29th year. He graduated from McGill in 1907. For some time he practised in New Mexico, and also did research work in the Montreal General Hospital.

A. B. CARSCALLEN .

Dr. Carscallen graduated from Victoria College in 1875. He practised in Enterprise, Ontario, for 27 years, where he died of paralysis.

NELSON MULLOY.

Dr. Mulloy died in Preston, Ontario, where he had practised for

many years. He was 72 years of age, and studied in Rolph Medical College. He graduated from Victoria in 1866.

GEORGE K. BUTLER.

Dr. Butler, of London, England, died recently in Halifax. He was a son of M. Butler, of Yarmouth, and a graduate of McGill. He was 62 years of age.

IVAN ANNETT.

The death of Dr. Ivan Annett occurred at Victoria Hospital, London, on 5th October, following a serious operation for which he was brought from Windsor. He had been practising only six months at Windsor, having been house surgeon at St. Joseph's Hospital previous to that. He was in his twenty-fourth year, and was graduated two years ago from Western University. Dr. Annett's home was in Brooke township, his parents being Mr. and Mrs. Walter Annett.

JAMES BAUGH.

Death came with startling suddenness on 18th October to Dr. James Baugh at his home, 409 King Street East, Hamilton. Deceased, who was in his 64th year, had just returned home. He had started to read a newspaper when Mrs. Baugh heard him gasp. She spoke to him and, receiving no reply, called Dr. E. B. O'Reilly. The latter responded immediately, but Dr. Baugh was dead when he arrived. Deceased was in excellent health until about two years ago, since which time his heart has occasioned him some concern. Dr. Baugh was a native of Shropshire, Eng., and for some years after coming to Canada was engaged in railway work with the Great Western Railway. Thirty years ago he graduated from Trinity Medical College, Toronto, as the medallist of his class, and prior to coming to Hamilton 25 years ago he practised his profession in London, Waterdown and Galt. He was an honorary member of St. George's Society, and was also identified with a number of friendly societies. A widow and one son, Edward, of Montreal ,and one daughter, Mrs. Tebb, of Toronto, survive.

BOOK REVIEWS

FINDLEY'S TEXT-BOOK OF GYNECOLOGY.

A Treatise on the Diseases of Women. For Students and Practitioners. By Palmer Findley, B.S., M.D., Professor of Gynecology, College of Medicine, State University of Nebraska; Gynecologist to the Clarkson Memorial Hospital and Douglas County Hospital; Fellow of the American Gynecological Society; Fellow of the American Association of Obstetricians and Gynecologists; Fellow of the Chicago Gynecological Society. Octavo, 954 pages, illustrated with 632 engravings in the text and 38 plates in colors and monochrome. Cloth, $6.00 net. Philadelphia and New York: Lea & Febiger, 1913.

This new work offers a complete exposition of the subject of diseases of women, and brings out many points of view not generally emphasized in books on gynecology. A very important feature is the full discussion given to conservative methods of treatment, such as douches, baths, exercise, massage, diet, dress and tampons, which rarely receive the consideration which their importance merits, either in books or in actual practice. Separate chapters are devoted to Non-operative Methods of Treatment, Hygiene and Dress, Preparation of Patient for Operation, Preparation of Operating Room, Field of Operation and Surgical Utensils, Choice of Anesthetics, Diet, Post-operative Complications and Care of Patients after Operation. Diagnosis has been placed on an anatomical basis, for it is pre-eminently true of diseases of women that the making of a diagnosis is in large part the recognition of the morbid anatomy. Another valuable feature is the presentation of certain subjects which may be considered as on the borderline between gynecology and obstetrics, for the separation of these two subjects is an illogical one. The book is very rich in its pictorial department, for in the text there are 632 engravings, besides 38 plates, many of which are colored. They have been inserted wherever it was possible to make clearer the point under discussion.

This very fine volume is largely the outgrowth of the author's work on Diagnosis of Diseases of Women. In the arrangement of the rich amount of information in the present volume the author has displayed very great skill. The volume is large, but not because of any useless repetitions. The matter of the work is well expressed. Diagnosis, operations and treatment are equally clearly and interestingly stated. The publishers have done their part very well.

OTOLOGY.

