

Technical and Bibliographic Notes / Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for scanning. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of scanning are checked below.

L'Institut a numérisé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de numérisation sont indiqués ci-dessous.

- Coloured covers /
Couverture de couleur
- Covers damaged /
Couverture endommagée
- Covers restored and/or laminated /
Couverture restaurée et/ou pelliculée
- Cover title missing /
Le titre de couverture manque
- Coloured maps /
Cartes géographiques en couleur
- Coloured ink (i.e. other than blue or black) /
Encre de couleur (i.e. autre que bleue ou noire)
- Coloured plates and/or illustrations /
Planches et/ou illustrations en couleur
- Bound with other material /
Relié avec d'autres documents
- Only edition available /
Seule édition disponible
- Tight binding may cause shadows or distortion
along interior margin / La reliure serrée peut
causer de l'ombre ou de la distorsion le long de la
marge intérieure.
- Additional comments /
Commentaires supplémentaires:

Continuous pagination.

- Coloured pages / Pages de couleur
- Pages damaged / Pages endommagées
- Pages restored and/or laminated /
Pages restaurées et/ou pelliculées
- Pages discoloured, stained or foxed/
Pages décolorées, tachetées ou piquées
- Pages detached / Pages détachées
- Showthrough / Transparence
- Quality of print varies /
Qualité inégale de l'impression
- Includes supplementary materials /
Comprend du matériel supplémentaire
- Blank leaves added during restorations may
appear within the text. Whenever possible, these
have been omitted from scanning / Il se peut que
certaines pages blanches ajoutées lors d'une
restauration apparaissent dans le texte, mais,
lorsque cela était possible, ces pages n'ont pas
été numérisées.

THE
MONTREAL MEDICAL JOURNAL.

VOL. XVIII.

NOVEMBER, 1889.

No. 5.

Original Communications.

INTRODUCTORY ADDRESS

DELIVERED AT THE OPENING OF THE FIFTY-SEVENTH SESSION
OF THE MEDICAL FACULTY OF MCGILL UNIVERSITY,
OCTOBER 1ST, 1889.

BY R. L. MACDONNELL, B.A., M.D.,
Professor of Clinical Medicine.

At the beginning of a new session it has always been the custom in this college for the members of the Faculty to select one of their number to address words of welcome to the newcomers and to those who have already embarked upon their medical career. This year my turn has come. On such occasions it is customary for the lecturer to introduce himself with an apology for his general and special unworthiness, but it is not my intention to do anything of the kind. On the contrary, I think myself peculiarly well fitted to welcome and give advice to new students. Firstly because, not being yet stricken in years, though scarcely juvenile, I fancy I can still think and act as a young man and look upon the world from the standpoint of a medical student; and, secondly, because it has been my good fortune to have spent ten years of my professional life in daily companionship with students. And indeed it would be a strange thing if I did not, during that time, learn to know how students thought, how they lived and moved and had their being. It is for these reasons that I think my advice may be of some service to those who are about to begin the work of the 57th session.

It will be part of my object to show you that, although the course of studies laid out for you is at first sight difficult, yet that the means of overcoming the difficulties and obstacles of the road are within your reach, and that to the industrious student the journey to a degree is interesting and pleasant. There are long marches it is true, and sometimes temporary stoppages (generally overcome by slight supplemental effort), but the road lies through a pleasing country, with so much that is interesting by the wayside that the traveller arrives at his destination sooner than the length of time spent in the journey would lead him to expect.

This is the problem to be solved by your faculty. How to afford the best medical education possible in the short space of four years? Our endeavour is to turn out as well educated a practitioner as we can—a practitioner I say, that is one who can practise, a man able at once to earn his own living and to make himself useful in the community. I believe we do turn out a practitioner, in the true sense of the word. The McGill graduate enters upon his career with a fair experience of general medical and special work, and so far we have no good reason to be dissatisfied with the result of our four years' work. The question arises, though, ought we to be satisfied or ought we be constantly endeavouring to effect improvements in the course?

The main difficulty in our way is the limited period of time at our disposal, but this difficulty we could overcome were it not for the attempts to regulate our teaching undertaken by the various provincial licensing bodies.

You have, I dare say, read *Æsop*, and you remember how the frogs, dissatisfied with the existing state of practice in the somewhat malarious district in which they resided, fell to grumbling, and, after considerable deliberation, demanded of Jupiter that some firm legislation should regulate the affairs of the profession. The thunderer, accordingly, sent them a log which met with contempt and disrespect. Annoyed at their conduct, he sent them a provincial board, and matters soon assumed such a condition that the frogs bitterly regretted that they had not set well alone. And so with the Canadian medical profession.

Boards were established, at the instigation of the members of the profession themselves, by the provincial governments, with the good intention of regulating admission to practice and preventing quacks and charlatans from exercising their dangerous trade. So far so good. But the boards, like Jupiter's stork, were not satisfied. They have in some provinces assumed the rôle of educators, and dictate to teachers what they must teach and to learners what they must learn. They have injured the profession they were intended to protect, and they have hampered and impeded the progress of the medical schools. From their mischievous interference this school suffers to an extreme degree. In particular, the College of Physicians and Surgeons of Ontario imposes upon our students certain very vexatious regulations, and exacts of them pecuniary taxes, wholly out of proportion to the benefits they may ever expect to derive from becoming licentiates. It would seem that but two objects are aimed at by these regulations and impositions. Firstly, the establishment of a barrier to keep out of the field as many competitors as possible, the originators of the movement having affected an entrance before the fence was put up; and, secondly, to render it more and more inconvenient and uncomfortable for an Ontario student to seek his education out of his own province. Failure will attend both these objects, for the fittest will survive in the battle of life by the law of nature, and no legislation will ever enable those unsuited by natural abilities and defective education to take a front rank in the fight. The struggle for existence in the profession must be a fair one from the start, and those who cannot live by their own talents and energies, will seek in vain for any benefit from legislative aid.

The claim is made, on the other hand, that provincial boards exclude quacks and charlatans, and so protect the practitioner from dishonest competitors. As I write there lies before me a Montreal paper in which at a glance I see the open advertisement of three notorious charlatans. The Ontario Board is active enough as regards the honest practitioner, yet no one can say that irregular practice does not exist in that province.

The system of examining by boards for admission to practice .

is, in one instance, carried to a great length and to an absurd conclusion. The Province of British Columbia has secured the existence of a board. There are some fifty practitioners in that province (I counted 51 in the copy of the register for '87), and united they form the Medical Council of Physicians and Surgeons of British Columbia. "Now, we have got in, let us keep the others out," seems to be their motto. If they had contented themselves with examining diplomas and rejecting those that came from indifferent colleges, then, perhaps, a useful function would be fulfilled, but, as the law stands at present, there is not one of you who, after graduating, would not become liable to punishment if he dared to give advice in British Columbia. He would be obliged to pass before the members of the Council, or such of them as may be appointed for the purpose, a satisfactory examination touching his fitness and capacity to practice as a physician or surgeon. In other words, the Provincial Board of British Columbia would have to make it its duty to see for itself whether your teachers understood what they were about when they taught you, examined you and certified on your diploma that you were a fit and proper person to practise medicine.

Lastly, a money tax is exacted. The plea can be made by such boards that the public must be protected, and it would be unsafe to allow a legally qualified practitioner from another province to exercise his calling within their borders. But no one can defend the establishment of a money barrier. The \$100 tax can have no other object than to limit competition.

If we wish the Canadian profession to gain the respect of the medical world, we must use every effort to rid ourselves of this provincial littleness, this parochial policy. Medicine is medicine everywhere, and a legally qualified Canadian practitioner ought to be able to practice in any part of his own country.

Another charge I bring against the provincial boards is, that they impede the progress of medical education by compelling teachers and students to devote an excessive proportion of their time to the giving and attending of didactic lectures.

The days have long since gone by when didactic lectures

were regarded as forming the principal part of a medical education. A century ago medical students were apprenticed to practitioners, and everything they learnt was of a strictly practical character. Jenner was apprenticed to a country surgeon near Bristol, and Sir Astley Cooper began professional life, at the age of fifteen, as an apprentice at Yarmouth. In those days the didactic lecture served a useful purpose in supplementing the strictly practical instruction which the pupil received from his master. The school system gradually replaced the apprentice system, and made the student, we wont say scientific, but it made him a man of books and opinions, and cultivated his memory to the neglect of his powers of observation.

A double course of lectures in all the more important branches of study was thought to be necessary, and the number of lectures in each course was fixed at one hundred. Opinions have changed, and improved methods are beginning to prevail. It was found that lectures failed to replace practical instruction. The professor has now to give way to the teacher. Students were over-lectured and under-taught. Your faculty would wish to replace a large proportion of the didactic lectures by practical laboratory work and instructive demonstrations, but the boards will not let them. They exact the pound of flesh; they must have the one hundred lectures twice told.* For my part, I see no hope of a change until such time as the affairs of our profession are controlled by more enlightened men, and I look to the time when you all shall be graduates, and I confidently hope you will have the good sense to vote with the party in favor of letting the shoemaker stick to his last, and letting the teaching be managed by the teachers. With no immediate hope of a change, we try to do our best to mitigate the evil. Accordingly, a few years ago, a system of grading the course was introduced, first in the classes in clinical medicine and clinical surgery, and the plan has been extended to other courses.

The excessive time devoted to didactic lectures is the worst

* The Ontario Board have added to the course in anatomy fifty more lectures, bringing the number of didactic lectures to the ridiculous figure of 250 !!

feature in our Canadian system of medical education. There is no country in the world where so many lectures have to be attended. When your brain is weary with much listening, your fingers cramped with note taking, your ischial tuberosities worn away from much sitting, do not entertain hard feelings against the faculty, but remember the provincial boards.

And then when all is done and you stand before the world the possessor of a degree, the boards do not leave you. You have to make up your mind where you are to exercise your talents for the public good. As matters now stand you may register your degree and practise in any part or province of the Dominion—in Quebec, New Brunswick, Nova Scotia, Manitoba, anywhere except in Ontario and British Columbia. In a few months we shall be able to announce that reciprocal relations will be established between the College of Physicians and Surgeons of Quebec and the General Medical Council of Great Britain, as a result of which a McGill degree may be registered in Great Britain. Provided with such a guarantee of professional respectability, you may practice in any part of Her Majesty's dominion except the two provinces. In all the mighty empire of Great Britain there are only two provinces where the profession has attempted to protect itself from honest competition by calling in the aid of the legislature.

That examinations are uncertain we all know, but some are much more uncertain than others, and none so uncertain as those conducted by licensing bodies. The examiners are selected from the body of the profession, and no teacher is allowed to examine in the subject in which he teaches. It would seem as if unfitness were a special qualification. The would-be examiner must have shown no special aptitude for the subject. A professor of surgery, for instance, would be qualified for the post of examiner in chemistry, but he must not examine in surgery, because he knows too much about it. A good country practitioner, with a nice comfortable circle of midwifery patients, is, on this principle, made examiner in physiology or anatomy. And what are the results? The examination is a scramble, sometimes the weak succeed while the strong succumb. "Quis custodiet ipsos custodes." Who shall examine the examiners?

I have gone to some length to show how the licensing boards impede progress. Now it shall be my effort to prove to you that, in spite of all the obstacles thrown in our way, the number of our students has steadily increased with the imposition of fresh tests and annoying regulations.

We ourselves, during the last twelve years, have instituted changes in the curriculum which have made Jordan a very much harder road to travel than it was in my time, and it really seems that the more difficult the course the more there are who wish to take it. The class of 1875-6 was the smallest in the last twenty years. It was in the spring of 1877 that the first examination in practical anatomy was held. (The students have taken a very deep interest in it ever since.) Practical chemistry followed suit, and higher marks were awarded in these two important subjects. Practical courses in microscopy, histology and pathology were established about this period. Enlargement and extension of the course has taken place in other directions. The proportion of marks qualifying for a pass was considerably raised and the tests have been increased. New subjects have been added, such as hygiene and gynecology. The whole course has been made longer by the addition of one compulsory summer session. Four complete years must be spent at college, and there are exemptions in favor of no one. But in spite of these changes, and there were not a few who thought our numbers would diminish, there has been a steadily increasing influx of students.

McGill was the first medical college on this continent to demand four complete years of study. She was the first to abolish the exemption in favour of the student who had spent his year of so-called study with a doctor, and that in favor of the bachelor of arts. And in this movement McGill is only doing what she has always done. She is leading. She did fifty years ago what some colleges are beginning to do to-day. She began her career with a matriculation examination. In the whole of the United States there is not a single college whose entrance examination is more severe than that which has always been demanded here. Very few colleges have any at all. Harvard University, which, owing

to its great reputation and the extent of its endowment, can afford to introduce costly reform, insists on a matriculation examination of which Latin forms a part. Some other colleges, with less ambitious views in the matter of preliminary education, content themselves with the three R's; and, lastly, come the unholy army of colleges who demand no examination at all, and in its rank are included many so-called first-class colleges. Matriculation examinations do not pay. They cost too much. The popular voice in the great republic is against the severity shown in demanding that one who wishes to enter a learned profession should be made to prove that he can read and write.

Students always take an interest in examinations. You know that our standard has been raised. But bear in mind that the actual amount of work is really reduced because so much more practical teaching is done and so much more personal aid afforded to each student. Moreover, the examinations have been arranged with a view to encourage practical observation and to put a limit upon what is commonly called the cramming process.

In spite of all these changes, changes which have been attempted in some colleges and which have had to be abandoned, the class at McGill has steadily increased year by year. This is a thing of which every Canadian ought to be proud, that the greater the difficulties presented the greater the number of those who seek to overcome them.

Having pointed out the path that leads to a degree, and explained how difficult a struggle it is to get into the profession by that path, I am going now to tell you how this may be accomplished. Firstly, I address myself to those who are here for the first time. These are commonly called Freshmen. A silly notion prevails that there is some kind of opprobrium attached to the title Freshman. A Freshman is a fresh man. Observe the word man. It does not mean boy. A man must put away boyish things. He must think and act as a man. He must cease to depend upon others, act for and rely upon himself. Boys may be noisy, sing loudly in the streets and behave generally as boys, but men should not do such things.

There are members of other classes in the College who would like to make you believe that *fresh* means silly, idle, presumptuous, and a host of other bad things; but it means nothing of the kind. It means vigorous, active, intelligent, energetic. Freshman! you stand to-day in a position truly enviable, you have the world before you, and opportunities for study such as your fathers never possessed. See that you use them properly. The first year is the most important period in your professional career. It must not be spent in idle amusement. Be careful, then, how you form your habits, and be especially careful of the companionship you make. Friendships with senior students are of mutual advantage. The youngster derives help and support from the senior, and the senior in teaching his younger brother improves greatly his own knowledge. I would like to see the students here follow the example of their English brethren, and spend more of their time in asking each other questions and teaching one another.

Remember, Freshmen! that having once become medical students you must sustain the character of the school, and the reputation of the school is merely the sum of the reputations of each member of the school.

Do not be over-anxious about examinations. Any person of ordinary intelligence and common industry can pass. Don't deceive yourselves. There is no luck in examinations. The student who was plucked because his luck was bad was the man who provided himself with so little knowledge that an unexpected call upon his scanty store made him a bankrupt. There are a few students whose natural capabilities are such that the intellectual life is unsuited to them, but that number is very small. I believe that there are very few who cannot pass. And above all things, do not work with the idea that your only object in coming here is to pass examinations and get a degree. You are not so many cannons and your teachers are not gunners who ram home a charge of Anatomy, another of Physiology and Chemistry, and fire you off as a salute on convocation day.

The knowledge you gain here must be the nucleus of your

life studies, and, moreover, you must regard your studies as being undertaken not with the object of merely acquiring a store of facts, but as the means of training the powers of observation. "The habit of observation is the foundation of the art of medicine." And it is upon your own observations and experiences that you will have to depend, and not upon those of other people. Other people's experiences are like other people's clothes; they may keep off the cold, but they don't fit and are very unbecoming. All through life the primary subjects must be kept at your fingers ends. It is not an exaggeration to say that nearly all the errors in diagnosis commonly met with in practice can be traced to defective knowledge of anatomy and physiology. A good physiologist or a good anatomist does not necessarily make a good physician or a good surgeon, but no man can properly practice medicine without a sound working knowledge of the primary branches.

Do not be contented with a minimum of work, just enough to enable you to scrape through the examinations. In dealing out your share of work give good measure. Make it a rule to do always more than is asked. Don't stop working the minute the clock strikes. Remember the words George Eliot puts into the mouth of Adam Bede: "I hate to see a man's arms drop down as if he was shot before the clock's fairly struck, just as if he had never a bit of pride and delight in 's work. The very grindstone 'ill go on turning a bit after you loose it."

Use your text books more, and depend more upon them. Select a good one, and stick to it. Read over the subject of the lecture you have heard that day. Cultivate a spirit of enquiry. Think out the problems set before you, and try to find out the reason for everything. Do not be satisfied with what you hear your teachers say unless you perfectly understand what they mean. We are too apt to talk above the heads of our class, and a good deal of the subject matter of the lecture or demonstration is not quite taken in and understood. Always ask if you don't understand. We all like to have students point out to us their own difficulties, and thereby give a direction to our teaching.

