

Technical and Bibliographic Notes / Notes techniques et bibliographiques

Canadiana.org has attempted to obtain the best 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.

Canadiana.org 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 CANADA LANCET.

A MONTHLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE,
CRITICISM AND NEWS.

Original Communications.

VIBRATORY MEDICINE.*

* Lecture delivered by Professor Charcot at the Salpêtrière, Paris. Translated from the original by D. Campbell Meyers, M.D., Toronto.

GENTLEMEN,—It was in 1878, in my service at the Salpêtrière, that M. Vigouroux commenced the trial of a method of which I wish to speak to you to-day: the treatment of certain affections of the nervous system by mechanical vibrations. M. Vigouroux at first studied the effects of these vibrations on several hysterics. By means of an enormous tuning fork put in action, he succeeded in dispelling hemianæsthesia and in breaking up contractures nearly as rapidly as with the magnet or the electric spark. He also calmed the lightning pains in a patient suffering from locomotor ataxia. As the result of a number of experiments of the same kind he was enabled to establish that the vibrations of a tuning fork have exactly the same physiological actions as the metals, the magnet and static electricity. The following year Schiff arrived theoretically at the same conclusions.

These experiments were not continued, and we must pass on to the 1880 period at which a distinguished electrician, M. Boudet, of Paris, began some new experiments which led him to some very important results. M. Boudet studied especially localized vibrations, or rather those he made to act locally. He constructed a tuning fork, mounted electrically, and fitted to the board-support of the tuning fork, at the point where the vibrations are felt with the greatest intensity, a small rod of copper, about twelve centimetres long, and terminated by a disc, which was applied to the part of the body or the nerve which one desired to submit to the vibrations. The disc was of small surface dimensions to prevent the diffusion of the vibrations, but in order to localize them better the disc may be terminated by a blunt point.

The first experiments of M. Boudet were made on a healthy man, devoid of any alteration of sensibility. On applying the vibrating rod on a rather sensitive region of the skin, the supra orbital, for example, he produced in a few moments a local analgesia, and even a very marked anæsthesia, which lasted from eight to twenty minutes, varying with the different subjects.

“The same experiment tried, he says, on different parts of the body leads to a like result, with this consideration that the effects are the more rapid and complete according as (1) one acts nearer to a sensitive branch (2) the tissues have less thickness and the base on which they rest is more resistant. The greatest effect is hence obtained on the forehead, the temples, the gums, the mastoid processes, etc., in a word, on all the points where the sensory nerves can be easily compressed on an osseous surface by the vibrating disc.”

In acting in this manner one can rapidly calm diverse neuralgias, facial neuralgia in particular. The number of vibrations per minute is of little importance; it is not the same with the intensity and energy which within given limits are indispensable.

The article which he published in regard to it contained besides some other considerations, which for being less well explained are not less interesting.

“When one applies,” he says, “the instrument on one of the points (of the face) that we have just cited the walls of the cranium vibrate in unison with the tuning fork as the sides of a drum would do, and one experiences a peculiar sensation that certain subjects compare to the commencement of vertigo, and which in certain others determines a very marked desire to sleep.

“In the cases of migraine, even benign, these very rapid vibrations communicated to the cranial walls, and in consequence to the encephalon leads to the cessation at the end of a few minutes, and often even cuts short the attack when taken at its commencement. We have been able, thanks to this procedure, to ourselves avoid some attacks of migraine which paralyzed us usually for many hours, and we are certain that many dyspeptics and rheumatics afflicted with the same evil will find therein a precious remedy for their sufferings.”

M. Boudet terminates by expressing the very probable hypothesis that the transmission of the

vibrations to the brain plays a rôle in the production of these effects.

Scarcely had the author published his article when the question of priority arose.

Dr. Jennings wrote a letter published by the *Progrès Médical*, February 19th, 1881, in which it was said that for four years Dr. Mortimer Granville, of London, applied the same method of vibrations for the cure of pain. He had even invented a special instrument called "the percuteur" which had been tried with relative success in a hospital in Paris.

M. Boudet recalled the experiments of M. Vigouroux, said that neither Dr. Mortimer Granville nor himself had "invented the vibrations," and desirous, perhaps of avoiding all future discussions, cut short his researches.

M. Granville, however, in a book which appeared in 1883, tells us the results of the method which he has employed in the treatment of certain diseases of the nervous system. The work of M. Granville may be divided into two parts: one theoretical, one practical, the second resulting directly from the first.