A Manual of Otology. By Gorham Bacon, A.B., M.D., Professor of Otology in the College of Physicians and Surgeons, Columbia University, New York; Aural Surgeon, New York Eye and Ear Infirmary; Consulting Otologist, Roosevelt Hospital, Presbyterian Hospital, Hospital for Ruptured and Crippled, Minturn Hospital, New York. Sixth edition, revised and enlarged, with 164 illustrations and 12 plates. New York and Philadelphia: Lea & Febiger, 1913. Price,

This very handsome and convenient volume takes up the medical

and surgical diseases of the ear that are likely to come the way of the general practitioner. The descriptions of what ought to be done is lucid and brief. It is pre-eminently a work for the student who has much other reading to do enough work on the ear to make a good pass at his examinations and enter into his professional career well equipped for cases of this specialty that may fall into his hands for treatment. This medium-sized book gives the reader a clear expression of our knowledge up to the present in anatomy, physiology, diagnosis, and medical and surgical treatment. The author has chosen the illustrations carefully and they do much towards elucidating the text. There is nothing that would suit the general practitioner and student better than this book. It is brief, clear, scientific, modern, and, yet, comprehensive. We wish to congratulate the author on the success of his efforts to keep this work in the first rank of those treating of the same subject. It merits words of strong commendation.

DUDLEY'S GYNECOLOGY.

The Principles and Practice of Gynecology. For Students and Practitioners. By E. C. Dudley, A.M., M.D., Professor of Gynecology in the Northwestern University Medical School, Chicago. Sixth edition, thoroughly revised. Octavo, 795 pages, with 439 illustrations, of which many are in colors, and 24 full-page plates. Cloth, $5.00 net. New York and Philadelphia: Lea & Febiger, publishers, 1913.

Dudley is unquestionably one of the strongest books on gynecology in the English language. Ever since its original publication, fifteen years ago, it has occupied the foremost place among American works on this subject, and the appearance of this new edition serves to strengthen it in this leading position. Its splendid record is evidenced in the complete originality of its elaborate engravings and plates, a feature possible in very few publications. Each one is designed to illustrate some special point in the text, and numerous series of drawings explain operative procedures as they take place, step by step. In its pictorial department the work stands unrivaled. The arrangement of the book is another excellent feature. The subjects are presented in pathological and etiological sequence, so that the reader will have constantly before him the physiological and pathological unity of the reproductive system, and will see the correlation of like morbid processes to each other. The text shows that it has had thorough revision throughout. Several chapters have been entirely re-written, and many new illustrations added. In its latest issue this standard work is well equipped for a new period of usefulness as the recognized authority.

One edition follows another of this very excellent work. Dr. Dud-

ley now needs no introduction, as his book has been so long before the medical profession and has been so extensively read that it might be said that every doctor knows "Dudley." To this volume one can always turn for sound advice. This is not all. There is nothing that is omitted. "There is nothing which he has not touched, and there is nothing which he has touched which he has not adorned."

MINOR SURGERY AND BANDAGING.

Minor and Operative Surgery, including Bandaging. By Henry R. Wharton, M.D., Surgeon to the Presbyterian Hospital, and the Children's Hospital; Consulting Surgeon to St. Christopher's Hospital, the Bryn Mawr Hospital, and Gerrard College; Fellow of the American Surgical Association. Eighth edition, with 570 illustrations. New York and Philadelphia: Lea & Febiger, edition, thoroughly revised and enlarged, with 570 illustrations. New York and Philadelphia: Lea & Febiger, 1913.

This well-known book follows the plan of former editions. The subjects covered are Bandaging, Minor Surgery, Asepsis and Antisepsis, Fractures, Dislocations, Operations, Amputations, Excisions, Resections, and Special Operations. It is quite interesting to observe how much ground an experienced author can cover in a volume of medium size by knowing how to select and how to condense. The author possesses both of these qualities in a very high degree. In this book there is no padding. It contains nothing that could be omitted without distinct loss. We have had the pleasure on former occasions of reviewing previous editions, and we have pleasure in again performing this task, and noting the progress and changes that tend to make it a still more useful book. It is a book that will find many readers, and each reader will become a friend. The publishers are also entitled to a full measure of recognition in issuing the book from time to time in such attractive form.

PROGRESSIVE MEDICINE.

A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., and Leighton F. Appleman, M.D. September, 1913. New York and Philadelphia: Lea & Febiger. Price, $6.00 per year.