Try to be careful, methodical, systematic. Make sure of one step before you take another. Give all your energies to facts and observations. Never mind the theories; they can take care of themselves. Waste no time. "Time is the stuff that life is made of." It is not the student who sits up late and burns most oil who succeeds best, any more than it is the person who eats most who becomes most healthy. Try to acquire the habit of utilizing odd moments. You cannot all take a prize, but you can all take a good degree.

Gentlemen! we begin our 57th session at a period in the history of the profession of unusual activity and progress, but with us in this college a period of sadness and mourning. This is the first introductory lecture for many a long year at which our late Dean is not present. Prof. Howard was in this room a year ago to welcome the new comer, but since our last meeting we have had to mourn his death.

It seems fit that I should speak of him to-day, but more in his relation to students than in his relation to the University and to the medical profession of Canada. I wish to point out to you how you may derive benefit from the example he set you. There is probably no student beginning his studies to-day who has before him greater difficulties to face than had our late Dean when his medical career began. He was a poor man. There were no powerful friends to advance his interests; there was nothing to depend upon but his own energy, his own perseverance and his wonderful capacity for hard work. His great love for his profession, and more particularly for the scientific part of it, showed itself in every day of his active life. His devotion to clinical studies made him a marked man in this University long before she honoured herself by granting him a degree. After his entry to practice his path was beset with many difficulties. The doors of the General Hospital were slow to open to him. He did not derive from that institution the fostering help it has afforded so many men who have since become eminent in the profession. The University herself at first overlooked his talents and energies, and he was not the first of his classmates to receive a teaching appointment. He had not

been long in the school before he gained that loving respect and admiration from the students which he retained to the last day of his life. In the faculty his strong personal influence was always exerted in favour of reform and improvement. In all his relations with the students Dr. Howard showed towards them a fatherly affection and interest. Valuable as was his time, manifold his engagements, no student ever failed to gain audience with him, and with audience sympathy and good counsel. Those of you who had the benefit of attending his last course of lectures will remember, as do all his old pupils, the kindness and forbearance, and the patience with which he spent often more than his lecture hour over again in answering questions and showing the pathological specimens in which he was so much interested, to the knot of eager students gathered about him. I can only say of him as a lecturer, what Baillie said of William Hunter: "No one ever possessed more enthusiasm for his art, more persevering industry, more acuteness of investigation, more perspicuity of expression, or, indeed, a greater share of natural eloquence. He excelled very much any lecturer whom I have ever heard in the clearness of his arrangement, the aptness of his illustration, and the elegance of his diction."

Whatever may be the fortunes of this college, whatever may be the success to which it shall attain, the period during which the reins of government were held by Dr. Howard, must always be regarded as one of progress and enlightenment. The rise of the school which I have attempted to demonstrate to you, is mainly the result of his energy and labour. Though older in years than any of his colleagues, Dr. Howard was as young as the youngest in his ideas of medical practice and of medical education. Advancing years brought with them no diminished vigour nor flagging interest in the welfare of the college he so dearly loved. He was ever ready to accept new ideas and to carry out the improvements which the advance of education from time to time demanded. The late years of his useful life were mainly devoted to the advancement of projects directly affecting the welfare of the Canadian medical student, the establishment of the Campbell Endowment Fund, and the organi-

zation of the Royal Victoria Hospital. By means of the revenue derived from the former we were enabled to build, equip and carry on the magnificent laboratories in which you will learn in a practical manner the rudiments of your profession. In a few years too, the student will study disease in a hospital which will reflect credit on the noble benefactors and on the country in which they live. For these great benefits the student is indebted firstly to the generosity of the benefactors, but such gifts were largely the outcome of the life work and energies of our late Dean.

The new session we begin in sorrow, but our sorrow must not weaken our efforts. Let the death of our leader stimulate us to unwonted energy. *Let us do what we would like him to see us doing.* Let us prove ourselves worthy pupils of Howard, and show the world that we can at least attempt to imitate the virtues of his character. Let us be as zealous, as honest, as upright, as conscientious as that noble example of all that constitutes the gentleman and the Christian who has been so recently taken from us.

VARICELLA.*

BY JAMES T. WHITTAKER, M.D., CINCINNATI.

Varicella or varicellæ, diminutive of varus, pimple, poek; chicken (French, *chiche*; Latin, *crier*, insignificant) pox; water poek, wind pox, variolæ notha, spuria, false pox, a trivial acute infection of childhood, distinguished by a long period of incubation, absence of prodromata, slight fever, a vesicular eruption, varied in size and short in duration, without complications or sequelæ. Chicken pox met its first description under the term *crystalli*, by the Italian anatomists, Ignessias, 1575 and Guido Guidi (Latin, *Vidus Vidius*, as in the Vidian canal), 1585, and received its present unfortunate name from Vogel, 1764. Fuller, 1730, and Heberden, 1767, made the first attempts to separate it from variola (varioid), with which it had been hitherto confounded, and

* Read at the meeting of the Canadian Medical Association. at Banff.

has been since by many authors (Hebra, Thompson) "with inconceivable persistence" (Thomas); a mistake which resulted in complete confusion regarding the nature of both affections, and in reproach and disrepute of vaccination in its early history.

The recognition of the fact that an attack of one secures future immunity from itself, but does not protect against the other, finally led to a distinct separation of the two diseases. Confirmation of this view was also obtained in the fact that vaccinia does not prevent varicella, nor varicella vaccinia. Czermak, after three failures in the ordinary way, succeeded in vaccinating a boy aged four, by introducing lymph into the interior of vesicles during an attack of varicella.

Varicella appears in sporadic and epidemic form, but epidemics never assume the range nor show the intervals of measles and smallpox. The disease does not die out entirely in large cities, but assumes something of an endemic proportion once or twice a year on the opening of schools and kindergartens. It is confined exclusively to childhood (exceptions by Heberden and Gregory) up to the age of twelve, and is rare after ten. The short-lived contagious principle, probably from the vesicles, is believed to be inhaled (*contagium halituosum*). Infants are never born with it.

Inoculation experiments fail oftener than succeed. Thus Hesse failed in 87, succeeded in causing a local eruption in 17 and a general eruption in nine cases. Steiner claims to have succeeded eight times in ten trials, but was unable to further propagate the disease from any case.

Tenholdt found in the contents of vesicles a micrococcus which, inoculated in man, produced light redness and swelling like that of spurious vaccinia, and in one case a vesicle smaller than a sudamen, the affection remaining local. Pfeiffer found in fresh vesicles of thirty cases, without exception, a parasite (proteid) showing an amoeboid stage, a cystic stage, spore formation, and, after the development of numerous spores, a return to the amoeboid stage. Inoculation with contents of vesicles showed, three times in five days, a localised, circumscribed varicellar exanthem, recurring scattered up to the 8th day. The parasite could not be cultivated upon any culture soil.

Incubation varies from eight to seventeen days.

Prodromata, in the forms of light malaise, occur only very exceptionally. The disease is announced by the eruption which shows itself in the form of spots of hyperæmia, in the centre of which appear, in the course of a few hours, distinct but slightly elevated vesicles, which attain their greatest circumference in the course of three to 24 hours. The vesicles contain a clear sticky serum, neutral or alkaline, never acid (as in sudamina) reaction, which fully distends the vesicle, and which exudes slowly, but not wholly, on puncture of the vesicle. The serum shows under a microscope a few pus cells which, when exceptionally present in greater quantity, may make the vesicle appear to resemble drops of wax. In lighter cases, without halo, the patient looks as if sprinkled with "drops of water" (Fagge).

The eruption shows itself first upon the neck and chest (face according to Thomas), to spread subsequently over the face and scalp, trunk and extremities, and shows itself always in successive crops, to the number of ten to fifty, or as many as 200 to 800 over the whole body, irregularly, never uniformly or at once.

Vesicles vary also in size, usually from a pin head to a pea, exceptionally from a dime even to a dollar. These large vesicles are, however, always lax, never full, as is the case in the blebs of burns, blisters and pemphigus. Distinct, isolate and irregular elsewhere, they may show aggregation like zoster upon the extremities, but are very rarely confluent anywhere. They are very superficial, lifting only the upper layers of the epidermis, and penetrate to the rete malpighi in only exceptional cases. Hence they but rarely show an umbilicus and seldom leave a scar.

The eruption may last two to five days when the residue dries to leave a light pigmentation, very exceptionally ulceration (Hesse), which gradually fades to leave no trace. Through premature rupture, air may enter a vesicle to produce the condition known as *v. ventosa*, *emphysematosa*, wind pock.

The eruption may also show itself on various mucosae, as in the eyes to produce conjunctivitis, keratitis; in the mouth and

palate to cause a stomatitis; more or less dysphagia, swelling of the cervical glands.

A slight rise of temperature, maximum, 102° (exceptionally 106° , Heberden) with associate symptoms of fever, headache, insomnia, anorexia, nausea, etc., attends or may attend the eruption, to continue with it two to three, exceptionally five, days. Defervescence is by crisis, without subsequent elevation or eruption. Very light cases may show no fever at all. Recurrence is possible but not probable.

Inasmuch as varicella was so long, and is often yet, mistaken for variola (varioid) the question of differential diagnosis assumes supreme importance. The diagnosis demands, first, a knowledge of the existence of either in the vicinity or community, and a definite history of the pre-existence or absence of either in the individual, together with the period of the last successful vaccination; second, the age of the patient, variola occurring at all ages, varicella being confined to childhood. Variola is preceded by prodromata, malaise, fever, headache, backache, sometimes initial rashes, and attended by a characteristic eruption on the third day. Varicella announces itself with its eruptions without prodromata.

Varicella appears first upon the neck and chest, or, if upon the face, irregularly over it, and irregularly over the body. Variola appears first upon the face, forehead, to extend over it regularly from above downward, thence to spread uniformly over the neck, chest, etc.

The superficial vesicles of varicella contain only serum, the deeper seated vesicles of variola, serum and, later, pus.

The eruption of variola is uniform in size, that of varicella varies greatly.

Varicella is very rarely confluent anywhere, and its vesicles are only exceptionally umbilicated. By the end of the third day spots of hyperæmia, fully developed vesicles and crusts may be perceived simultaneously and side by side in varicella, whereas the variations in the age of the eruption would be observed only at points distant from each other in variola.

Fever precedes by several days the eruption of variola to fall with its appearance; whereas fever occurs only with the eruption of varicella, to increase with its development. Variola shows in marked cases secondary fever, absent in varicella.

The mortality of varicella is practically *nil*, yet, inasmuch as complications, fatal hæmorrhages, catarrhal pneumonia, nephritis, has been recorded as coincidences or complications (Hutchinson), delicate children may be protected by removal from the area of infection, or isolation of patients insepar ate chambers.

Patients should remain indoors, if not in bed, during the existence of the eruption, and should not be permitted to return to school untill all signs of it have disappeared. Treatment is superfluous.

HÆMATOMA OF THE VULVA AND VAGINA.

By A. H. WRIGHT, M.D., TORONTO.

Read at the Meeting of the Canadian Medical Association at Banff, August, 1889.

Thrombus, or hæmatoma of the vulva and vagina, from statistics which I have been able to gather, occurred fifty times in 103,424 cases where records were kept with this point in view, or about once in every 2,070 labors. The mortality is high, according to the reports of Deneux, Winckel, Barker, Scanzoni and others, which show in the aggregate about 90 deaths in 400 cases, or 18.5 per cent.

The following are two cases which have come under my observation:—

CASE I.—*Hæmatoma of the Vagina.*

Mrs. S., aged 22, primipara, attended in labor, May 27th, of last year, by Dr. MacCallum of Toronto. After the head had reached the middle of the pelvis, a lump was detected in the left wall of the vagina, immediately below the head. At this time labor had been in progress about twelve hours and the uterine contractions had been unusually strong. Shortly after this a copious hæmorrhage commenced. A message was sent for me, and, having but a short distance to go, I arrived in a few minutes. The patient showed the ordinary indications of severe hæmorrhage. On examination I found the hæmorrhage still continuing from a rent in the vagina on the left side, extending towards the posterior wall. The serious bleeding was evidently arterial, and I was fortunately able to control it by pressure with the thumb inside the vagina and the forefinger

outside the vulva, using my right hand and leaving the left free. While I thus "held the fort," Dr. MacCallum had plenty of time to make the necessary arrangements for forceps delivery. After he had anæsthetized the patient, I applied the forceps very easily with my left hand, while I continued to control the bleeding, as I have described. I had found that the slightest relaxation of pressure allowed a recurrence of hæmorrhage, and the patient had already lost more blood than she could afford. I easily drew the head against the bleeding surface, when the substituted pressure completely controlled the hæmorrhage. The uterine contractions were still strong, and I removed the forceps, leaving the delivery to nature's efforts. No more chloroform was administered and the child was soon expelled, after which the hæmorrhage recurred, and I again controlled it by pressure. Dr. MacCallum expressed the placenta and the uterine contractions remained well contracted. I then introduced a suture rather deeply through the left labium, and also through the upper edge of the vaginal rent. On tying this it tore through the vaginal wall above, but fortunately appeared to have caught the bleeding vessel, as there was no return of serious hæmorrhage. I used two other sutures, but think they did little or no good. A pad and T bandage were applied. Dr. MacCallum afterwards took charge of the case, and changed the dressings frequently with ordinary antiseptic precautions. There was some suppuration with high temperature for two weeks, after which the patient made a fair though rather tedious recovery.

CASE II.—*Hæmatoma of the Vulva.*

A. S., married, aged 31; primipara; confined in the Toronto Burnside Lying-in Hospital, December 12th, by Dr. Thompson, the resident accoucheur. Labor protracted, duration 24 hours; membranes ruptured two hours before delivery; uterine contractions unusually strong, especially during last three or four hours; head pressed on perineum for nearly two hours. Forceps not used; took several doses of chloral; no other anæsthetic. There was a slight rupture of the perinæum, for which one catgut suture was introduced. Condition of vulva apparently normal, when the parts were washed and the antiseptic pad applied. Child weighed 8 pounds, Swelling in right labium first noticed by nurse about 22 hours after de-

livery, at 4 a.m., December 13. I received a message to go to hospital during the morning, but was unable to reach there before 2 p.m., about 30 hours after delivery. I found a large hæmatoma of right labium majus extending backwards to the gluteal region, and pressing inwards on the vagina. The skin over the swelling was very dark in color—almost black. A large slough was evidently imminent. I decided on immediate incision. After ether was administered, I made the incision about $2\frac{1}{2}$ to 3 inches long on inner side of labium, and removed clots amounting in the aggregate to the size of a child's head, leaving a very ragged, dark-looking surface within the cavity. I feared that a large portion of the skin and subcutaneous tissue had lost its vitality, and that considerable sloughing would occur. The cavity was washed out with a hot solution of mercury bichloride, 1 to 1,000. There was very little, or practically, no hemorrhage, and I therefore used no styptic, but introduced a plug of gauze dipped in the antiseptic solution and well dusted with iodoform, and applied a T bandage, leaving room for the lochial discharges to escape beside the dressings. I ordered the wound to be dressed in a similar manner every six hours, but directed that no force be used in introducing the gauze unless hæmorrhage occurred; and pads for lochial discharges to be changed every hour, at least until bedtime. On the following day I was surprised to find the cavity so much reduced in size—in fact quite insignificant when compared with the large opening which was left on the preceding day after the removal of the clots. Skin still dark colored, but there was less indication of sloughing. On the fourth day there was a healthy-looking granulating surface with scarcely any cavity. After this there was rapid progress, no sloughing occurred, there was no pus at any time, no rise of temperature, and the wound was completely healed on the 16th day, when the patient left the hospital.

These two cases are rather typical examples of the two most common varieties of hæmatoma of this region, caused by the rupture of vessels in the submucous tissue of the vagina or the subcutaneous tissue of the vulva. The vaginal thrombus may be formed at any point below the pelvic fascia, as happened in Case I., but in rare cases the bleeding may occur above the pelvic fascia, and the blood cannot then go towards

the surface, but is forced upwards between the pelvic diaphragm and the peritoneum, as high, or even higher than the kidneys. Death in such cases may occur with the ordinary signs of concealed hæmorrhage. In Case II. the thrombus appeared to be between the superficial and middle fascia of the perineum—probably the most usual site.

In referring to the frequency of this accident, according to the evidence at our disposal, I, of course, referred to the gross cases which in the past have been discoverable, or, more correctly, discovered. Strictly speaking, it is far from correct to say that vaginal or vulvar thrombus is formed only once in two thousand labors. We are told by those who have investigated the subject carefully in post mortem examinations, especially Barnes and Matthews Duncan, that small submucous extravasations of blood along the genital tract during parturition are very common, if not practically universal. The more serious lesions which attract attention differ probably in degree rather than in kind. In a general way we may say they are all caused by pressure. Among the more definite explanations which have been offered I know of none which I consider at all satisfactory. One would naturally suppose that varicose veins would at least predispose towards the formation of these thrombi; but such is not the fact, as the majority of authorities agree. Winckel, however, is among the minority who think that this condition of varicosity does undoubtedly predispose towards such accidents. In both of my cases the veins were, as far as could be ascertained, entirely normal.