Vibration gives to the nerve which serves to conduct it the energy that it had lost. M. Mortimer Granville proposes to always act *locally*. He makes use of a percuteur, the "clock work percuteur," the mechanism of which recalls that of the striking part of a clock. This apparatus is convenient for the practitioner, it is portable and difficult to put out of order, but the doctor who devotes himself especially to percussion will employ in preference the system set in motion by electricity. The rod, percussing much rather than vibrating, is of a variable form; a button, a disc, a small hammer with a flat head, a pencil or brush. According as one wishes to act locally or over a more extensive surface, one can even place a painful foot in water for example, and make use of this latter to diffuse the vibrations. The séances have a variable duration according to the case.

The results that he has obtained in the treatment of certain neuralgias, in particular of facial neuralgia, are remarkable. But the treatment is especially to be recommended in neurasthenia, cerebral or spinal, in migraine and in insomnia. If a headache is localized, one percusses and causes to vibrate locally the nerves and nervous plexuses of the neighborhood; if it is more extended as in

migraine, one passes the vibrating brush from before backwards. The same procedure is followed in the pains of neurasthenia which are localized the length of the vertebral column. Let us retain these different methods of treatment, we will be obliged to recall them presently.

For a long time I have taught patients attacked by paralysis agitans that they would derive great benefit from voyages on a railway or in a carriage. During the entire duration of the voyage the sensations so troublesome and at times so painful, which are the almost necessary cortège of this disease, seem to disappear almost completely; the benefit lasting a certain time after the termination of the voyage. I had very often occasion to remark these facts to the students who followed my lectures, and I expressed the hypothesis more than once that good effects would follow the treatment of Parkinson's disease by a procedure which would resemble the combination of movements communicated to the body by a carriage in motion.

One of my hearers, Dr. Jégu, proposed to me to search for an apparatus realizing these desiderata. Aided by a distinguished engineer, M. Solignac, he constructed an arm chair in which a special mechanism communicated rapid movements of oscillation around an anterior and lateral axis. These movements combined and opposed produced a vibration, a rapid trembling, very like, as you may judge for yourself by sitting in the chair, to that which one experiences when seated in a railway carriage in motion. The apparatus installed, M. Jégu had no trouble in finding subjects for experiment among the patients of my service, and those who frequented my polyclinic, but death came suddenly to overtake him in the midst of his researches.

At my request, M. Gilles de la Tourette, my former *chef de clinique*, was kind enough to continue the experiments which had been interrupted. These have been tried as yet on eight subjects, six men and two women. Unfortunately these, for the most part, have not belonged to the service, and several for diverse causes have followed the treatment irregularly.

Without seeking to analyze one by one the satisfactory results which have been obtained, one is permitted at present to form a general idea of the action of the treatment.

Improvement generally makes itself felt after

the fifth or sixth séance. This change is felt especially in the painful phenomena which so frequently accompany Parkinson's disease.

Immediately after quitting the shaking chair, the patient feels himself lighter, it seems that his stiffness has disappeared, he walks better than before. Phenomenon nearly constant, the nights become good, the patient who tossed about incessantly in his bed, sleeps with a calm sleep which procures him a great relief. Except in one case the trembling did not appear to be sensibly influenced. This well-being makes itself felt especially the day of the treatment, hence the necessity of having daily séances. Unfortunately that is difficult at the Salpêtrière. The chair is moved by an electro-motor, and three times weekly we make use of that electricity to run the static machines. Besides, the séances have not perhaps been sufficiently prolonged. In fact it is difficult to give, when one has a certain number of patients, more than a quarter of an hour or twenty minutes to each one. We soon hope to overcome these desiderata; however it may be the results that we have obtained are most encouraging, the researches will be continued, and I will take the occasion to keep you *au courant* with what results we obtain. It is already a great deal to be able to help patients suffering from paralysis agitans, on whom ordinary medicines act with little efficacy as you know.

M. Gilles de la Tourette has not limited himself to watching the action of the shaking chair and to note his results, he has sought other applications of the vibratory method.

The results that I have indicated to you obtained by M. M. Boudet and Mortimer Granville had attracted his attention. To cure certain neuralgias, to possess a remedy which was said to be almost heroic against migraine, to give sleep to patients, to dispel the symptoms of neurasthenia, is no small matter in medicine.

M. Gilles de la Tourette had remarked in reading the article of M. Boudet that the latter expressed the hypothesis that the local vibrations are diffused through the whole cranial walls, putting in their turn the brain in vibration, and that the results obtained might, indeed, be due to those mechanical vibrations transmitted to the encephalon.

It is not doubtful, moreover, that besides the

pointed rod, the discs and the brush employed by M. Mortimer Granville, may not act in the same manner. He constructed a sort of headpiece, with divided sides, and by the aid of a very simple contrivance these sides of it exactly fit the head of the subject for experiment. The headpiece is surmounted by a flat surface on which is placed a small special motor driven by a simple battery. The entire apparatus is easy to manage, very portable, and its machinery can run, so to speak, without interruption, without fear of derangement. The little motor gives about 6,000 turns a minute, all very regular, producing a continuous vibration which is transmitted to the entire cranium by the sides of the headpieces. The entire head vibrates as a whole, as one can easily assure one's self by placing the hands on one mastoid process. The apparatus in action produces a continuous sound, sort of soft buzzing, which is not perhaps immaterial to note on account of the pathogenesis of the results obtained. One can at will increase or diminish both the number and the amplitude of the vibrations by a very simple regulating mechanism.