William Ewart, M.D., F.R.C.P., takes the diseases of thorax and its viscera; William S. Gottheil, M.D., writes on Dermatology and Syphilis; Edward P. Davis takes charge of the section on Obstetrics; and W. G. Spiller, M.D., reviews the recent work on Nervous Diseases. These authors are as competent as they are well known. This is an excellent number in an excellent series.

LONG SAULT RAPIDS.

Commission of Conservation, Canada, Committee on Waters and Water Powers on St. Lawrence River. An enquiry into the constitutional and other aspects of the project to develop power therefrom. By Arthur V. White, M.E. Printed by the Mortimer Company, Ottawa, 1913.

The very important question of granting rights to companies to use the waters of the St. Lawrence for the developing of power is fully examined in this volume. It is shown that the United States Government has ownership in the land under the river for a certain distance and grant monopoly rights to a certain company. The use of the waters in this way may prove harmful to navigation. The volume is a very interesting and valuable one.

MISCELLANEOUS MEDICAL NEWS

ONTARIO MEDICAL ASSOCIATION.

Abstracts of minutes of annual meeting of the Ontario Medical Association, held in London, June 26th, 1913.

The President, Dr. C. F. McGillvray, occupied the chair. Communications were read by the secretary, Dr. F. Arnold Clarkson, (1) from the Huron Medical Society asking that steps be taken to federate all the county societies with the Provincial Association. On motion of Dr. Bingham, seconded by Dr. Mullin, the following committee was appointed to bring in a report at next meeting: President, Vice-president, Secretary, and Drs. Moore, Wallace and Moorehouse (London.) (2) From the National Sanitarium concerning the action of the Ontario Medical Association at its meeting.

Secretary, Ontario Medical Association,
Toronto.

Dear Sir.—Your letter of 28th May, forwarding copy of resolution of the Ontario Medical Association, has been duly received and considered by The Board of the National Sanitarium Association, and I am instructed to write as follows:

The Board feels that the action taken by the Medical Association is altogether unusual, and the Board does not believe that any incident or occurrence at the Toronto General Hospital, St. Michael's, the Isolation, or any other hospital occupying a similar position, has heretofore received the attention of the Medical Association.

The subject of the resolution, if at all a proper one to be considered by the Medical Association should, in the opinion of the Board, have

been impartially investigated before they undertook to pass judgment upon it.

Our Board had no notice of the resolution proposed by Dr. McPhedram, and no proper opportunity to submit evidence.

Our Board do not at present deem it necessary to go into details of the subject matter of the resolution but may briefly refer to the following:

Dr. Caulfield took exception to the publication of an abstract from his Official Report of February 23rd, 1912, to the trustees, and made that the principal ground for tendering his resignation, to take effect in six months' time.

In view of the character of his letter, and for other important reasons, it was decided by the Board to terminate his engagement forthwith, and to pay him a sum equivalent to six months' salary.

The Board, through its secretary, closed the laboratory and placed it in charge of the Physician-in-Chief.

So far as his work in the laboratory was concerned, the only request Dr. Caulfield made on leaving was that everything should be left undisturbed for four days. Not only was this done, but for a period of two weeks nothing was disturbed, the motor being allowed to run and the gas kept burning.

The Physician-in-Chief then considered it necessary for the safety of all the inmates of the Hospital, that the growing tubercular material in the basement be sterilized. Through some misunderstanding which the Board exceedingly regrets, tubes containing cultures, in the Upper Laboratory, were similarly treated.

Our Board feels, and your Association will appreciate that the loss of these cultures is a most serious matter for the Sanitarium Association.

The trustees paid Dr. Caulfield a sum equivalent to six months' salary, notwithstanding the fact that after a service of only some three years in their employ, he had previously been given leave of absence for six months, to pursue his studies in Europe, his full salary being paid during that period.

The Trustees undertook the further burden of paying the salary of a substitute to carry on the work during Dr. Caulfield's absence.

The Trustees have further shown their interest and sympathy in connection with laboratory work in a very practical way—$1,500 having been contributed from amongst their number towards Dr. Caulfield's salary, so that it might not be a burden upon the Institution.

The Trustees believe the real nature and value of the deliverance of the Medical Association will be better understood and appreciated when the facts are made clear, and especially when it becomes known

that the member who proposed the resolution, which reflected unfairly on the National Sanitarium Association, afterwards accepted the Chairmanship of the Committee appointed to report upon his own resolution, and that he some six months ago had a serious difference with the Board regarding his proposed appointment as Consultant-Physician to the Muskoka Hospitals of the National Sanitarium Association.