There is a variety of these cases which is more clearly described by Matthews Duncan than any other author so far as I know, *i.e.*, vaginal submucous hæmatomata, generally, if not always, unrecognised, which are not absorbed, but subsequently suppurate, and form vaginal abscesses. At a meeting of the Obstetrical Society of London last month, Dr. Duncan related two cases of such abscesses, in which the finger could be introduced through a rounded opening of the vaginal mucous membrane into a cavity as big as a walnut. In the discussion which ensued, as reported in the *British Medical Journal*, various cases of vaginal abscesses were related which the speakers thought were of a similar nature. A number of these had resulted in death from septicæmia. It is quite likely

that such cases are not uncommon, but are generally unrecognized or imperfectly understood; and it is unnecessary for me to dilate on the vast importance of a correct diagnosis and proper appreciation of the condition when it exists.

The statistics to which I have referred indicate a mortality that is almost startling, but I think modern antisepsis will show much better results. The great value of antiseptic methods is well shown by the results of the treatment of the large cavity left on the removal of the vulvar thrombus. The wound was kept perfectly healthy by the antiseptic dressings, and the natural elasticity of the parts appeared to have a remarkable effect in rapidly reducing the size of the cavity. The wonderful changes which took place within three or four days, by which a great ugly-looking hole had almost completely disappeared, seemed to me simply marvellous.

The treatment will, of course, depend upon various circumstances—whether the hæmatoma is large or small, whether it appears before or after the completion of labor, etc. I will make no effort to enter into details, but may simply say that we will probably all agree, in a general way, to leave alone these blood tumors which are small, do not obstruct labor, do not threaten to cause sloughs, and do not suppurate, with the hope that they will be absorbed. On the other hand, when such a tumor prevents delivery, is likely to slough, or becomes an abscess, we should freely incise, empty the cavity, check hæmorrhage if it occur, and afterwards wash out regularly. In my case of vaginal thrombus I think I should have made no effort to introduce sutures after the hæmorrhage was stopped. I think it scarcely possible to get such coaptation as to hope for primary union, and it is probably better in such a case to leave the wound in such a shape that it can be easily and frequently cleansed. In the case of vulvar thrombus, I think that, under the circumstances, there can scarcely be any doubt as to the propriety of making an immediate and free incision when I first saw it.

A CLASSIFICATION AND NOMENCLATURE OF MINERAL SPRINGS.

By H. BEAUMONT SMALL, M.D., Ottawa, Ont.

Prepared for the meeting of the Canadian Medical Association at Banff, N.W.T.

It was my original intention to have prepared for this meeting a thorough and exhaustive work on the mineral springs of this country. In addition to a general review of the subject, I wished to prepare a handbook for the practitioner, in which would be found all information regarding the character of the water, how it compares with other waters, where situated, the sanitary state of its surroundings, hotel accommodation, facilities for using the waters, and such other points as are essential in the selection of a health resort. The task, however, was greater than I anticipated, and my work remains unfinished.

In the present paper I wish particularly to direct your attention to the classification of mineral waters, and shall glance at the geology and chemistry of the subject as far as is required to make clear the divisions.

Anyone who has had occasion to refer to the literature of the subject is aware of the meagreness of the information that is to be found there. We have nothing whatever bearing on the therapeutic value of Canadian springs, and such works as there are on the springs of the United States possess very little merit as scientific productions. All are very superficial, and the analyses furnished are, many of them, old and unreliable, in many instances the work of amateur chemists. Perhaps the best and most scientific work on this continent was that carried on by Professor Sterry Hunt, the result of which is to be found among his contributions in the Reports of the Geological Survey of Canada, 1863-66. He treats the subject from the chemist's point of view—giving the analysis of a large number of Canadian springs, and explaining the origin of all the constituents, in his well-known lucid and attractive style. Anyone desirous to continue this study, should not fail to become familiar with these essays.

The classification of mineral springs is much the same the world over, the divisions being based on the most marked

character of the water. The following will give some idea of the methods prevailing in the different countries as they are taken from standard works:—

TABLE I.

GERMAN.	FRENCH.	AMERICAN.
Alkaline	Sulphur.	Alkaline.
Glauber Salt.	Saline.	Saline.
Iron.	Bicarbonate.	Sulphur.
Salt.	Purgative.	Chalybeate.
Epsom Salt.	Ferruginous.	Purgative
		Calcic.
Earthy.		

All are purely arbitrary. The great difficulty is that in any of them a water containing soda salts with iron and sulphuretted hydrogen may be placed in any one of three classes—alkaline, iron, or sulphur—with perfect correctness. Another objection, and one which I think points to a very great defect in the classification, is that the name gives no indication of what the other constituents may be. When a chalybeate water is mentioned, we know it contains iron, but have no idea whether it contains neutral, alkaline or even acid salts. It is the same with sulphur waters, or the waters of any class.

In the classification I propose to overcome this difficulty, we form the three divisions according as the waters are neutral, alkaline or acid. No classes are provided for sulphur, iron, etc.; instead, when any of these constituents, which may be called "accidental," are present, the term will be used as a prefix, and we will then refer to waters as sulphuretted salines, sulphuretted alkalines, sulphuretted acids; or ferrated salines, ferrated alkalines or acids, as the case may be. The Banff springs are commonly known as *thermal sulphur* to the public, if we call it a *thermal sulphuretted alkaline water* it at once conveys an idea of its chemical character and therapeutic possibilities.

The advantage of this nomenclature must be apparent at once, and commend itself to members of our profession, not

only on account of its scientific accuracy, but also on account of its being both simple and serviceable.

The salts which these waters contain are not dissolved at haphazard from the soil of the locality at which they emerge. They are of much deeper origin, arising from geological formations of a definite chemical composition—their source as Prof. Hunt points out, is the oldest sedimentary rocks termed the "Silurian," which were deposited from the earliest known sea, and are very generally distributed throughout the whole world. The constituents of which these formations are composed were at one time in solution in the waters of this primeval sea; from which, as a result of chemical reactions, they were deposited as carbonates of lime and magnesia, silicate of soda, sulphates of lime, alumina, and other insoluble salts.

At a later period, owing to terrestrial disturbances, parts of this sea became land-locked, forming great inland seas, one of which occupied the extent of country that is now the valley of the Ottawa, St. Lawrence and Upper Lakes. The conditions for evaporation being favorable, these bodies of water gradually diminished, leaving beds of chlorides of soda, lime, magnesium, sulphates of the same bases, and bromides and iodides of soda and magnesium. Towards the end of this process the concentrated solution that remained resembled the "bittern" of modern salt works, and filled the basins and fissures of the sediments already formed.

Since that period other geological formations have been deposited, convulsions of nature have disturbed their relations, and cracks and fissures have occurred that reach from the surface to this deep saliniferous strata. Water from the surface slowly penetrates these depths, following the fissures and percolating rocks, and in time again reaches the surface, bearing in solution the salts which for so many ages have remained buried.

In this rapid geological sketch, what I wish to point out is, that it is evident there are two distinct sources from which these springs may arise; one a sediment of soluble saline matter, the other an older and more stable formation upon which water acts more slowly.

Class 1.—In the first instance the salts of the concentrated

sea water are dissolved at once by the water in its passage through the earth, the result being the simple saline waters, such as St. Catherine and Borthwick springs, or the stronger purgative waters, such as the (*Fredrichshall*). They are neutral in reaction, contain no carbonates, or only such small amounts as may be dissolved in their course to the surface. They are never strongly carbonated nor sulphuretted, and are rarely thermal.

Class 2.—From the second source the salts are the results of chemical reaction, as when a solution of carbonate of lime and magnesia comes in contact with a formation containing soda, carbonate of soda and magnesia is formed, the lime being deposited as an insoluble salt. In other instances carbonic acid gas, formed at great depths, may be held in solution by the water by which it acquires very decided solvent properties, and readily acts on the beds of soda, magnesium and lime. They are alkaline in reaction; they contain as the characteristic salts carbonates of soda and of the alkaline earths with lithia, silica, and sulphates of lime; they have no bromine or iodine; they contain varying amounts of carbonic acid gas; may be sulphuretted and thermal. The great number of our springs are an admixture of these two classes, as at Saratoga, Caledonia, &c.

Class 3.—Acid waters. Waters also rise to the surface which are strongly acid in reaction, due to the sulphuric acid which they contain; the salts they hold in solution are the sulphates of soda, and of alumina and iron. The acid is probably formed at a great depth by the influence of subterranean heat on sulphates, in the presence of an organic matter; or, under the same influences H_2S with water may produce the acid. In Canada a spring of this character occurs at Tuscarora, near Brantford, and another near Niagara.

All other ingredients commonly met with in mineral springs—iron, sulphuretted hydrogen, arsenic, carbonic acid gas, &c., &c.—are what may be termed accidental, they are not derived from any special geographical formation, they may or they may not be present in any one of three classes.

Iron is derived from the soil, in which it is very generally distributed, after the other salts had been obtained and the character of the water determined. It is rendered soluble by

organic matter and carbonic acid, except in the acid waters where it is a sulphate.

Sulphuretted hydrogen may be generated at great depths in the same way as sulphuric acid, or it may form more closely near the surface from the decomposition of sulphate of lime by organic matter, which reduces it to a sulphide, and this is decomposed by carbonic acid into carbonate of lime and H_2S .

The temperature of the water is due to terrestrial heat. All our thermal springs of any importance are in the Rocky Mountains. In Eastern Canada there are two or three, the temperature of which is several degrees above that of the locality; one at Chambly, the other at the acid spring at Tuscarora. These are distinctly thermal, but in so slight a degree as to be of no service.

As the springs of Europe, as well as those of this country, arise from the same geological formations, it follows that they are alike in both countries; that is, the salines in Canada have their analogues in Europe, so also with the other classes. The only waters we have not got are the purgative salines such as the "Fredrichshall." In every other class we have waters equal to any of the European Spas. The Banff waters have their counterpart in the waters of the French Pyrenees; a comparison of the two analyses will show them to be almost identical, not only in composition, but also in temperature. The waters of the United States are simply a continuation of those of this country. The most common in the east are the alkali-salines, a union of the first and second classes, examples of which are given in the accompanying table.

In this crude and hurried paper, I feel that I have not at all done justice to the subject which is of so much importance. I trust, however, that it will make clear the points I wish to raise, and it should sufficiently introduce the subject to elicit a discussion on all its phases, should no other paper treat on it more fully. What we want in this country is a proper scientific study of our springs, thorough analysis, not only of the solids, but also of the gases, a proper study of climatic influences, and, what is of the greatest im-

portance, a careful observation, on the part of physicians, of the results of courses of treatment.

One Pint.	SALINE.			ALKALINE.		ACID	Saratoga	Caledonia	Chambly
	St. Catherine	Friedrichshal.	Borthwick.	Banff.	Idaho	Tuscarora.			
Chloride Sodium.....	20.64	67.37	98.08	.09			50.05	46.93	7.12
" Potass:.....	2.30		1.30				1.	.21	.27
" Magn:.....	36.26	31.08	2.11						
" Calc:.....	148.58		1.83						
Sulphate Sodium.....		41.73		.28	3.67	.42			
" Magn:.....		39.55	2.45	1.03	2.34	1.29			
" Calc:.....	16.99	11.24	2.01	4.70	.43	6.20			
Carbonate Sodium.....				2.97	3.85		.94	1.93	9.01
" Mag:.....		3.53			.36		9.01	3.76	.65
" Calc:.....	.08	.11		1.30	1.19		12.41	.85	.30
Iron.....	.44				.52	3.09	.03		
Br. I.....	.07	.02	.35				1.08	1.33	
Alumina.....						3.74			
Sulphuric Acid.....						34.31			

Retrospect Department.

QUARTERLY RETROSPECT OF MEDICINE.

By R. L. MACDONNELL, M.D.,

Professor of Clinical Medicine in McGill University; Physician to Montreal General Hospital.

LIFE INSURANCE.

Within the last few years there has been a change of opinion regarding the import of certain conditions of the system and of certain chronic morbid processes resulting in decided modifications of the rules governing the selection of lives for assurance. An absolute rule was enforced that the presence of a heart murmur effectually excluded from all benefits, and so did the presence of albuminuria, even though unaccompanied by any other deviation from the normal condition of health. And while it is becoming acknowledged that albuminuria and chronic valvular affections may be consistent with a fair expectation of life, other points formerly regarded as being but of secondary importance are now looked upon as being very dangerous to life, and consequently damaging to the value of a life risk. These are intemperance, gout, obesity, and syphilis. In the following pages an abstract will be presented of some of the more recent addition to the literature of life insurance, in the hope that the practitioner may gain aid in managing the cases that come to him for examination.

The Presence of a Heart Murmur.—At the Brighton meeting of the British Medical Association in 1886, Sir Andrew Clark read a paper on "Cases in which disease of the valves of the heart had been known to exist for upwards of five years without causing serious symptoms." He noted 684 cases of valvular disease without symptoms, showing how many persons must be going about with heart disease and yet not suffering from it. Lesions of the heart produced in youth were noticed to be greatly recovered from, if development were not complete.

In the ensuing discussion, Dr. Gairdner, of Glasgow, stated that he had referred to this subject in print 25 years ago, and that there was a tendency to overrate the importance of mur-

murs, to pay too much attention to sound rather than the circumstances, and to take too serious a view of cardiac murmurs and disease generally. In summing up, Sir Andrew Clark said that considering a case for life insurance he weighed these facts—the time the mitral disease must have existed; whether independently of disease of the heart-walls; whether in existence for over two years; whether associated with attacks of negative congestion; whether the general health was good, and whether there was a fair radial pulse. Murmurs must be considered in their relation to the general health and the condition of the heart-wall.

Following up the evidence of so keen and accurate an observer as Sir Andrew Clark, the medical advisers of some of the life insurance companies arranged a series of questions, and indicated the direction of the special examination of those who had heart murmurs and wished to insure. One of these papers is before me. The home office wishes to have information on certain points, and puts the following questions, which I give in full, forming as they do a guide for the examination of cardiac cases, not only for insurance but for general purposes:—

Does the proposer suffer (1) from breathlessness or (2) from palpitation? Is there any pallor or congestion of the face? Is there, or has there recently been, any dropsy, and, if so, in what situations? Are the superficial veins enlarged, or the arteries thickened? Describe the state of the pulse, including (a) its rate per minute, (b) its characters, especially noting if it be regular or irregular in rhythm or quality? State the results of your examination of the heart, in respect especially to (a) position of the apex and the nature of its import on palpitation, (b) size of the heart, (c) character of the heart's sounds in the different areas—(1) Mitral, (2) aortic, (3) pulmonary, (4) tricuspid. Note if any murmur be heard; state where it is most distinct, and to where it is propagated. State the results of auscultation of the carotids, and of the veins at root of the neck. What are the characters of the urine? If any abnormality of the circulation be detected, what, in your opinion, is the nature of the abnormality? The influence now being produced by it upon health? The probability of its being recovered from or continuing indefinitely.

The question of the acceptance of heart cases affects merely those who are the subjects of mitral murmurs and those whose murmurs depend on blood causes. Aortic murmurs are a barrier to acceptance. "These cases of *aortic murmurs*, systolic, diastolic or double, are entirely uninsurable, the elements of durability being wanting. We have not to deal, as in mitral cases, with gradually accumulated alterations of structure, which imply a definite series of progressive morbid events, and so become somewhat calculable as to time; but life may, and often does, end suddenly, owing to the failure of the systemic supply—especially of the brain. The ordinary results of cardiac dropsy, overgorged right cavities of the heart, pulmonary œdema, and hæmorrhage, are rarely seen in these aortic cases, and then only when the mitral valve and right chambers of the heart have yielded. But the sufferer rarely lives long enough to die in that mode." *

But the case is different with mitral murmurs. Numbers of persons may have a mitral murmur from childhood to old age without undergoing any symptoms, and therefore without the effects of heart disease recognized as injurious to life. All depends upon the maintenance of compensation. The dangers to such a life would probably arise after middle life, owing to the supervention of fatty changes in the heart muscle. The rule of insurance companies has been to unconditionally reject such cases. They are not insurable in any case at the ordinary rate.

Suppose that the applicant presents every good point, good personal and family history, that his occupation is such as not to require great muscular strain, and his habits are in every way desirable, and that the only objection to immediate acceptance is the presence of a murmur at the mitral area. "But, if such a case present with murmur only, and without great enlargement of the heart or any secondary disorder, and especially if the ventricular contraction be moderately strong, without the signs of much hypertrophy, and the murmur be well pronounced; and if, in addition, it can be shown that such condition must have prevailed for a long time, say from the

* Medical Handbook of Life Assurance for the use of Medical and other Officers of Companies, by James Edward Pollock, M.D., F.R.C.P., and James Chisholm. London. 1889.

date of one attack of rheumatic fever many years previously, and if the proposer have unimpaired health, and does not exceed 35 years of age, it is our opinion that it is possible to accept such a life with a considerable addition to the premium. * * * * * We hold that such lives are insurable, and certainly if a sufficient number of them presented, so as to make the risks spread over a number of similar cases, we feel sure that offices would be safe in accepting them. But to take one or two only, which, by chance, might not verify the prognosis, might bring the practice into disrepute." The most dangerous are those indicating failure of power and muscular tone, and that the aortic cases are much more perilous than the mitral, the former being ineligible at the rate which may be assigned to them, while it may be possible to compensate the increase of risk in the latter by additions in some form to the premium.

Albumen in the Urine.—The insurance examiner will sometimes meet with a case of this kind. A person in good health, who has never had any previous illness and has no suspicion of the presence of any disease, presents himself for examination. The family history and the personal points are unexceptionable, but when the urine is examined a small amount is present. Ought that risk be entirely rejected, or can it be accepted at a rating? I have met with a few such cases, and they have not been taken by the company for which I was examining. There seems lately to have been a change of opinion on this important point, and it is an important question to consider—is albumen necessarily a sign of disease?—and not only from an insurance standpoint, but also as regards the welfare of our patients. Two valuable papers on this subject have recently appeared.

"We have still a number of cases, by no means insignificant, in which albumen is continuously present in the urine of persons of various ages, but beyond that of adolescence, or early youth, it is to be disregarded as of no importance, or it is to be looked upon as the early stage of nephritis. It is possible that in some of these a more minute examination, such as is by no means easy on a large scale, would bring to light casts and

* Ibid., p. 77.

settle the question of some renal disturbance, the question then becoming—What is the prognosis in slight cases of chronic nephritis?"

These cases should be regarded with grave suspicion. "Some of them seem to be instances of a real nephritis, running a very chronic course, and presenting at the time of their first examination no constitutional symptoms. Munn found that in a considerable number of cases, in which at first only albumen was noted, that casts were subsequently present. Four of sixty-nine had died within three years, and in the majority a general deterioration of appearance was noticed."

It may further be suggested that among them there were many over-weights, a class peculiarly liable to nephritis, and also that middle-aged business men, such as are the majority of those presenting themselves for life insurance, form a class especially liable to *interstitial* nephritis, a form attended with the least marked symptoms for a long time, perhaps for years." *

Dr. James Tyson, of Philadelphia, believes that a certain number of good risks are lost to companies by the indiscriminate rejection of all cases of albuminuria. Two cases are cited in his paper as illustrating a class in which, although there is albuminuria, its subjects have not renal disease, and are insurable risks. Could a set of rules be laid out for his guidance, the well-trained examiner might save his company a certain number of risks which are now lost to it.

"Unfortunately, from necessity perhaps, at the present day the majority of medical examiners are neither well educated nor well trained. Supposing, however, that these important desiderata are attained, as it is reasonable to believe they will, at no distant day, are there any conditions which, if observed, will enable the companies to secure these risks which are now rejected? I believe there are, and I submit them to your consideration." †

1. The applicant must in all other respects present the signs of good health. 2. The albuminuria should be unaccompanied

* *Edes*.—On the absolute and relative value of albumen and casts, and of renal inadequacy in the diagnosis and prognosis of diseases of the kidney.—*Transactions of the Association of American Physicians*. Vol. iii.

† Tyson.—*The Relation of Albuminuria to Life Insurance*.—*Ibid*, p. 175.

by tube casts. However perfect may appear the health of an applicant with albuminuria, the presence of casts in his urine must effectually close the gates of life insurance against him.

3. If the quantity of the albumen is large, the applicant should be rejected irrespective of the presence of casts.

4. "A consideration which goes far toward establishing the functional character of an albuminuria, although not essential to this end, is the absence of albumen on rising in the morning. Nor dare it be said that such an albuminuria precludes the existence of organic disease. It must be taken in connection with the other considerations mentioned."

5. The specific gravity of the total amount for 24 hours must alone be taken into consideration. If we regard the specific gravity of a normal 24 hours urine (say 50 oz.) as 1020, the following may be laid down: Albuminuria is least significant when the specific gravity is high, throwing out, of course, the consideration of sugar." In all forms of renal disease the solids are diminished, and in all, except true nephritis and cyanotic induration, the specific gravity is lowered. In these two it is lowered, because in them the quantity of urine is also markedly less, and, in consequence, the specific gravity is increased to 1028 and even higher. In acute nephritis the presence of blood may also contribute to such specific gravity. Strictly speaking, acute nephritis may be ignored, because no one ill of it is ever likely to apply for life insurance. In functional albuminuria the specific gravity remains normal. When the real specific gravity is above 1020, another most important fact is in evidence against the presence of organic disease, and in favor of the view that the albuminuria is functional. On the other hand, if the real specific gravity of the urine be 1012, 1010, 1008, or even less, as it sometimes is, it would be hazardous to accept such a case of albuminuria.

6. The signs of hypertrophy of the left ventricle, and of high vascular tension associated with albuminuria, are conclusive symptoms of renal disease, and should exclude the candidate.

7. The age. Albuminuria is much less apt to be functional after forty than between twenty-one and thirty-five.

8. "The presence of true gout in any shape precludes admission to life insurance, because gout is always, sooner or later, followed by nephritis."

9. Retinal symptoms are in some cases the earliest noted sign

of Bright's disease, and, whether or not conjoined with albuminuria, must effectually exclude the candidate.

These observations, Dr. Tyson considers, should be made to extend over a considerable portion of time, and should be made by competent persons, a class in which he does not include the ordinary American practitioner.

The most recent paper on the subject is that of Dr. Pavy in the *Lancet* of the 21st August of the present year,* and it constituted an introduction of the subject for discussion, at the last meeting of the British Medical Association. The cases in question are divided into three groups—(1) Cases in which traces only of albumen are observed; (2) cases in which a notable amount of albumen exists, and is always present, and (3) cases in which a notable amount of albumen is found at one period of the twenty-four hours and none at another, or, in other words, cases which possess a cyclic character. Only those cases must be taken into consideration in which all the other evidences of Bright's disease are absent, and the albuminuria must constitute the only factor.

A careful survey of all the collateral circumstances is therefore called for, and the points to which attention must be given are mainly identical with those enumerated in Dr. Tyson's paper. Dr. Pavy considers too, that the specific gravity of the urine is important apart from the presence of albumen. An occasional large quantity with low specific gravity is not a matter of import, the permissible inference being that a nervous or some other temporary state has given rise to it. As an habitual occurrence, however, it may possess great significance, and will suffice to excite suspicion of grave disease. No opinion should be given without a microscopic examination. Blood corpuscles will prompt delay and further enquiry. The absence of casts does not imply the non-existence of renal disease. Casts of the seminal tubules may be met with which closely resembles renal casts, and they may or may not be accompanied by spermatozoa. "With traces of albumen thus found, and with everything else bearing upon the point to be

* "On the Prognosis of Cases of Albuminuria with Special Reference to Life Insurance."

pronounced satisfactory, after a full and careful investigation of the case, I should not consider the cases invalidated. The granular kidney is the form of renal disease which is especially associated with small amounts of albumen, and what calls therefore for most consideration in the investigation of the collateral aspects of the case is attention to the main coincident conditions belonging to this affection, viz., increased quantity of urine, low specific gravity, and morbid changes in the cardio-vascular system."

The second group of cases is that in which a notable amount of albumen exists and is always present; no history of nephritis; no casts of tubules; none of the general symptoms of Bright's disease. "I do not consider that medical knowledge is at present in a position to enable us to differentiate these cases from those which may become developed into well marked Bright's disease. * * * * It would be only in a case that had been under distinct observation for a considerable time without anything wrong becoming developed, that I would venture to look favorably upon the prospects, and even then I should consider that a decidedly more than ordinary risk existed."

The third group comprises cases with a notable amount of urine appearing and disappearing in such a manner as to give the case a cyclic character. At the period of rising in the morning there is no albumen to be discovered. In an hour or two's time albumen shows itself, increases in quantity for a while, and then, as the day advances, declines and becomes usually entirely lost before bed-time is reached. Remaining absent during the night, it returns after rising the next day, and subsequently follows the same order that had been previously observed. "I feel it warrantable to state that with a sufficiently full and careful enquiry, it may be ascertained whether the case falls or not in the cyclic functional group, and that, if it does so, a favorable opinion of the future may be given." If insurance companies should decide to admit these cases as eligible for acceptance, it is not unreasonable that an additional premium should be demanded.

In the discussion of the paper, Dr. Gairdner stated that he was still unconvinced that we could talk of "functional albuminuria." The presence of albumen in the urine is a danger

signal. The amount of the danger varied enormously. He thought the occurrence of albumen in healthy persons was a rare event. In insurance such cases should be postponed.

A communication was read from Dr. George Johnson, in which he gave it as his decided opinion that all albuminuria was pathological.

DISEASES OF THE HEART AND LUNGS.

Spontaneous Rupture of the Heart.—In connection with the history of a case of rupture of the cardiac wall, not very long ago discussed at the Medico-Chirurgical Society, the observations recorded by G. Meyer (*Deutsch Archiv f. Klin. Medicin*, XVIII., p. 378) may be found interesting. In the first case the following were the anatomico-pathological changes: Spontaneous rupture of the heart at the very apex of the left ventricle; sclerosis of the coronary arteries with foci of obliteration by thrombosis of the descending branch of the right coronary artery; fatty degeneration of the cardiac muscle in the neighborhood of the rupture, chronic fibrous endocarditis of the aortic valves, with marked stenosis and insufficiency; hypertrophy and dilatation of the heart. In the second case there was an incomplete rupture of the left ventricle, the result of a chronic aneurysm of the heart; obliterating thrombosis of the left coronary artery; fatty degeneration of the myocardium, limited to the neighborhood of the rupture.

Meyer also report seven other cases from the archives of the Pathological Institute at Munich.

Cerebral Abscess Following Empyema.—Dr. W. B. Hadden describes in detail, in the last volume of the St. Thomas' Reports, three cases of empyema in which the formation of a cerebral abscess occurred.

Case I.—Male, aged 27. Pleurisy of left side twelve months before admission, when empyema was diagnosed and resection of a rib practised. A few days after the operation vomiting was noted, and this symptom was more or less present, though not urgent, for months and was thought to be due to the troublesome cough from which the patient suffered. The progress of the case was unfavorable, the temperature remained high, and at the end of six months several epileptic fits

occurred, followed by continued drowsiness and marked weakness of the left arm and leg and left side of the face. Left hemiplegia, more marked in the arm than in the leg, finally set in. No optic neuritis. Sensation in the left arm, and left side of the face was thought to be impaired. P. M.—An abscess, which measured two inches from before backwards by one inch from above downwards, was found to occupy the white matter, corresponding to the posterior two-thirds of the superior frontal convolution, and the adjoining part of the middle frontal convolution on the right side. The ascending frontal was not involved. There was also an abscess in the white matter corresponding to the fore part of the right occipital lobe.

Case II.—Male, aged 28. The patient was reported to have had tropical abscess of the liver, but the autopsy showed that this had probably been a pleurisy, because the liver presented no signs of suppuration at the autopsy. Resection of rib January 21st, 1884. Left the hospital in May, a small fistula being left at the site of the wound. Pus re-collected in 1886. Another operation was performed with a view to facilitate drainage. After this, vomiting was noted. Ten days after the operation the patient suddenly became very pale, but did not lose consciousness. He complained greatly of pains in his chest and became delirious. Fifteen days after the operation the left arm became weak; drowsiness; the eyes were continually turned to the left; paralysis on the left side of the mouth; left arm and leg completely paralysed; pain in the right side of the head in the situation of the right frontal eminence. Later on, there was total anæsthesia of the left forearm and hand, and partial anæsthesia over the left side of the face and neck and left upper arm. P. M.—Occupying the centrum ovale minus and majus of the right hemisphere, just behind the fissure of Rolando, was a globular abscess, $2\frac{1}{2}$ inches in diameter, whose walls reached the deeper layers of the cortex.

Case III.—Male, aged 4. Scarlet fever four months before admission, which was followed by nephritis; empyema of the left side. Nine days after resection of the rib vomiting set in. There was evidently pain in the head, but no screaming, no

paralysis, no unconsciousness. P. M.—A globular abscess in the left frontal lobe.*

Pneumonic Paralysis.—Stephen (*Rev. de Med.*, January, 1889.) reports two cases of paralysis occurring in the course of pneumonia, and gives a review of the literature of the subject. He concludes by saying that paralysis may develop at the beginning of pneumonia, in its course, or during convalescence. The cause of these paralyzes is in some cases a meningitis (cerebral, spinal, or cerebro-spinal), but in many others there is an entire absence of gross organic lesion. In cases of the first category it is admitted that there is an extrapulmonary localization of pneumococci in the meninges; and in those of the second category it seems most probable to the author that the pneumonic affection was determined either directly or indirectly by the medium of the cerebro-spinal disturbances of a dyscrasic, dynamic or functional nature in the nervous centres or in the nerves.

DISEASES OF THE STOMACH.

The Sensation of Hunger in Gastric Ulcer.—In a paper† on the treatment of gastric ulcer Dr. Wm. Ord observes that in cases where hunger is urgently present, and where the taking of food seems to relieve pain, there are usually adhesions of the walls of the stomach of such a nature as to prevent the narrowing of that cavity. A lay sister in a home presented for several years recurrently the ordinary signs of gastric ulcer. At length the pain became persistent, and had constant tenderness associated with it. Vomiting was frequent and there was often blood with it. Inordinate appetite. For several years she took nothing but mashed potatoes freely enriched with butter. After freely partaking, vomiting set in in about an hour and a half, followed by pain. Such symptoms he thought due to the prevention by adhesions of the collapse of the walls of the stomach. Sensations of extreme hunger arise when the walls of an empty

*See Montreal Medical Journal, Vol. xvii., p. 601. An abstract is given of a paper by Cérenville, "Des Manifestations Eucéphaliques de la Pleurésie Purulente."

† American Journal of the Medical Sciences, June, 1889.

stomach are prevented from coming into contact. An elderly gentleman was under the care of Dr. Ord for several years. His appetite was enormous. He ate voraciously of whatever was set before him, with a special selection of the richest possible dishes, after partaking of which he vomited freely. The autopsy showed that an old abscess connected with the gall bladder had caused adhesions between the stomach and surrounding parts, so that it became no longer a movable viscus, but a large permanent cavity, as firmly bound to the adjacent organs as if a stomach had never existed.

Exaggerated Epigastric Reflex in Gastric Ulcer—In the Edinburgh periodical *Clinical Studies*, conducted by Dr. Byrom Bramwell, and in the first number, attention was directed to the presence of marked exaggeration of the epigastric reflex in a case of ulcer of the stomach. Dr. W. J. Clarke, of Birmingham, has also observed the same sign in a case of ulcer of the stomach in a woman aged 23, with severe attacks of profuse hæmatemesis. Was this association of the two conditions accidental?

On the Diagnosis of Motor Insufficiency of the Stomach.—Brunner, at the Medical Clinic of Professor Riegel, in Giessen, undertook the task of putting to the test recent methods for estimating the motor power of the stomach. The salol method of Ewald and Seivers was tried in healthy as well as in diseased people, and as a result he found that there was great variation in healthy stomachs as in diseased ones. Even when there is great motor debility small quantities of salol sufficient for the establishment of the re-action readily find their way into the intestine. According to Brunner, therefore, the salol method for accuracy and practicability is not to be recommended.

The oil method of Klemperer was then put on trial. Brunner's results both in healthy and diseased stomachs failed to tally with those of Klemperer, and consequently he concludes that the method is not suitable for practical purposes, moreover, it is an uncertain test, since out of the number of oils present, one can scarcely come to any decision on the presence and still less on the degree of motor insufficiency present.

Finally, the author considers that the plan followed in Riegel's Clinic is the best, viz., that of determining the degree

of motor disturbance in the stomach by the quantity and properties of the gastric contents after a test meal.

On the other hand, Ewald* asserts that he never finds the diagnosis of disturbed motor function of the stomach on the Salol method, but that he finds it useful when considered in conjunction with the other symptoms present. The degree of alkalinity necessary for the decomposition of salol is a factor quite beyond reach, and depends upon the secretion of the pancreas and the bile ducts. In fifty-eight trials of the salol method, the normal period for the appearance of the reaction was but twice exceeded. The reaction depends upon the quantity of salol used, the form in which it is administered, and the periods at which the estimates are made, facts which Brunner seems to have overlooked. Ewald sees no reason to depreciate the diagnostic value of the salol method, from which very useful information as to the motor functions of the stomach may in certain cases be derived.

* Deutsche Med. Wochenschrift, 1889. No. 7 and No. 11.

Hospital Reports.

MONTREAL GENERAL HOSPITAL.

GYNÆCOLOGICAL CASES UNDER CARE OF DR. ALLOWAY.

(Continued from page 300—Reported by Dr. Low).

Laceration of Cervix—Trachelorrhaphy.

CASE XIV.—Aged 23; admitted July 30th, 1889; married five years; two pregnancies; menstruation regular; leucorrhœal discharge profuse; pain over epigastrium and sacrum; dysmenorrhœa severe. These symptoms have lasted during the past two years, making serious inroads upon the patient's general health.