I am, yours faithfully,

(Sgd.) R. DUNBAR,
Sec.-Treas.

P.S.—A copy of the above letter is being forwarded to the Secretary of the Association, and one to the Chairman of the Committee, who will doubtless bring it before the other members of the Committee, and before the Medical Association.

R. D.

Dr. Adam Wright gave notice of motion *re* separation of the Ontario Medical Association from the Canadian Medical Association. This, with the other notices of motion of the previous meeting, was laid over until next year.

The next meeting will be in Toronto in May, 1914.

BEQUESTS OF JAMES ROSS, OF MONTREAL.

Public bequests in the will of the late James Ross, President of the Dominion Coal Company, amounting to nearly half a million dollars, have been made public. The list includes:

Montreal Art Association	$100,000
McGill University	100,000
Royal Victoria Hospital	50,000
Montreal General Hospital	50,000
Montreal Maternity Hospital	50,000
Alexandria Hospital	25,000
Ross Memorial Hospital	25,000

The estate is estimated at between twelve and fifteen millions. Before his death Mr. Ross gave the Montreal Art Association more than $100,000, and $50,000 to McGill University and $25,000 to the Alexandria Hospital. He also founded the Ross Memorial Hospital in Lindsay.

RESULTS IN MEDICAL EXAMINATIONS AT UNIVERSITY OF TORONTO.

The following are the results of the medical examinations at the

University of Toronto. A star against a name indicates failure to pass in the subject named in brackets, and students so starred must take supplementary examinations in the subjects in which they failed to pass.

Students who are starred must submit to Supplementary Examination in one or more subjects.

FOURTH EXAMINATION.

Five years' course—Pass—*S. S. Ball (pathology), A. F. Bastedo, R. J. W. Brooke, H. H. Burnham, R. Coutts, *J. Cassels (pathology), H. Clarke, R. E. Coleman, F. G. Davis, R. E. Hartry, R. E. Horkins, H. B. Jeffs, J. E. Knox, H. S. Martin, K. G. McKenzie, J. F. McQuay, *O. S. Ross (pathology), *W. F. Shaw (obstetrics), W. E. Sinclair, R. P. Smith, *R. S. Smith (clin. medicine), *E. H. Stephens (clin. medicine, pathology, path. chemistry, obstetrics), W. L. Tyrer, *D. R. Wark (pathology).

FOURTH EXAMINATION.

Four years' course—Pass—W. D. Bruce, *H. H. Colwell (pathology), J. G. Zuna, R. St. E. Murray, W. H. Ochs, *N. E. H. Sproule (pathology), F. W. Weston.

FIFTH EXAMINATION.

Pass—T. C. Clark, R. Home, C. F. Night, J. G. Morgan, W. B. Seaton.

THIRD EXAMINATION.

Pass—H. R. Adams, R. Ball, J. A. Bean, N. E. Betzner, W. R. Campbell, *E. J. Carson (pharmacology, clin. medicine, path. chemistry), E. B. Clouse, R. D. Cowan, T. H. Crews, J. G. Cunningham, J. Daly, L. O. Fallis, *V. P. Fleming (pharmacology), W. S. Foote, P. V. Graham, T. E. P. Gocher, J. B. Hanley, H. C. P. Hazelwood, M. R. Helliwell, J. R. Howitt, H. G. Joyce, W. T. Kennedy, F. R. Kirkham, H. C. Martin, W. M. Martyn, H. K. Mitchell, A. McCallum, *A. J. McIntosh (pharmacology, pathology), *C. MacKay (anatomy, pathology), J. McKeown, *D. S. MacLennan (clin. surgery, pathology), D. McMullen, G. W. MacNeil, E. A. McQuade, W. R. Newman, P. M. O'Sullivan, R. Paul, *E. C. Pugh (clin. medicine, clin. surgery), *E. H. Stephen (clin. medicine, path. chemistry), E. Z. Stirrett, *A. Thomson (pharmacology, pathology), S. Y. Walsh, *P. A. Williams (physiology).

FIRST EXAMINATION.

Pass—W. B. Barnes, J. C. S. Battley, Miss M. B. Becker, W. Delahunt, W. I. Henderson, B. S. Loney, W. R. Lane, J. A. Mathers, C. V. Mills, F. M. Mackenzie, W. S. McKeough, B. Rapp, W. J. Scott, M.