Examination.—Bilateral laceration of cervix; ectropion and extensive glandular hypertrophy.

Treatment.—After due rest in bed Dr. Alloway performed Schröder's trachelorrhaphy on the 10th August. Patient discharged from hospital 28th August. Union good and patient much improved.

Laceration of Cervix—Hæmorrhagic Endometritis.

CASE XV.—Aged 45; admitted August 20th, 1889; married 24 years; nine children; two miscarriages. After the last miscarriage she was metrorrhagic for seven weeks, and dates her present illness from that event. She has been losing blood continuously for the last seven months, and the discharge is at present very offensive. She complains of pain in pelvis and lumbar regions. These pains have existed for the past two years, and have increased in severity.

Examination.—Bilateral laceration of cervix with marked hyperplasia and eversion, chronic endometritis, etc. After undergoing the usual preparatory treatment for three weeks, Dr. Alloway sharp-curretted the uterine cervix and performed Schröder's operation. Patient had an uninterrupted recovery, and left hospital on the 29th in good health.

XVI.—Age 24; admitted July 25th, 1889; married one year ago; had one child at full term, (3 months ago), still born. Directly following labor she complained of some sharp pain in

left iliac region and back, which soon increased in severity up to the present time. Profuse leucorrhœal discharge and painful menstruation. There is great prostration, and patient incapacitated for work.

Examination.—Perineum lacerated to sphincter ani muscle. Bilateral laceration of cervix with hyperplasia, retroversion of uterus, chronic pelvic peritonitis and extreme tenderness of pelvic floor.

Treatment.—This patient was confined to bed for several weeks on hot douches and iodine and glycerine treatment. The uterus eventually became righted to its natural position after absorption of the products of posterior parametritis, the cause of the retroversion.

August 15th.—Dr. Alloway performed Emmet's trachelorrhaphy and Tait's perineorrhaphy.

August 30th.—Patient left hospital in excellent condition of health.

CASE XVII.—Aged 21 ; admitted July 21st, 1889 ; married two years, never been pregnant ; menstruation regular, accompanied with little pain, but preceded by severe headache and nausea. Duration of flow six days. Her sterile condition was her chief complaint.

Examination.—Some vaginitis ; cervix elongated, conoid and extensively eroded ; catarrhal endometritis ; uterus anteflexed, mobile and not painful. No parametritis at present, but some cicatricial shortening of utero-sacral ligaments from past existing posterior parametritis.

Treatment.—Confined to bed under iodine and glycerine treatment for some weeks. Dr. Alloway dilated, sharp-curetted the uterine cavity, and removed the elongated cervix after Schroeder's method.

August 20th.—Patient left hospital free from uterine discharges and feeling well.

Alexander's Operation.

CASE XVIII.—Age 22 ; admitted August 5th, 1889 ; unmarried ; menstruation regular, but painful. She states that

some two years ago, after undergoing severe bodily exertion and strain, she was suddenly seized with agonizing pain in both iliac and lumbar regions; that she became so ill she had to remain in bed for some days. She recovered somewhat, but has never been free from pain in these regions, more or less, since the accident. Her general health has been so much impaired that she has been quite unable to do even light house-work.

Examination.—In this case a very novel form of hymen was found. It consisted of a strong, thick membrane, perforated at three or four different places, (cribriform). This was completely dissected out with the scissors. The uterus could now be palpated and the vagina explored. The uterus was found in sharp retroflexion, but could be replaced. It would, however, quickly fall back again into retroflexion. The posterior wall of the vagina seemed much shortened and tense, as also did the broad and utero-sacral ligaments. Ovaries normal and no parametritis present.

August 7.—Dr. Alloway performed Alexander's operation of shortening the round ligaments.

September 1st.—Left hospital to-day entirely relieved of symptoms.

[This patient, (a housemaid of a city clergyman,) I had occasion to see on the 29th of October. I found the uterus in its normal position. She was in robust health, and declared she was absolutely free from any feeling approaching to that of pain in the pelvis. She had gained largely in weight, and was doing heavy general house work. This form of uterine displacement in young unmarried ladies is not uncommon, and is especially amenable to this operation. Good results invariably follow.—T. J. A.]

*Trachelorrhaphy and Perineorrhaphy by Alexander's
Operation.*

CASE XIX.—Aged 38; admitted August 14th, 1889; married sixteen years; five full-term pregnancies; menstruation regular, though somewhat profuse. She complains of constant

pelvic pain, accompanied with bearing-down sensation. Frequent and painful micturition. Patient states that shortly after her second confinement she noticed a mass protruding from the vulva which she had to replace with her hand in order to allow her to empty the bladder. This condition of prolapse continued during the following twelve or fourteen years to the present time. She has had four operations performed upon the perineum, with the object of obtaining relief, but all have been unsuccessful.

Examination.—Uterine and vaginal walls found in complete prolapse—*i.e.*, uterus completely outside vulva in retroflexion. Cervix has been lacerated bilaterally, and the perineum is completely so, and atrophied from pressure.

Treatment.—The patient was confined to bed, with hips elevated and vagina well packed with astringent tampons every day until the 23rd September, when Dr. Alloway performed Emmet's trachelorrhaphy on the cervix, a high colpoperineorrhaphy (Tait's) to restore the perineum, and Alexander's operation of shortening the round ligaments, at one sitting. Patient made an uninterrupted recovery, and was discharged on the 30th September. The uterus was found in good position and high up in the pelvis. The patient expressed herself as free from discomfort beyond some tenderness in inguinal wounds.

Reviews and Notices of Books.

A Cyclopædia of the Diseases of Children—Medical and Surgical, by American, British and Canadian authors. Edited by JOHN M. KEATING, M.D. Vol. I. Imp. Oct., p.p. 992. Illustrated with plates and charts. Philadelphia: J. B. Lippincott & Co.

In the preface the editor states that the work consists of a collection of monographs, not mere dictionary articles arranged in the form of a systematic treatise, and devoted to the consideration of the anatomy, physiology, medicine, surgery and hygiene of infancy, childhood and adolescence. As each contributor has been selected with special reference to his familiarity with the subject he writes upon, it is hoped that these articles will not only be of immediate practical utility, but will also serve as standards for future reference. This is the first work of the kind that has been published in the English language, and as Dr. Jacobi says, it marks an immense progress in the history of both general, medical and pediatric literature. On glancing over the list of authors, we notice an unusually large number of names widely and favorably known. The volume opens with an introductory article by Dr. Jacobi. "Pediatrics," he says, "is no speciality in the common acceptance of the term. It does not deal with an organ, but with the entire organism at the very period which presents the most interesting features to the student of biology and medicine. Infancy and childhood are the links between conception and death between the foetus and the adult. The latter has attained a certain degree of invariability. His physiological labor is reproduction; that of the young is both reproduction and growth. . . Pediatrics does not deal with miniature men and women with reduced doses, and the same class of diseases in smaller bodies, but has its own independent range and horizon, and gives as much to general medicine as it has received from it. . . There is hardly a chapter more interesting than that of the history of the relation of the bones of the cranium to its contents. The solid skull serves as a support to the

brain and its blood vessels, but it may form an obstacle to their developement: an insufficient degree of ossification will enhance the possibility of enlargement of the blood vessels and the liability to effusion; premature ossification, however, either partial or general, is a cause of asymmetry, epilepsy or idiotism, and influences the cause of inter-current diseases." In his article he calls attention to many of the peculiarities of infancy and childhood, and briefly touches on the therapeutics of these periods. Finally, as a proof of the need of such a work on pediatrics, he refers to the fact that so little time is allotted to special instruction in this branch of medicine in many of the medical schools, both of this country and Great Britain, where few schools have more than a clinical chair on the diseases of children; which, he adds, only means the authority given an enthusiastic worker to teach as much or as little as he can without recognition, thanks or reward, of a doctrine not officially recognized by examination. The continent of Europe has made more progress. Most of the large and small universities have their distinct chair on diseases of children, and their students know beforehand that they will have to prove, before being permitted to practice, their acquaintance with what they are *compelled* to learn of this subject.

Part I, General Subjects. Beginning with an interesting article of forty pages *On the Anatomy of Children*, by Geo. McLellan of the Philadelphia School of Anatomy, wherein the author studies the body regionally, describing the anatomy of each, and discusses the features characteristic of children. His paper is freely illustrated both by engravings and photographs. Angel Money of London writes on the *Physiology of Infancy*. James Finlayson of Glasgow contributes fifty-nine pages on the *Diagnosis of Disease in Infancy*. It is a most interesting article, and should be thoroughly read by every young practitioner. William C. Dabney discusses very thoroughly in an article all that is known on the strange subject of *Maternal Impressions*. He has collected from various sources ninety cases which seem to him worthy of credence; these he classifies in a series of tables according to part of body involved. Some of

these appear clearly as errors of development, but many are of such a nature as can only be explained by admitting the power of strong emotional impressions in a pregnant woman. Barton C. Hirst follows with an article on *Diseases of the Fœtus. The care of the Child at and immediately after Birth*, by A. R. F. Penrose; *The Closure of the Ductus Arteriosus and of the umbilical Hypogastric Arteries* by J. Collins Warren; and *Injuries of the New Born*, by Theophilus Parvin, are excellent papers, freely discussing their several subjects. They are followed by one of the most interesting papers in the volume, that of J. M. Rotch on *Infant Feeding*—who has managed to give us much that is new and interesting. Samuel S. Adams writes on *Diet After Weaning*, and Miss Catherine Wood of Great Ormond Sick Children's Hospital, contributes an article of twelve pages *On the Nursing of Sick Children*, from which much useful information may be gained, and which may be specially commended to the physician who thinks he knows always more than the nurse. Articles on Nursery, Hygiene, Dentition, Puberty, its Pathology and Hygiene, and the Influence of Race and Nationality on Disease, complete Part I.

Part II is devoted to Fevers and Miasmatic Diseases, and contains articles by Wm. Pasteur, and Collic and Cheadle of London, Lewis Smith, S. C. Busey, Forchheimer, and many others. The volume closes with an article on the General Therapeutics of Children's Diseases, by Roberts Bartholow of Philadelphia.

The work as a whole is cordially recommended to our readers. All the articles are good—not a few are masterly expositions of their subjects—while their publishers have certainly lightened the task of the reader by the more than usual excellence of the type and binding.

A System of Obstetrics by American Authors. Vols. I. and II. Edited by BARTON COOKE HURST, M.D., Associate Professor of Obstetrics in the University of Pennsylvania, &c. Illustrated with one colored plate and 309 wood engravings. Philadelphia: Lea Bros. & Co 1888.

The first volume of this erudite work contains a special treatise on the following subjects: The History of Obstetrics,

by George J. Engelmann, M.D. *The Histology and Physiology of Ovulation, Menstruation, and Fertilization. The Development of the Embryo*, by H. Newell Martin, F.R.S., &c. *The Fœtus, its Development, Anomalies, Monstrosities, Disease and Premature Expulsion*, by Barton Cooke Hurst, M.D. *Pregnancy: Its Physiology, Pathology, Signs and Differential Diagnosis*, by W. W. Jaggard, A.M., M.D. *The Conduct of Labor, and the Management of the Puerperal State*, by Samuel C. Busey, M.D. *On the Mechanism of Labor, and the Treatment of Labor based on the Mechanism*, by R. A. F. Penrose, M.D., LL.D.

The second volume contains: *Diseases and Accidents of Labor*, by Theophilus Parvin, M.D., LL.D. *The Forceps: Embriotomy*, by Edward P. Davis, A.M., M.D. *The Premature Induction of Labor*, by James C. Cameron, M.D. *Version*, by James C. Cameron. *The Cæsarean Operation, Symphysiotomy, Laparo-Elytrotomy, and Laparo-Cystectomy*, by Robert P. Harris, A.M., M.D. *Puerperal Infection*, by Henry J. Garrigues, A.M., M.D. *Inflammation of the Breast and Allied Diseases connected with Childbirth*, by Henry J. Garrigues, A.M., M.D. *The Etiology of Puerperal Fever*, by Harold C. Ernst, M.D. *Some Complications of the Puerperal State, Independent of Septic Infection*, by Barton C. Hurst, M.D. *Insanity and Diseases of the nervous system in the child-bearing woman*, by James Hendrie Lloyd, A.M., M.D. *The Management and the Diseases of the new-born infant*, by J. Lewis Smith, M.D. *The Surgical Diseases of Infancy and Early Childhood*, by Stephen Smith, A.M., M.D. *Congenital Anomalies of the Eye*, by G. E. De Schweinitz, M.D.

The magnitude and importance of this truly great work can be surmised from a glance at the above list of subjects and eminent authors. It is a lasting exponent of the perseverance, toil and brilliant scientific attainments of those in whose charge the various subjects were intrusted. To make any special criticism would be difficult, and if made would invariably be of a favorable nature. It is so pleasing to feel that the old Churchill-Ramsbottom style of teaching has passed away like the dust of its authors, and that we have in "The System of Obstetrics" a method which no man can study without enthusiasm. The numerous illustrations are scale-drawn,

and anatomically correct; they are a special feature of the work from their freshness and individuality.

We cannot conclude these remarks without paying a high tribute of admiration to the indefatigable editor. The very complete nature and scientific accuracy of the treatise shows how arduous the task must have been, and much credit must be given to Dr. Hurst in its successful accomplishment. We think no practitioner can afford to be without the work.—T. J. A.

An Introduction to Pathology and Morbid Anatomy. By T. HENRY GREEN, M.D., and STANLEY BOYD, M.B., F.R.C.S. Sixth American from Seventh English Edition. Philadelphia: Lea Bros. & Co. 1891.

In this new edition of "Green" great pains have been taken by the editor, Mr. Boyd, to bring the work up to date. To this end, a large amount of new matter has been added, and thus the individuality of the book has been to a great extent lost. If one were disposed to be critical, it might be said that these new portions greatly need boiling down, but even with its defects, the book is still probably the most useful one we possess for beginners in pathology. The publishers have done their work quite as well as ever, though the plates in the English editions are clearer. A number of very ambiguous micro-photographs, which have been introduced, might very well have been spared.

Strathpeffer Spa: its Climate and Waters with Observations, Historical and General, Descriptive of the Community. By FORTESQUE FOX, M.D., (Lond.) London: H. K. Lewis, 136 Gower street. 1889.

This little book is all that its title announces, and nothing seems to have been left undone to make the virtues of the Spa and its surroundings known. It is, moreover, illustrated by a beautiful map, photographs, &c. The entire work has an air of thoroughness about it, and seems to have been inspired by a desire to make the qualities of a valuable spring within easy access known as they deserve. The book is creditable to both author and publisher.

Inebriety: its Etiology, Pathology, Treatment and Jurisprudence. By Norman Kerr, M.D., F.L.S. Second edition. London: H. K. Lewis, 136 Gower street, 1889.

Between the covers of this book of 450 pages is contained about all that there is to be said at present on the subject of inebriety. The key to the work is furnished by the author in the preface to the first edition, where he says: "The present volume has been written in the hope that it may aid, however feebly, through the medium of the attending practitioner, who, I trust, will be among my readers, in the enlightenment of the patient, his sorely-tried relatives, and the community, in the great truth that inebriety is a disease as curable as most other diseases, calling for medical, mental and moral treatment." We think no one can read this valuable work without agreeing with the author's main conclusion, and if the profession and the public once become convinced of the truth of this and what is implied therein, an enormous advance will have been made in knowledge, and the foundation thus laid for intelligent efforts in the improvement of the condition of a large class of unfortunates. And what is of equal importance. A host of evils, now apparently inevitable, may in time be prevented by that wisest recognition of the bearings of heredity and causation, which is alone the path by which a radical cure—if such is possible—will be found for the disease. The paragraphs of this work are so summarized in the marginal headings that a general idea of the scope and even the teaching of the book may be readily gained in a comparatively short period of time. This is a method not only desirable in text-books, but worthy of imitation in many others, and has as yet been too little employed. Apart from the establishment of the author's ideas, the book is valuable for the amount of information it conveys. It has nothing to do directly with advocating total abstinence; at the same time, if the temperance reformers could but see it, efforts in accordance with the principles set forth by the author, would probably be more effective than those in the direction at present, cunningly followed so exclusively. This work tends to advance real civilization.

Society Proceedings.

MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

Annual Meeting, October 4th, 1889.

WM. GARDNER, M.D., PRESIDENT, IN THE CHAIR.

The annual meeting of the Society was held this evening. There were present: Drs. Roddick, Shepherd, Blackadder, Johnston, J. A. MacDonald and others, 31 in all.

After the minutes of the preceding meeting and that of the last annual meeting had been read and confirmed, the President introduced Dr. E. A. McGannon, of Brockville, and invited him to take part in the discussions. The following were proposed for membership: Dr. J. M. Jack, proposed by Dr. Ruttan, seconded by Dr. G. T. Ross; Dr. E. A. McGannon, proposed by Dr. J. A. MacDonald, seconded by Dr. G. T. Ross.

Dr. JOHNSTON exhibited specimens from a case of gout where almost every joint throughout the body showed infiltration with urate of sodium. There was marked deformity of the fingers. The sheaths of the tendons were everywhere filled with similar deposit. The patient during life vomited chalk stones and passed them in great numbers; but at time of autopsy the alimentary canal was free from concretions. The cause of death was pleurisy with effusion.

D. DECOW exhibited a specimen of medullary cancer of the stomach, with secondary nodules in the liver. The disease had run a very rapid course. The onset dated from a period when the patient, a man aged 52, was much depressed, owing to the death of a near relative.

Dr. G. A. BROWN exhibited a specimen from a case of pyo-salpingitis. In brief, the history of the case was, that four weeks previous to admission to the General Hospital patient was seized with severe attacks of vomiting, no food being retained in the stomach. She also suffered from severe abdominal pain. This illness had been preceded by a drinking spree of about six weeks duration, and at the time of admission patient had symptoms of delirium tremens. Upon examination the abdomen was found to be much distended and so tender to the touch that an examination was rendered almost impossible. Examination of

the other regions of the body was negative. Temperature, 101. The patient's general condition continued to grow worse, in spite of all treatment—the vomiting and abdominal pain not being alleviated—until, six days after admission, the patient died. Post mortem examination revealed a purulent peritonitis—one pint and a quarter of purulent fluid being found in the cavity, and a great deal of lymph on the parietal and visceral layers of the peritoneum, the intestines being matted together. The entrance of the fallopian tube into the uterus on the right side was found to be closed, but just beyond this the tube was found to be dilated, and which, on being opened, was found filled with pus. This sac was found to have a communication with a portion of the small intestine. Examination of the remaining organs of the body was negative.

The treasurer reported: Receipts, \$484.23; expenditure, \$486.58, thus leaving a slight deficit in the funds of the Society.

The notice of motion regarding an amendment to the constitution, given by Drs. Trenholme and Shepherd, was then considered. The notice was that all members of the resident staff of the Montreal hospitals be ex-officio members of this Society. Carried.

The treasurer's accounts were then duly audited and found correct.

Upon motion of Dr. Roddick, seconded by Dr. Blackadder, the report was adopted.

Drs. G. T. Ross and E. Blackadder were appointed scrutineers, and the Society proceeded to elect officers for the ensuing year. The elections resulted as follows:—President, Dr. Geo. Armstrong; 1st Vice-President, Dr. Shepherd; 2nd Vice-President, Dr. W. Mills; Secretary, Dr. H. S. Birkett; Treasurer, Dr. J. A. Macdonald; Librarian, Dr. T. D. Read; council, Drs. W. Gardner, Ruttan and Roddick.

Moved by Dr. Proudfoot, seconded by Dr. Roddick, that a vote of thanks be tendered by the Society to Dr. Ruttan, the retiring secretary. Carried.

A general vote of thanks to the retiring officers was then moved by Dr. Roddick and seconded by Dr. J. Gardner. Carried,

The Society then adjourned, the President's address being postponed until the next meeting.

ASSOCIATION OF AMERICAN PHYSICIANS.

ANNUAL MEETING.—(Continued from page 315.)

DR. JAMES J. PUTNAM, of Boston, remarked that the reported cases of tetany showed such a variety of infectious sources, that it seemed hardly probable that they should act in such a similar manner unless there were something else behind. Two or three things are to be considered. First, the influence of habit. The disease set up by a variety of causes may continue as a result of habit. Second, the suggestion that in such cases of disordered action we have to deal with an over-sensitiveness of physiological arrangement is important. In these conditions we have the disordered manifestation of what is really a function, but one which we ordinarily recognize, as it has no independent existence. It would seem that, in the absence of further knowledge with regard to infection and the manner in which this infection arising from various sources may act, we should insist upon the possibilities of explanation which are presented to us by what we know of the physiology and disordered physiology of the nervous system, in attempting to explain conditions met with in this and similar diseases.

DR. JAMES STEWART, Montreal, said, in connection with the influence of peripheral irritation, that in the cases of dilatation of the stomach where tetany had caused death, the symptoms came on a few hours after the stomach had been washed out. This would point to irritation rather than decomposition as the active cause in this class of cases. There are many other cases where infection could not enter.

DR. JOHN T. CARPENTER, Pottsville, said, in regard to anæmia as the cause of tetany, that we should have to go back of the anæmia to the cause that produced it. He knew of no cause that would produce anæmia so surely as septic absorption.

Afternoon Session.

DR. A. B. BALL, New York, read a paper on *Thrombosis of Cerebral Sinuses and Veins*. The author first referred to the influence of the following factors in the production of thrombosis:—(1) blood stasis; (2) vessel lesion; (3) blood changes. The anatomical conditions in the sinuses that favor thrombosis were described at length. A number of cases of marantic

thrombosis of cerebral veins and sinuses in chlorotic girls were given. The symptoms were next considered. Much importance has been attached to distension of external veins collateral to the internal veins supposed to be affected, giving rise to hæmorrhages and œdema. These signs are frequently absent, and may be due to other conditions. The mobility of the symptoms have been considered of value. In these cases the cerebral symptoms undergo strange alterations not seen usually in other affections. Active delirium is exceptional. The depression continues, but alternates with a certain amount of improvement. Fever is absent at first, and, if present, is to be attributed to complicating conditions. Paralytic symptoms of varying extent are usually present. With the exception of the variation in degrees, the paralysis does not differ from paralysis from other causes.

Discussion.

Dr. WILLIAM OSLER, Baltimore, exhibited two specimens illustrating the conditions prescribed by Dr. Ball. The first specimen was one of extensive thrombosis of the lateral sinus occurring in a man who died from phlegmonous erysipelas of the cheek. There were no special symptoms in that case. The second specimen was from a woman dying of consumption. It was thought that gradually increasing coma and the onset of cerebral symptoms were supposed to be due to the basilar meningitis.

Dr. A. JACOBI, New York, enumerated certain additional aiding causes. The first was a disproportion between the white and red blood corpuscles. The second cause was the relative absence of muscular tissue in a number of the veins. A third cause was absence of water in the blood, often due to the withholding of sufficient fluid in the diet of patients. The last cause referred to was weakness of the heart. When in exhaustive diseases, the heart is allowed to become feeble, thrombosis with all its bad results must be expected. It is certainly a good therapeutic measure to stimulate and strengthen the heart in every disease that will last long or tends to terminate in exhaustion.

Dr. WILLIAM H. WELCH, Baltimore, said: There is one point of great force in explaining the production of thrombosis, that

is the possibility that there is some form of intoxication analogous to that produced experimentally by various substances, such as the fibrin ferment. Under such circumstances there is almost instantaneously thrombosis wherever the ferment reaches. Pathologists are aware of the frequency with which thrombi, usually of a mixed character, are found in the cerebral sinuses, particularly the superior longitudinal, in cases that have presented no symptom during life.

Dr. SAMUEL C. BUSEY, of Washington, D.C., read a paper on *The Effusion of Chyle and of Chyle-like, Milky, Fatty Fluids into Serous Cavities*. The object of the paper was to present the subject of effusion of chyle, chyle-like and fatty fluids into serous cavities. It was limited to the effusion of such fluids into the cavities of the pleuræ, peritoneum and tunica vaginalis. The subject of traumatic injuries of the absorbent vessels seems to have been peculiarly attractive to many of the older writers; Ruysch, as early as 1665, drew attention to wounds of the lymphatic vessels. The reported cases of effusion of chyle and milk-like fluids into the pleural and peritoneal cavities, including the doubtful cases, do not exceed forty-three; and these cases cover a period of one hundred and ninety years. Nevertheless, twenty-three of the cases of effusion of chyle and chyle-like fluid into the abdominal cavity have been observed during the present century, fifteen since 1850, and thirteen during the last and present decades. The increasing frequency of the occurrence is thus clearly shown.

Effusion into the Pleural Cavities: Chyle-Thorax.—Of this, including the doubtful cases, there have been ten cases reported. In five of these the chyle poured directly from the thoracic duct. The diagnosis in these cases can only be made by evacuation and examination of the fluid. The prominent symptoms are dyspnoea and accumulation of fluid in one or both cavities. The prognosis is improvable, and the treatment expectant.

Effusion into the Tunica Vaginalis Testis.—The case of galactocoele reported by Vidal (de Cassis) seems to have been the first observation of this class of effusions. In two of the reported cases the patulous orifices of the vessels from which the lymph exuded were found. Since 1885 there have been re-

ported in this country thirteen cases in which filaria were found; and two of these were cases of lymphocele. It has not been shown, however, that filaria are present in every case of lymphocele. It is conceivable that adenitis, gonorrhoeal lymphangitis or other conditions which obliterate the permeability of neighboring and connecting glands, might cause stasis of lymph and dilatation and rupture of lymph capillaries and plexuses with which the serous membranes are so richly supplied. The opinion of those who have had the best opportunity to study the relation of filaria to disease in general, seems to be that of Sir Joseph Fayre's, that "it has been shown that disorders of the lymphatic system are most frequently associated with, if not caused by, the filaria." The recent invasion of portions of the sub-tropical belt of this country by the filaria, and the reports of cases of disease with which the parasite has been so uniformly associated, together with the fact that the mosquito has been proven to be its intermediate host, present considerations of the highest importance to the profession and general public. Some of the cases have been cured by injection of iodine, others have been cured by dissecting back the vessels, and tying the bundle *en masse* with a silk ligature.

Chylous and Oily Ascites.—A tabulated statement, arranged chronologically, presenting a condensed summary of the reports of cases of chylous and oily ascites was given. The number of cases reported were thirty-three. Primary rupture occurred in but five cases. Chylous ascites may be the secondary result of a variety of morbid conditions which directly or remotely obstruct the flow of the chyle through the lacteals, receptaculum or thoracic duct, impede its exit into the left subclavian vein, or retard the current of blood in the left subclavian vein, right side of the heart or lessen circulation. The relation of puerperal conditions to the effusion of chyle are not susceptible of explanation. In five cases the fluid found in the peritoneal cavity was associated with tuberculosis, and in four it is stated that the peritoneum was more or less studded with tubercles. No perforation or rupture of chyle-conveying vessels was found in any of these cases.

The symptomatology of effusion of chyle into the peritoneal

cavity is not sufficiently distinctive to differentiate such cases from ordinary ascites, and a diagnosis is only possible after examination of the evacuated fluid. Of the thirty-three cases nineteen died, nine recovered, and in five the result is not stated. Of the twenty-two cases of chylous ascites proper, twelve died, five recovered, and in five the result is not stated. Meagre and unsatisfactory as are the clinical details of these cases, they point to two conclusions: (1) that a free and obstructed channel of communication between the venous system and the chyle-conveying vessels is essential to the proper nutrition of the body and preservation of life; and (2) that death following the partial or complete obliteration of this communication is the result of inanition.

In seventeen of the thirty-three tabulated cases tapping was practised, and in most of the cases repeated several times. Six of these recovered. In two, laparotomy was resorted to with recovery of both patients. One was a case of intact retention cyst, and the other was probably a ruptured cyst. As a medical resource, paracentesis is of questionable value. The treatment is mainly directed to the prolongation of life. The causative condition may in some cases be amenable to medicinal treatment, but in most cases some surgical procedure might offer a prospect of cure. In filarial cases, the treatment applicable to such would be admissible. Sorsina thinks that astringents such as gallic acid and tincture of the chloride of iron with rest, tonics and proper alimentation are useful. Lancereux thinks that the parasitic forms of lymphatic disease are curable. He has found mercurial inunction in the region of the affected gland in connection with hydrophathy, of service. He suggests the injection of parasiticides into the affected glands for the purpose of destroying the female adult worm.

Discussion.

Dr. WM. OSLER, of Baltimore, said that in ordinary post-mortem work it was not unfrequent to meet with varices of the chyle vessels of the mesentery covering the walls of the intestine. Sometimes there are extravasations which may form large chylous cysts. With reference to chyluria he was positive that there was a non-parasitic form. He had made

thorough examinations in one such case and failed to find filaria. On post-mortem examination nothing was discovered. Also in a case of lymph scrotum, he had examined the fluid and the blood, and had found no embryos. He laid a great deal of stress upon these cases, as it is generally stated that these conditions are always parasitic.

Dr. WM. H. WELCH, of Baltimore, exhibited a specimen of chyle removed from the abdominal cavity of a boy twelve years of age. He described the chemical and microscopical characters of the fluid, and dwelt upon the importance of distinguishing between chylous and fatty hydrops.

Dr. J. F. ADAMS, of Pittsfield, Mass., read a paper on *Substitutes for Opium in chronic diseases*. The disadvantages attending the use of opium are: (1) in an overdose, it is poison; (2) in ordinary doses, its benefits are largely offset by various functional derangements; (3) its use involves the danger of the opium habit. Other remedies may be substituted for opium for the relief of pain. The antipyretics, antipyrine, acetanilide, phenacetine and exalgine have well-grounded claims to be regarded as rivals of opium. They are, however, less certain, and less prompt, particularly where pain is very violent. Antipyrine in five to ten grain doses, had been found valuable as an analgesic, particularly in headache, neuralgia and rheumatism. Acetanilide he had found less active than antipyrine. Used in doses of seven or eight grains, he had found it particularly serviceable in lumbago and dysmenorrhœa. In the latter condition one or two doses had afforded prompt relief. Salicylic acid and its sodium salt for the relief of pain in rheumatism, is to be included.

Discussion.

Dr. G. M. GARLAND, of Boston, referred to the value of the fluid extract of gelsemium as a substitute for opium. In frontal headaches it has had an admirable effect. It is used also with advantage in difficult and painful menstruation, and certain forms of neuralgia. As a simple hypnotic, gelsemium answers well in cases of temporary congestion with insomnia and headache. In hysterical conditions, this agent will often induce sleep in a short time. The drug is given in

doses of five to ten drops every half-hour until the desired effect is obtained, or its physiological effect is produced in diplopia and ptosis. These appear sufficiently early to serve as a warning.

Dr. ISRAEL T. DANA, of Portland, reported two cases of opium habit occurring in a man and wife. The husband was a young man who had for some time given hypodermic injections of morphia to a patient dying of cancer. He subsequently broke his leg, and remembering the effect of the injections in the case of cancer, he tried them on himself. The result was so exhilarating that he "could not see why his wife should not have a little of the fun," and he began giving her the injections, although she was perfectly healthy. In this way the habit was induced, and when admitted to the hospital, each one was taking six grains of morphia daily.

Dr. M. G. DADIMAN, who had practised in Asia Minor and Constantinople, stated that he had never seen a case of opium habit in his practice in these places.

Dr. D. W. PRENTISS, of Washington, read a paper on *Remarkable Case of Slow Pulse*.

Second Day—Thursday, Sept. 19th.

Dr. FREDERICK P. HENRY, of Philadelphia, read a paper on the *Relation between Chlorosis, Simple Anæmia and Pernicious Anæmia*. The discussion of the relation between chlorosis, anæmia, pernicious anæmia, etc., may be divided into three heads:—(1) Are they separate diseases? (2) Are they of a kindred nature? (3) Are they different stages of one affection? Pernicious anæmia is first considered, because the determination of its status is of fundamental importance. It is admitted by all that the clinical features of this disease are common to a number of affections, especially cancer and atrophy of gastric glands; but those who argue most forcibly in favor of its independent nature exclude from the category of pernicious anæmia all cases in which an anatomical lesion of any organ is found. This appears to me unscientific, for an independent disease is one which rests upon a constant anatomical basis or is invariably produced by the same specific agent. Hunter has endeavored to establish pernicious anæmia

as an independent disease by the demonstration of an excess of iron in the liver in cases of that affection. He regards this as the essential anatomical feature of pernicious anæmia. The work of Hunter is of great value, and certainly demonstrates the existence of an excessive hæmolysis in that disease. In my opinion, however, this excessive hæmolysis is a consequence of defective hæmogenesis, for certain facts show the red corpuscles of pernicious anæmia to be abnormally weak and perishable. Chlorosis is universally admitted to be due to defective hæmogenesis, and therefore I regard it and pernicious anæmia as closely related affections. Transitions from one affection to the other have also been observed by myself and others.