H. Soules, W. E. L. Sparks, E. L. Stoll, *W. A. Thomson (physics), K. P. White, D. G. Wilson.

SECOND EXAMINATION.

Pass—W. A. Blake, I. Cohen, Miss L. W. Cringan, D. Davis, A. W. Gregory, *A. J. Ireland (bacteriology), A. D. Lapp, W. E. Martin, A. R. MacDonald, E. A. McQuade, H C. Nash, J. R. Rehill.

CONTAGIOUS DISEASES IN ONTARIO.

The records of the Provincial Board of Health do not show any serious epidemics. The number of cases of typhoid last month is 39 more than in same month last year, with four more deaths. The record for the month speaks for itself.

	1913.		1912.	
Disease	Cases.	Deaths.	Cases.	Deaths.
Smallpox	3	0	4	0
Scarlet Fever	98	8	97	6
Diphtheria	112	12	118	14
Measles	29	1	80	3
Whooping Cough	38	8	109	16
Typhoid Fever	338	27	299	31
Tuberculosis	94	67	111	60
Infantile Paralysis	5	2	12	6
Cerebro Spinal Meningitis	5	3	4	4
	722	128	834	140

Only about 60 per cent. of the deaths from tuberculosis are reported by local boards of health.

MANY CHANGES MADE IN GENERAL HOSPITAL STAFF.

Dr. J. T. Fotheringham was appointed to succeed Dr. W. P. Caven, as head of the medical service of the Toronto General Hospital at the monthly meeting of the Board of Governors, at which several changes in the staff were made.

Dr. William Goldie will take charge of the medical department in the out-patient clinic department; Dr. Goldwin Howland, the neurological section; Dr. King Smith was given charge of skin diseases; Drs. Cooper, Cole, John Mitchell, F. W. Rolph, J. A. Oille, A. E. Trow, and W. A. Williams, temporary assistants.

Dr. Norman Shenstone, senior assistant, was appointed to succeed Clarence Starr, who is now surgeon at the Hospital for Sick Children. Dr. Stanley Ryerson was made senior surgical assistant ,Dr. Beverley Z. Milner, assistant in surgical department of out-patient clinic; Dr. Thomas Hanley, junior anaesthetist, and a registrar to succeed Dr. D. E. Robertson; Dr. George Royce, senior assistant, eye and ear department; Drs. W. E. McKelvey, H. G. McBone, R. S. Pentecost, A. E. Campbell and E. Boyd, temporary assistants eye and ear department; Dr. C. R. Dixon consultant in electrical department.

TORONTO'S HEALTH.

September is considered by the officials of the Health Department to have been a very satisfactory month in Toronto from the hygienic standpoint. The cases of reported disease in the city, as compared with the previous month, were:

Disease.	Sept.	Aug.
Diphtheria	58	47
Scarlet fever	35	37
Typhoid	133	66
Measles	13	28
Smallpox	0	0
Tuberculosis	46	48
Chickenpox	8	2
Whooping cough	6	2
Erysipelas	1	2
Meningitis	1	1
Poliomyelitis	1	0

With regard to the large number of typhoid cases—133—it is stated that more than half of these originated outside the city.

HOSPITAL AIDS MEETING.

St. Thomas, Berlin, Elmira, Waterloo, Hespeler, Ingersoll, Brantford, Galt and Woodstock were represented at the fifth annual meeting of the United Hospital Aids of Western Ontario, held in Stratford on 8th October. Following a visit to the local hospital and dinner at the City Hall, the delegates were welcomed by Mrs. John Forbes, Mrs. Livingston, of Brantford, responding. Mrs. Chambers, of Woodstock, retiring president, gave an address.

Ways and means of raising hospital funds were discussed. Wood-

stock was chosen for the next meeting, and officers were elected as follows: Hon. President, Mrs. Watrous, Brantford; President, Mrs. (Dr.) Rankin, Stratford; Secretary-Treasurer, Mrs. Thos. Ballantyne, Stratford.

NEW COTS IN THE CHILDREN'S HOSPITAL.

There is no more worthy charity than that which cares for the sick little ones of the Province of Ontario. There is no charity which appeals more strongly to the people, for its good work is known from one end of the Province to the other.