Dr. F. FORCHEIMER, of Cincinnati, read a paper on *The Relation of Anæmia to Chlorosis*. The speaker first referred to the confusion which existed in regard to the definition of the two diseases. Immermann states that we are justified in stating that anæmia is that condition in which there is a diminution of red corpuscles as well as of the albumins of the plasma in the blood (hypalbuminosis). Strumpell considered that "the essential element in anæmia is therefore a diminution in the number of red corpuscles, or so-called oligocythæmia," and states further that "oligocythæmia is not invariably accompanied by a diminution in the amount of serum-albumin (by which he means plasma-hypalbuminosis)." Going on, it is found that anæmia or oligæmia vera really means a diminution of the whole quantity of the blood, and that this condition can be divided into hydremia, oligocythæmia, oligæmia sicca and oligæmia hypalbuminosis. We have three representative definitions: the one, broad and general, including a diminution of any one or all of the constituents of the blood; a second in which hypalbuminosis and oligocythæmia are the principal if not the only factors; and a third, which makes oligocythæmia alone the characteristic feature. From a purely practical standpoint the latter seems the best. The same confusion in regard to definition is met with in a consideration of chlorosis. Duncan (1867) was, however, probably the first to make the distinctive feature, oligochromæmia characteristic for chlorosis, that is, in chlorosis we find the individual red corpuscles

deficient in hemoglobin. Unfortunately for this definition, the term chlorosis is to be looked upon as an essentially clinical one; it is not going too far to state that by far the great majority of reported cases of chlorosis are not chlorosis at all. Another difficulty is that both oligocythæmia and oligochromæmia may occur in the same individual, so that the term chloranæmia is justified by observation of existing conditions. It is more than probable that anæmia is a forerunner of chlorosis in a great many instances; and possibly a number of cases occur in which there is a combination of both conditions. Almost any cause put down for anæmia will hold good for chlorosis. Sex, age, a peculiar composition of the blood, and certain vascular anomalies are held to be especially characteristic of chlorosis. The two latter are the only ones to be found in chlorosis. The process of sexual development is looked to as the time of most common occurrence of chlorosis. This age also produces a great number of cases of anæmia; but children and old people are subject to anæmia, and practically excluded from chlorosis. The greatest number of cases occurs between the ages of fifteen and twenty-five years, decidedly after the time of first menstruation. Furthermore, an anæmic constitution is a strong predisposing cause for chlorosis. The clinical characteristic of chlorosis lies in the peculiar changes in the blood. In anæmia, the red corpuscles, as well as the albumin of the plasma, are reduced in quantity, and frequently there is production of a greater number of smaller corpuscles (microcytes). As a result of the reduction of the number of red corpuscles, the Hb. is correspondingly reduced in quantity. In pure chlorosis the number of red corpuscles is not diminished, and a tendency to the production of larger red corpuscles (megalocytes) is especially well marked. These changes are, however, not sufficiently characteristic to establish a diagnosis. It is also found that the amount of Hb. in each corpuscle is diminished. It has been said that in anæmia there is always hypalbuminosis, while in chlorosis this is absent; but this has not yet been positively proved. One respect in which chlorosis is said to differ materially, if not absolutely, from anæmia, consists in the pathological changes, first described by Virchow. These are narrowing of the lumen of the aorta and larger arteries, as well as thinning of their walls. The heart

is sometimes small, sometimes hypertrophied. This view would permit us to state that chlorosis is always congenital, in some cases latent for years, while anæmia in most cases is acquired. Many objections have been urged against this view. The relation of the symptoms of anæmia to chlorosis depends upon the conditions of the blood and the anatomical substrata. Given a case of anæmia in which there is only a reduction of Hb. as a result of oligocythæmia, and a case of chlorosis, in which there is a reduction of Hb. as a result of oligochromæmia, and metabolism in both cases will be approximately the same; but if in anæmia we have oligocythæmia as well as hypalbuminosis, which is said to co-exist in the majority of cases, the metabolism must be different from that of a pure case of oligocythæmia. As a result of reduction of Hb. there is simply reduction in the process of oxidation; at the same time the waste products are carried off, and sufficient albuminous food is carried to the tissues by the plasma of the blood, which is unchanged. Hypalbuminosis and oligocythæmia produce an entirely different result. We have the same factor, suboxidation; but we have, in addition, deficiency of supply. In mild cases of anæmia there is produced a loss of weight; in severe cases the condition called marasmus. In chlorosis very little if any loss of weight occurs; very frequently the opposite condition is brought about by too great supply, and by the presence of too much CO_2 preventing decomposition of fats. When anæmia is associated with chlorosis, we have a very unfortunate combination, especially if there is a great amount of hypalbuminosis. Unless we believe that the anatomical lesions of Virchow belong to chlorosis, there exists no difference between the symptoms of chlorosis and anæmia. The therapeutic relations of the two diseases must be considered. While the indiscriminate use of iron in anæmia must be deprecated; yet, upon the whole, iron is just as much looked upon as a specific in anæmia as in chlorosis. Where in anæmia we try to remove the cause and institute causal treatment, we are satisfied in chlorosis with removing that symptom which is the essential of the disease. It has been repeatedly demonstrated that the removal of this essential symptom is followed temporarily by complete recovery. Whereas, in anæmia, treatment

is followed by complete recovery or complete failure, iron in chlorosis will always result in amelioration, even if the tendency to relapse cannot be removed. There are few cases of chlorosis, even those with the lesions of Virchow, that are not benefited by the administration of iron in sufficient quantity. In a great many cases of anæmia, the use of iron would be followed by negative or by bad results.

Discussion.—Dr. WILLIAM OSLER, of Baltimore, took issue with Dr. Henry in regard to chlorosis. He held that chlorosis is absolutely distinct from pernicious anæmia, and for the following reasons: (1) The sex. He had never seen chlorosis in the male. (2) The pathological conditions. He regarded the hyperplasia of the heart and great vessels as a specific anatomical distinction of a certain number of cases. (3) The character of the blood. He considered the diminution of the percentage of hæmaglobin a distinctive feature of chlorosis. (4) Curability. Although in chlorosis there is a tendency to relapse, each given attack can be cured if sufficiently large doses of iron are employed.

Dr. FRANCIS P. KINNICUTT, New York, agreed as to the lack of relation between chlorosis and pernicious anæmia. He had never seen true chlorosis in the male. All his cases of pernicious anæmia on the other hand, with one or two exceptions, had occurred in males. He agreed with Dr. Henry in regard to the relationship between Hodgkins' disease and true leukaemia. He reported a case which came under his observation with typical symptoms of Hodgkins' disease. At this time the proportion of white corpuscles to red was normal. The spleen and liver gradually enlarged, and two years later, at the time of the patient's death, there was one white corpuscle to five or six red.

Dr. W. W. JOHNSTON, Washington, thought that a study of certain anæmias which are met with in women will throw light upon the association of anæmia with diseases of the intestinal glands and gastric tubules. The explanation of the chronic anæmias of parturition is probably the continual pressure upon the intestinal tube, causing a long starvation lasting nearly a year. This seems to produce an actual organic change in the intestinal glands. Several illustrative cases were cited.

Dr. WILLIAM PEPPER, Philadelphia, agreed with Dr. Osler in regard to the relation between true anæmia and chlorosis and progressive pernicious anæmia, so-called. He was not prepared to admit the analogy between true chlorosis and progressive pernicious anæmia. The conditions of the blood are widely antagonistic in these two affections. The clinical differences are also very marked. In the present state of knowledge, it is probably wiser to consider essential anæmia as an independent affection.

Dr. FREDERICK P. HENRY, Philadelphia, thought that the definition of chlorosis given by Dr. Osler could not be maintained, that is, that there is always a diminution of hæmoglobin with a nearly normal number of red corpuscles. The arguments that he had advanced were based entirely upon personal observations. While chlorosis is readily relieved by treatment in the early stages, yet, if it is neglected, the chlorosis may become more intense and may present the appearance of pernicious anæmia.

Dr. S. WEIR MITCHELL, Philadelphia, read a paper on the *Subjective False Sensation of Cold, Considered as a Symptom*. The speaker had met with many cases where a feeling of cold is complained of in members which do not present any objective changes in temperature. These may be placed in three classes: (1) Those due to a central cause; (2) those due to neuritis; (3) those whose origin is at present inexplicable or due to hysteria. A number of cases exhibiting this symptom to an extreme degree, were reported. In the first case, a marked sensation of cold, involving the left side of the body, followed an injury to the head. Three or four cases were referred to, coming in the second class. The sensation of cold involved the posterior part of the legs, the back or buttocks. In all these cases, there was either neuritis at the time or it developed subsequently. When this symptom is noted neuritis may be expected. Two cases belonging to the third group were described. One was an elderly individual with no sign of hysteria. The other was a case of a young woman with marked hysterical symptoms.

Discussion.—Dr. JAMES J. PUTNAM, of Boston, had frequently seen the coldness spoken of in chronic spinal disease and in neuritis, and described such a case in a man with chronic sensory neuritis.

Dr. F. T. MILLS, Baltimore, regarded this sensation of coldness as a very important symptom of neuritis, and reported a case associated with acute neuritis of the ulnar nerves.

Dr. G. M. GARLAND, of Boston, read a paper on *Gastric Neurasthenia*. The author first reviewed Leube's observations on dyspepsia nervosa, and presented a category of the gastric neuroses. A case of anorexia nervosa, occurring in a woman sixty-three years of age, was reported. The woman was of feeble constitution. She had digested her food without consciousness of the process, and her bodily functions were practically normal in every way except that she suffered from anorexia. Three cases of nervous vomiting were then reported. The conclusions drawn from the cases were that: (1) All the women have been of dark complexion. (2) They have not been of the so-called hysterical temperament. (3) Feeding by the mouth was abandoned in every case, and rectal enemata were necessary. (4) None of the drugs usually potent in soothing a nauseated stomach were of any avail. Morphia subcutaneously was the only remedy that was of benefit. (5) The vomitus caused great discomfort along the throat, and in one case caused severe glossitis. In connection with the hyperacidity, the reader referred to certain cases of acid vomiting described by Rossbach, and designated nervosa gastroxy-nosis. The acidity of these cases depends upon excessive secretion of hydrochloric acid, and is independent of the presence of food in the stomach.

Afternoon Session.—The discussion of Dr. Garland's paper was taken up.

Dr. S. WEIR MITCHELL, Philadelphia, said that in all cases of neurasthenia where there are great complaints of gastric and intestinal difficulty, the presence of hypochondriacal conditions must constantly be considered. It is rare for grave cases of neurasthenia to present themselves without some abdominal symptoms. In regard to anorexia nervosa he thought that in the majority of cases a background of hysteria would be found. It is suspicious that this condition is never seen in men.

Dr. WILLIAM PEPPER, Philadelphia, asked in what respects, other than the invariable and extreme acidity of the matters

vomited, these cases differ from those that have been described under the head of cyclic and recurrent vomiting. He had seen many such cases, and some like the fatal case reported. In some of the cases the vomited matters were extremely acid. He had had these matters examined chemically, with the hope of finding some leucomaine, but so far with negative results. In regard to the treatment, the only remedy that had been of benefit, had been antipyrine. In one or two cases this had apparently stopped the attacks.

Dr. F. W. WHITNEY, of Boston, presented specimens from two cases of *Cretinism*.

Dr. JOHN H. MUSSER, of Philadelphia, read a paper on *Primary Cancer of the Gall-bladder and Ducts*. The speaker, after describing two cases of this affection that had come under his observation, reviewed the cases that had been reported and presented the following conclusions:—Primary cancer of the gall-bladder is not so rare as is generally believed. It occurs in the female nearly three times as often as in the male. A large number (fifty-seven per cent.) of the cases occur under the age of sixty. Gall-stones are an exciting cause, especially in persons predisposed to the affection. The organ is generally not much enlarged save as the result of secondary processes.

Dr. HENRY FORMAD, of Philadelphia, read a paper on *The Anatomical and Physiological Relations of Lesions of the Heart and Kidneys*. The paper was based upon the post-mortem study of three hundred cases observed in public and private practice.

Dr. P. G. ROBINSON, of St. Louis, read a paper on *The Contagium of Diphtheria*. The subject is one which merits our most earnest and continued study, because of the prominent place it occupies among the prevailing causes of annual mortality, and because of the diversity of opinion which is entertained in regard to its etiology, pathology and treatment. The disease has become familiar to the practitioner only within the last generation, although traced historically to a very remote period. It prevails very generally throughout this continent, and constitutes one of the chief and most constant causes of mortality, which amounts to nearly 125 per thousand of the population of the

United States, and of cases reported the percentage of deaths is from thirty to thirty-five. Diphtheria is an acute infectious disease, doubtless due to a living organism (microbe), the exact identity of which cannot yet be regarded as settled. Primarily a local affection, the system becomes secondarily and generally infected through absorption of a poison generated at the primary and localized seat of inoculation. The modes of infection are numerous, the contagium being directly transferred by contact in a dry state through the air for limited distances in foul clothing, in polluted food and drink, milk probably being a prolific source of infection. The most difficult problem to solve is that which relates to the conditions most favorable to the growth and development of the germs and the propagation of the disease. While, strictly speaking, diphtheria can hardly be called a filth-disease, since it prevails often to a very limited extent in those localities whose hygienic surroundings are apparently the worst, yet certain kinds of filthy accumulations, such as the ordure of animals, notably the refuse of cowsheds and dairies, seem to furnish the most favorable conditions for the culture of this particular germ. Until this problem can be solved and the life history and habitat of the diphtheritic germ is understood, no definite plan can be formulated for the arrest of the contagion nor for the hopeful treatment of the disease.

Third Day—Friday, Sept. 20th.

The following officers were elected :

President, Dr. S. C. Busey, Washington; 1st Vice-President, Dr. William Pepper, Philadelphia; 2nd Vice-President, Dr. Henry U. Lyman, Chicago; Recorder, Dr. I. Minis Hays, Philadelphia; Secretary, Dr. Henry Hun, Albany; Treasurer, Dr. W. W. Johnston, Washington; Member of Council, Dr. G. Baumgarten, St. Louis; Representative on Executive Committee of Congress of American Physicians and Surgeons, Dr. William Pepper, Philadelphia.

The following members were elected: Drs. William G. Thompson, William H. Thomson, J. West Roosevelt, New York; Drs. Charles Carey, Charles G. Stockton, Buffalo; Drs. Victor C. Vaughn, Heneage Gibbes, Ann Arbor; Dr. Charles W.

Purdy, Chicago; Dr. Starling Loving, Columbus, O.; Dr. W. H. Geddings, Aiken, S.C.; Dr. William C. Dabney, Charlottesville, Va.; Dr. B. F. Westbrook, Brooklyn; Dr. Henry P. Walcott, Cambridge, Mass.

The date of the next meeting to be between May 20th and June 15th, 1890.

Dr. JAMES J. PUTNAM, of Boston, read a paper on *A Supplementary Inquiry into the Frequency with which Lead is Found in the Urine*. The paper embodied further researches as to the frequency with which traces of lead are found in the urine of persons in good health, or not presenting the classical symptoms of lead poisoning; and discussed the propriety of enlarging our clinical conception of that disease. A table was shown in which the results of the present investigation were combined with those reported upon two years ago, which may be summarized as follows: The urines of sixty-eight persons, either presenting no symptoms (healthy medical students), or only symptoms of specific or local disease (phthisis, pleurisy, local injuries, etc.), were found by Dr. A. M. Comey and Dr. C. P. Worcester to contain lead in the proportion of about seventeen per cent.; while those of another group of 125 persons, presenting various symptoms of disease such as it was thought might possibly be due in part to lead poisoning, contained lead in the proportion of fifty per cent. The largest sub-group of this latter class embraced thirty-six cases, not strictly homogeneous, but made up of chronic or sub-chronic affections of the spinal cord and peripheral nerves. One (typical) fatal case of this sub-group was analyzed at some length, and the results of the microscopic examination of the spinal cord and nerves were reported upon.

Dr. E. M. GREENE reported a number of observations made on Boston drinking water, showing the frequency with which lead is present, and the length of time required to wholly rid a pipe of its presence.

Dr. HAROLD C. ERNST, of Jamaica Plain, Mass., read a paper on *How Far a Cow may be Tuberculous before the Milk Becomes Dangerous as a Food-Supply*. The observations which he reported were made at the instance of the Massachusetts Society for the Promotion of Agriculture. The surroundings of the

animals used were prepared in the most careful manner. One hundred and fourteen samples of milk were examined for the bacillus, and these were obtained from thirty-six cows suffering with tuberculosis of some organ other than the udder. Seventeen samples were found to contain tubercle bacilli. These specimens came from ten cows. The cream was found to contain bacilli as often as the milk. The bacilli were present with a fair degree of constancy. Well animals were then inoculated with the result of inducing the disease in 50 per cent. of the cases treated. Feeding experiments were also made with the result of inducing the disease in a number of calves and young pigs. The following conclusions were presented:—(1) Emphatically, milk from cows affected with tuberculosis in any part of the body may contain the virus of the disease. (2) The virus is present whether there is disease of the udder or not. (3) There is no ground for the assertion that there must be a lesion of the udder before the milk can contain the infection of tuberculosis. (4) On the contrary, the bacilli of tuberculosis are present and active in a very large proportion of cases in the milk of cows affected with tuberculosis, but with *no discoverable* lesion of the udder.

A paper on *Primary Cancer of the Duodenum*, by Dr. E. N. Whittier, of Boston, was read by title.

Dr. WM. OSLER, of Baltimore, exhibited a patient showing anæsthesia, the result of lesions of the cauda equina, from spina bifida which had healed.

Dr. E. L. TRUDEAU, of Saranac Lake, read a paper on *Hot Air Inhalations in Pulmonary Tuberculosis*. The paper presented a brief clinical history of four cases treated during periods varying from one to four months, by Weigert's method. This was considered as secondary and only as a basis for the bacteriological study which is left to answer the claim of specificity made for the method. The question to be answered is whether breathing of hot air can prevent the growth of the tubercle bacillus in the lungs of living individuals. The clinical evidence obtained brings out no positive proof in favor of the treatment. From the bacteriological research the following notes are made: In all the cases the bacillus which was present before the treatment remained in the sputum, and

no effect was produced upon that important element of the disease. The claim of diminished virulence was tested by inoculations made on rabbits before, during and after the treatment. The sputum of one of the patients who improved was found fifteen weeks after the uninterrupted daily breathing of hot air to produce tuberculosis in the animals injected, as promptly and to a similar extent as that injected before the treatment had been instituted. The author's conclusions were: (1) The therapeutic value of hot air inhalations in phthisis is doubtful; (2) the evidence obtained by bacteriological study of the cases recorded does not confirm the assumption that inhalations of heated air can either prevent the growth of the tubercle bacillus in the lungs of living individuals or diminish the virulence of this microbe when it has gained access to them.—*Boston Medical and Surgical Journal*.

Selections.

Pathological Affinities of Lead and Alcohol. By Dr. Norman Porritt, Surgeon to the Huddersfield Infirmary.—To account for the prevalence of lead poisoning in Huddersfield it is only necessary to be acquainted with the character of the water supply. The water supply is derived from several sources, and it is found that the water from two reservoirs is not only abnormally acid, but has also the dangerous property of dissolving lead, and when left standing in the lead service pipes attacks them and forms a plumbic solution. As is well known, other towns have, or have had, water supplies which act upon lead. Keighley and Sheffield have each acquired some notoriety.

Noticing, in the first place, that both alcohol and the salts of lead coagulate albumen, we may, for convenience sake, divide their actions into two great groups—(1) the excretory group, and (2) the nervous group. Turning first to the excretory group of phenomena, we are at once confronted by the action of these substances on the kidneys. Each is a recognized cause of albuminuria, each can play a part in the causation of granular kidney, while the subtle power of each to initiate or develop gout is well known. In short, each damages the kidneys, and

may set up not only temporary and functional disorder, but even ineradicable organic renal disease. On the other excretory organs, the chylopoietic viscera, the actions of alcohol and lead, though analogous in their ultimate results, are different in their *modus operandi*. Alcohol attacks the liver; lead, the bowels. Alcohol encourages secretion from the mucous tracts: lead diminishes it. But the increased activity of the alcohol-stimulated mucous membrane is more than counterbalanced by the diminution of oxidation which is taking place in the rest of the body. This diminution of oxidation has a counterpart in the case of lead, for, according to Dr. Lauder Brunton, lead has the power of checking the elimination of uric acid.

Both lead and alcohol have a special, a peculiar, and a well-known action on the nervous system. Alcohol is eliminated from the system much more easily and more rapidly than lead, and we are not so familiar with its paralyzing effects as in the case of a poison which, like lead, slowly accumulates in the body. As is well-known, however, paralysis from alcohol, when given in a dose too large for the excretory organs to be got rid of, or when administered in smaller quantities over a long period, is not uncommon. The effects of alcohol are essentially paralytic, as are also those of lead, and there is not only nervous or muscular paralysis, but there are, if I may coin a phrase, excretory and metabolic paralysis.

Then alcohol and lead resemble each other in both being elective poisons. Some men are made tipsy by a quantity of drink which would do no more than serve as a thirst-quencher for others; and, on the other hand, of two individuals imbibing a plumbic solution, the one may suffer the throes of colic, while the other escapes any unusual manifestation. Lead has little or no elective affinity for children, or the numerous children of our lead-poisoned patients would surely suffer. Of twenty-two cases of lead-poisoning which have been under my care, fourteen were males and eight females. Of the eight females three only suffered severely, and they were all above the age of sixty. The conclusions from these facts are that lead has a greater elective affinity for men than women, a greater elective affinity

for women than for children, and a greater elective affinity for old than for young women.

Without denying that there is such a thing as elective action I would suggest that by professing to explain the way in which lead singles out one of several victims by the term of "elective action," we are in many cases just glossing over our ignorance by a plausible and pretty figure of speech. There must be some causes for the elective action of lead, and, although in many cases they may elude us, let us endeavor to search for them, and not take refuge in such an empty phrase as "elective action." I suggest, as one explanation of this elective action, that whatever hinders metabolism or checks excretion will enhance the susceptibility to lead poisoning. Children with active metabolic processes and vigorous excretory organs rarely suffer. Women, whose kidneys are less often afflicted with Bright's disease than those of men, are less frequently the subjects of lead poisoning; while my own cases suggest that young women suffer much less severely than old ones. *A priori* there is a strong presumption that men, from more frequent exposure to sources of poisoning, should suffer more often than women. But this presumption can only be held when the cases of workers in lead are considered. In my twenty-two cases one man and one woman were poisoned by lead other than that derived from lead service pipes. Twenty cases remain—thirteen in males and seven in females, or not quite two to one. In all these cases the source of the lead, on chemical examination, was found to be the drinking water.

Now, in cases of poisoning from a water-supply, it is the wife and not the husband, who is the more exposed to the poison. She spends her greater part of her time at home; she takes all her meals at home, and often takes supplementary meals or cups of tea when her lord and master is at business. It is, therefore, much more likely that she and her little ones will imbibe more of the toxic material than her frequently absent spouse. The point was illustrated in the case of *Milnes v. the Corporation of Huddersfield*. The plaintiff, a solicitor of Huddersfield, being lead-poisoned, sought for the lead, not in the domestic

water-supply, but at the water supply at his office in town. The lead was ultimately discovered in the domestic water-supply which was used by the whole family, but which Mr. Milnes did not suspect, as after breakfast he spent his whole day from home at his offices and business in the town. Notwithstanding, my cases show that more men are affected than women. What is the explanation of this unexpected disproportion? If the lessons of my twenty cases have been rightly understood, I have a clue to the explanation in the greater alcoholic consumption of the male sex.

Examining my thirteen cases more closely, I find that one died with all the symptoms of abdominal obstruction; two had wrist-drop, two had general convulsions, with more or less complete unconsciousness. The remaining eight cases suffered from nothing worse than colic, though that is bad enough. All the eight colic cases occurred in workingmen, and in every case but one there was no evidence to show that the patients were otherwise but steady and usually abstemious men; indeed, one was a total abstainer. Of the five severe cases, three were drunkards or "soakers;" the fatal case was that of a man who worked as a cloth finisher in a very hot room, had the pot-belly of a drinker, and always drank beer, although his wife never knew him to be the worse for liquor more than three times. Of the two cases in which there was wrist-drop, one man is known to be unsteady, and, though preferring beer, never turns up his nose at spirits. The other wrist-drop case is employed at a hotel, where the opportunities for getting drink are many. Then we come to the two cases where general convulsions with unconsciousness occurred. One of them caused me much anxiety, and when the man's condition was at its worst, as I was leaving his house a neighbor stopped me. The neighbor, after enquiring after my patient, asked me where the lead came from that was poisoning him. I told him the drinking water. He shook his head doubtfully, and said he was sure it could come from nowhere else but the top of the patient's beer-barrel, the beer having taken it up as it ran from the barrel. The hint thus given was followed up, and I elicited that the patient had

drunk beer to excess for some time before I saw him. In the other case with convulsions a similar history was discovered. These men were respectively twenty-eight and thirty-two years of age, and seemed vigorous, healthy men. One I have lost sight of, but the other occupied the same house for three years after his illness, became a teetotaller, and has had the best of health. In none of these five cases was any other inmate of the house affected, although at one house the drinking water contained as much as 1.3 grain of lead per gallon. Each patient was married and has a family, and their occupations did not bring them into contact with lead.

Alcohol, then, has a very powerful influence in intensifying the effects of lead. My friend, Mr. Abbott, late of Almond-bury, tells me that the worst case of lead poisoning he has seen is that of an inebriate painter; while a practitioner in a neighboring township, where an epidemic of "water-supply lead poisoning" is occurring, assures me that the case of the landlord of a beer-house is the most severe one he has had under his care.

Although Dr. Clifford Allbutt has observed the frequent concurrence of spirit drinking and lead poisoning, he thinks the increased ingestion of leaden water which is taken with the spirit explains what is evidently not a mere coincidence. Here I should join issue with Dr. Clifford Allbutt, and allot a considerable share of the toxic work to the alcohol. As we have seen, both alcohol and lead interfere with metabolism and check excretion. The result is: the alcohol locks in the lead; the lead chains up the alcohol. A combination like this accentuates the action of lead, or produces a hybrid sort of affection partly alcoholic and partly plumbic, as in the two cases with general convulsions.

My cases justify, I think, the views I hold, but my contention is further strengthened by a knowledge of the remarkable way in which the kidneys excrete lead. In one of my cases I was uncertain whether the patient was suffering from plumbism or hidden malignant disease. To decide the question, I had, not only the drinking water, but the patient's urine, analysed

by Mr. George Jarman, F.I.C., the borough analyst. His report was that the drinking water contained 0.8 gr. of lead per gallon, the urine 0.28 gr. of lead per gallon. Thus the patient's urine contained such a proportion of lead as would have caused poisoning if present in drinking water. When we bear in mind the albuminuria of inebriety, fluctuating with each increase or diminution in the alcoholic consumption, and disappearing, perhaps, during the abstemious intervals, and when we remember that a great outlet for the excretion of lead in the kidneys, we must allow that there is *a priori* probability that the combination of lead and alcohol is not likely to be so readily got rid of as either substance singly. The question is important from a practical point of view, and I would suggest in all cases of lead poisoning, but more especially in the rarer cases where the higher nerve centres are affected, that a careful enquiry into the patient's habits be made.—*London Lancet*, January 26, 1889, p. 164.

On the Lobar Pneumonia of Children.

By DR. THURE HEKSTRÖM, in Stockholm.—In the children's clinic of Professor von Iaksch in Graz, thirty cases of croupous pneumonia came under observation in one year. Hekström publishes the histories and fever charts and adds some remarks thereon. The initial symptoms were always sudden, a special rigor but seldom occurred. The inflammation affected in a majority of the cases the upper lobe, (19 times in 30 cases) and the upper lobe of the right lung was twice as often attacked as that of the left lung. Pneumonia of the upper lobes is no more dangerous than that located elsewhere. The crisis follows in between four to ten days generally in twelve hours. In one case a relapse occurred—a rare event in childhood. All the cases ended favorably. Of the complications, pleurisy occurred four times in one of the cases—a dry pleurisy set itself up on the side opposite to that on which the disease existed. A little girl, six years old, became covered with an erythematous rash on her face and abdomen, which disappeared after some days. In the urine—whose quantity was always diminished and in some instances considerably—albumen was found in only five cases and traces of

it in two others. Frequently, on the other hand, peptone, acetone and acetic acid were found. Whilst the latter in grown up persons indicate a severe course of the disease, a similar significance can be assigned to them in the case of children. Von Jaksch conjectures that certain nervous symptoms in the course of a pneumonia are in connection with the diaceturia. The therapeusis was as simple as possible. Antipyrin and thallin were given in cases where the temperature was very high. For the severe pains dry cupping was found very serviceable. To relieve the severe cough urethan and antipyrin were of use; for the debility, which was rarely present, alcohol as a stimulant was prescribed.—*Schmidt's Jahrbücher*, Band 222. Jahrgang 1889, No. 4.

THE
Montreal Medical Journal.

VOL. XVIII.

NOVEMBER, 1889.

No. 5.

THE TRANSMISSION OF ACQUIRED PECULIARITIES.

The interesting discussion as to whether acquired peculiarities are capable of being transmitted seems as far from settled as ever. The assortment of recent literature is something appalling, and makes very dry reading. The difficulty is to find some crucial test. No sooner does some believer in the affirmative side suggest some case, supposed to be free from fallacies, than an opponent proceeds to shew it to be full of them, and to the ordinary reader both appear to be equally right.

Thus far it seems to be a drawn battle, if any advantage exists, it can scarcely be denied that the noes have it. The cases advanced by the upholders of a possible transmission of acquired peculiarities have depended largely upon a mass of hearsay evidence and on cases or experiments capable of two interpretations. Thus the fact that among animals whose tails or ears are docked, isolated cases occur in their offspring where these organs are stunted, was taken as a proof that the condition was capable of being transmitted. Bonnet, however, has shown that in the domesticated animals the tail was an organ shewing a gradual process of involution and reduction of the vertebræ, and liable to be stunted independent of any interference. Weismann has followed the matter up in the case of white mice, where he had through five generations docked the tails without any of the hundred individuals showing any tendency to inherit the defect.

Thus the inheritance of abnormalities of traumatic origin

appears to be very questionable. The question of the hereditary immunity from contagious diseases is even more interesting clinically. Prof. ———, of Budapest, who has experimented extensively in rabies, exhibited a dog born of parents who had each been subjected to prepared inoculations of modified rabic virus. This puppy on being inoculated with fixed virus (*i. e.*, virus of maximum intensity) was found to be perfectly immune. Of course this case is open to the objections that with the uncertain incubation period characteristic of rabies, the disease may have affected the animal in its modified form while still *in utero*. Then again some dogs are naturally immune.

On the whole, the solution of this problem appears to be far off, but even should acquired conditions be proved beyond cavail incapable of transmission, there is little doubt that their real or supposed transmission will continue for all time to form an important plank of the temperance platform.

A NEW ANTHRAX VACCINE.

Professor Hueppe, of Prague, has recently made an important contribution to the subject of the protective inoculation for anthrax. His method of investigation was extremely interesting. The present vaccine, an alternated anthrax virus, though very serviceable, is difficult to prepare and liable under certain conditions to regain its full virulence. Further, the person inoculating is always, after all, propagating genuine anthrax, though in a mild form.

In solving the problem of how to procure a protective vaccine, free from these objections, Hueppe resorted to the plan of investigating the chemical decomposition products of albuminoids (ptomaines) obtained by the action of various non-pathogenic bacteria in pure cultures. He finally in this way discovered a harmless organism found in garden earth whose ptomaines were almost identical chemically with those of anthrax. By previously inoculating cultures of this he succeeded in rendering white mice, the animals who, of all others, are most susceptible to even very attenuated anthrax, completely immune to inoculations by it, even in its most virulent form.

Thus far the results are most brilliant, and if it proves suited to practical purposes, this method will place anthrax vaccinations in a position comparable with those against smallpox as regards their freedom from untoward results.

MULTIPLE MYELOMA AND ALBUMINOSURIA.

Kahler, of Prague, reports a case of multiple myeloma affecting only the bones of the trunk. The ribs, spinal column, and the iliac bones were found to be extensively diseased. Spontaneous fractures had occurred in a number of the ribs. The patient, a man aged 43, succumbed after an eight years' illness.

A very interesting fact was that during the last six years of his illness the urine was constantly found to contain considerable quantities of albuminose. Kahler suggests that the presence of albuminose in the urine in considerable quantities in this disease may aid us to distinguish it from osteomalacia.

Albuminose is only exceptionally found in the urine in cases of osteomalacia, and then only in small quantities.

THE HARVEY CASE.

The man Harvey, who killed his wife and two children a few months ago in Guelph, has been tried, found guilty of murder, and is sentenced to be hanged in a few days.

Active steps are being taken to petition the Minister of Justice to commute the sentence of this unfortunate man, on the ground of insanity. For the sake of humanity it is to be hoped that this effort will be successful. Four of the leading experts in insanity in Ontario, testified at the trial, that in their opinion Harvey was insane at the time he killed his wife and children. The Jury, however, appear to have laid little stress on the opinions expressed by those best able to judge of the prisoner's mental state. They found him guilty. The Judge sentenced him to be hung, and unless proper representations are made to those in authority, the sentence will be carried out, and another case will be added to the long and cruel list of judicial murders.

Medical Items.

—Dr. R. W. Reid has been appointed Professor of Physiology in University College, Dundee.

—Prof. Neumann received, it is said, the sum of \$20,000 for his professional visit to the late King of Portugal.

—Prof. von Krafft-Ebing is the successor of the late Prof. Leidesdorf in the Clinic for Mental Diseases in the Vienna Landes-Irrenanstalt.

—Dr. Robert W. Reid, Joint Lecturer on Anatomy at St. Thomas Hospital, London, has been appointed to the Chair of Anatomy in Aberdeen, rendered vacant by the retirement of Prof. Struthers.

—Dr. Hofman von Wellenhof, assistant to Professor Gruber, of the Vienna Hygiene Institute, died recently from glanders contracted from a coachman whom he was attending. The infection took place through the respiratory passages.

THE JOHNS HOPKINS HOSPITAL BULLETIN.

The Trustees of the Johns Hopkins Hospital have authorized the issue of a monthly publication to be known as the Hospital Bulletin. It will contain announcements of courses of lectures, programmes of clinical and pathological study, details of hospital and dispensary practice, abstracts of papers read and other proceedings of the Medical Society of the Hospital, reports of lectures and all other matters of general interest in connection with the work of the Hospital.

In size of page and general make-up the Bulletin will resemble closely the Johns Hopkins University Circulars. In fact it will attempt to fill in the Hospital the same place which the Circulars fill in the University. Nine numbers will be issued annually. The first number will appear in November, 1889.

The subscription price will be one dollar per year. Subscriptions may be sent to "The Publication Agency of the Johns Hopkins University, Baltimore, Md."