The general public aid this charity in many ways, and there is no better way than by the maintenance of a cot, in perpetuity or annually.

In the hospital, the new cots named in perpetuity by a payment of $2,000 each are as follows:

The Thomas Walmsley Cot, by bequest of the late Mr. Thomas Walmsley, Toronto.

The Rice Lewis Memorial Cot, by Mrs. Robert L. Gooderham, daughter of the late Mr. Rice Lewis.

The Charles S. Rumsey Cot, by Mrs. Charles S. Rumsey, St. Mary's Ont.

In the hospital, the new cots named annually by a payment of $100 each are as follows:

The S. J. Miller & Company Cot, by Messrs. S. J. Miller & Company, Toronto.

Bloor Street Baptist Men's Union Cot, by Men's Union Bible Class, Bloor Street Baptist Church, Toronto.

The Margaret Matilda Godson Cot, by Mr. Lionel Godson, Toronto.

At the Lakeside Home for Little Children, at the Lighthouse Point, Toronto Island, the cots named annually by a payment of $25 each are:

The Harry and Grace Forward Cot, by Mrs. H. F. Forward, Belleville, Ont.; the Brussels Continuation and Public School Cot, by school children, Brussels, Ont.; the Atwood Chapter Cot, by R.A.C. No. 149, Atwood; Employees, General Mines, Limited, Cot, by employees of General Mines, Limited, Haileybury, Ont.; the South Middleton Epworth League Cot, by the South Middleton Epworth League.

The St. Andrew's Windsor Cot, supported by Adult Bible Class, Windsor, Ont.

The Sunshine Cot, supported by Sunshine Club, Inglewood, Ont.

The Mrs. Annie MacKay Cot, bequest of Mrs. Annie MacKay, Toronto.

DOMINION MEDICAL EXAMINATIONS.

Dr. R. W. Powell, registrar, announces the results of the recent examinations in Montreal under the Canada Medical Act.

The following condidates have been successful in passing the recent examination by the Medical Council of Canada and are thereby entitled to be enrolled on the medical register of Canada:

L. A. Aubin, Rawdon, Quebec; I. F. Belanger, Quebec; I. A. Bergerson, St. Antoine de Tilly, Quebec; C. R. Bourne, Montreal; C. E. Brown, London, Ont.; I. Cumming, Ottawa, Ont.; A. P. Davies, Hull, Quebec; A. S. Duncan, London, Ont.; J. B. Gallagher, Bath, N.B.; I. F. Grant, Montreal; E. H. Gray, Montreal; W. G. Hepburn, Montreal; L. G. Howle, Bras d'Apic, Quebec; W. C. Hutton, Montreal; J. J. Irvine, Montreal; J. A. H. Joyal, Montreal; R. F. Kelso, Montreal; J. H. G. Lacasse, St. Genevieve de Pierre Ford, Quebec; J. L. Lamy, St. Flore, Quebec; A. Leger, Montreal; A. F. Macaulay, London, Ont.; F. H. Mackay, Montreal; T. W. F. MacKnight, Tamworth, Ont.; L. W. MacNutt, Ottawa, Ont.; A. A. Martin, Pierce, Neb.; A. J. McCalla, St. Catharines, Ont.; W. G. Morris, Vancouver; R. L. Morrison, Barrie, Ont.; P. Kase, Verdun, Quebec; I. G. Phillips, Cornwall, Ont.; W. S. Pickup, Fort William, Ont.; I. L. Poirier, Craigmont, Ont.; L. K. Poyntz, Tavistock, Ont.; A. L. Raymond, Williamstown, Ont.; K. M. B. Simon, Toronto; A. Stewart, Ottawa; T. W. Sutherland, Montreal; F. S. Swain, Montreal; A. T. Turner, Bowden, Alta.; E. J. O. Walcott, Montreal; L. W. Walkey, Hanover, Ont.; T. J. Wall, Kansas City, Mo.; W. G. Wallace, Metcalfe, Ont.; H. C. Workman, Kingston, Ont.

Of the 71 candidates who presented themselves for this, the first examination under the Canada Medical Act, the above 44 proved equal to the occasion. Eight were referred back to the council, having failed in not more than two subjects, and nineteen were rejected.

DEFECTIVES IN CANADA.

A bulletin just issued by the Census and Statistics Office gives the result of enumeration of the defective classes in Canada—blind, deaf and dumb, insane and idiotic—in the census of 1911.

The number of blind was 3,238; of deaf and dumb, 4,584; of insane, 14,702; and of idiotic, 5,387; making a total of defectives of 28,611, of which 15,530 were males and 13,081 were females.

From 1901 to 1911 the population increased by 34.17 per cent.; for the same period the total number of infirm increased from 26,148 to 28,611, an increase of 9.42 per cent. in the decade.

In Canada in 1 11 there were 100 males to every 74 females incapacitated through blindness.

In 1901 there were 6,165 blind persons per 10,000 of population. In 1911 the proportion had fallen to 4,493 per 10,000.

Deaf and dumb persons constituted 11,608 per 10,000 of population in 1901. The proportion in 1911 was 6.361.

In every 10,000 of the population of 1901 there were 31.014 insane and idiotic persons. The proportion fell to 28.847 in the year 1911.

There has been an increase in actual numbers and in proportion of the population of unsound mind in every Province excepting New Brunswick. The highest proportion is shown by Prince Edward Island, with 41.717 per 10,000 of the population, followed by Ontario with 34.998, Nova Scotia with 33.615, and Quebec with 32.443 per 10,000.

MEDICAL PREPARATIONS, ETC.

ACUTE PROSTATITIS: SANMETTO.

In the treatment of acute prostatitis salicylic acid internally in five-grain doses, and sanmetto in teaspoonful doses tends to diminish the source of infection, reduce the existing inflammation, and encourage resolution. The sanmetto being a mild, soothing resolvent diuretic also tends to allay the suffering of patient. If the urine is acid citrate of potassium in ten-grain doses will aid in relieving irritation and tenesmus. As further measures for reducing inflammation, light diet, absolute rest in bed, free movement of the bowels, and local application of heat by means of sitz baths, or hot water bag, should be enjoined. If the sanmetto is kept up urinary retention is not likely to supervene, unless there is a previously hypertrophied prostate; in that case the bladder should be emptied by a soft catheter at intervals, still keeping up the use of sanmetto. The prostate should not be massaged during the inflammatory state, but during the period of resolution massage will aid the process.

A SYSTEMIC BOOST.

It is safe to say that the average physician is called upon to prescribe a tonic more frequently than any one other form of medication, unless it be a cathartic. Patients who are patients solely because they are tired, "run down" and generally debilitated, are constant visitors at the physician's office. Such individuals need something that will

boost them up to their normal point of resistance and then hold them there; in other words, not a mere temporary stimulation, with secondary depression, but a permanent help to the revitalization of the blood and a general reconstruction. Pepto-Mangan (Gude) is not only prompt in action as an encourager of appetite and better spirits, but is also distinctly efficient as a blood builder and systemic reconstituent. It is pleasant, non-irritant, free from constipating effect and does not stain the teeth. It is thus a general constitutional tonic of positive service in all conditions of general devitalization.

THE "CITY" ANEMIC.

The hard hum-drum city life, especially of those whose days are spent indoors, in offices, bending over desks, ledgers, and school books, is almost certain, sooner or later, to leave its traces upon the man, woman or child thus unfortunately situated. General sluggishness of metabolism, due to indoor confinement in a vitiated atmosphere, and lack of exercise, is followed by failing appetite and later by degenerative blood changes of anemic nature. While Pepto-Mangan (Gude) cannot, of course, remedy the cause of the anemia and general devitalization, it almost always assists materially in overcoming the anemic blood state, increases appetite and acts as a real and general reconstructive. As Pepto-Mangan (Gude) is free from irritant effect upon digestion, it is readily borne and quickly absorbed and assimilated, and as it is non-astringent it does not cause or increase constipation.

PREVENTION OF POSTERIOR URETHRITIS.

It is said that the salicylate of sodium, though of comparatively little value in the inflammation of the anterior urethra, exerts a beneficial effect in posterior urethritis. Under its influence the urine rapidly clears, and the acute distressing symptoms disappear. It is upon the theory that this drug renders the urine markedly acid, and thereby helps in preventing the extension of the inflammation to the bladder and the production of cystitis. Apart from the administration of salicylate of sodium, the treatment must also be directed to combating the prominent symptoms of acute posterior urethritis, vesical tenesmus, terminal hemorrhage, etc. Sanmetto should be given, and the use of the hot sitz bath prescribed. Should the distress be very great, small doses of morphine may be administered.