The apparatus placed on the head of a *healthy* subject is perfectly well supported and its action does not produce the slightest inconvenience. At the end of seven or eight minutes one has a sensation of numbness which invades the entire body and almost invariably induces sleep. In fact the experiment has shown that a séance of 10 minutes made about six o'clock in the evening would produce a calm sleep, the corresponding night. Eight or ten séances overcome insomnia where this is not due to any organic affection of the cerebrum.

In three cases the vibration proved very efficacious, as Boudet had already remarked, to abort an attack of migraine.

Three persons attacked by neurasthenia have been treated by this method, two were cured, the third interrupted the treatment at a time when she was already improved but not cured.

Vibration acts by dispelling at first the cephalic symptoms, especially the vertigo and the painful band, so special to this affection. What seems to show distinctly that the vibrations act particularly upon the encephalon is, that in a case in which the spinal phenomena were predominant, the weakness of the lower extremities, the relative sexual impotence disappeared without the recourse to

vibrations along the vertebral column. With this patient static electricity had completely failed.

It is no longer doubtful after what I have said, that vibration, practiced in this way, is a powerful sedative to the nervous system.

One knows that for a long time alienists employ in the treatment of certain forms of insanity, trans-cerebral currents. One can conceive that the rapid vibrations conveyed to the encephalon may lead to very beneficent modifications. In a case of melancholic depression some very favorable results have been obtained, and vibration seems to have completely checked the march of an attack which, at the time the treatment commenced, showed no sign whatever of retrogression.

I can say no more at present, but as you see the experiments are being actively continued; what I have reported is to show you the advantages that may be obtained from vibratory medicine.

DIAGNOSIS OF LOBAR FROM LOBULAR PNEUMONIA AND OF PNEUMONIA FROM BRONCHITIS IN CHILDREN.*

BY H. T. MACHELL, M.D.,

Professor of Obstetrics, Woman's Medical College,
Toronto.

In children, the histories of these two diseases differ very considerably, and where an intelligent account of the symptoms in the early stage of the illness can be obtained, it is often of very great assistance in making out a diagnosis. The age may give us some clue.

Lobar pneumonia usually occurs in children over three years of age (Northrup, New York), though Jacobi thinks it does not occur, as a rule, till eight or ten years have been reached. Again, he says, "babies a few weeks old are apt to have lobar pneumonia, and until they are five or six weeks old I have seen more lobar than catarrhal, but after that, the vast majority exhibit the lobular form." Of Holt's 207 cases of pneumonia under three years of age at the New York Infant Asylum, 77 % were cases of broncho-pneumonia and 23 % were of lobar pneumonia. So that from birth to five or six weeks, the greater number of these cases are likely to be lobar, and from that date to three years at least three-fourths will be

lobular. From ten years of age (Jacobi) the lobar form, as in the adult, will be found to prevail. (I use the terms lobular pneumonia and broncho-pneumonia synonymously, though as a matter of fact the latter expression is more indicative of the actual condition).

The acute nature of the disease and the sudden onset are suggestive of the lobar form, which is usually ushered in with vomiting, chills, epigastric pain, headache, delirium or convulsions; while in the lobular variety there is a history of bronchitis, measles, whooping-cough, scarlatina, etc. The one follows apparently perfect health, and seems to knock the child over without any cause; the other can nearly always be traced to some of the above-mentioned diseases as a cause. In the one, from a condition of perfect health, the child suddenly becomes flushed in the face, vomits, has some cough, is dull, heavy, stupid and often delirious; in the other there is merely an aggravation of the symptoms from which the child has been suffering. Often it is a little worse affected, and that is all that is noticed.

Temperature. — Lobar pneumonia is usually ushered in by a well-marked rigor in children old enough to notice it, and speedily followed by a rapid elevation of temperature; in infancy and early childhood frequently ranging from 103° to 106° F., with morning subsidence and evening rise, of one or more degrees, and a sudden and generally permanent depression about the seventh to ninth day (T. S. Lattimer). There is also a difference in the temperature of the two sides.

In broncho-pneumonia the temperature is the same on either side, it is more irregular, it ascends more gradually, but there is a greater morning remission—frequently 3 to 4° F. Besides this, it is not uncommon to observe a morning temperature which is considerably higher than that of the evening (F. Gower Morrill).* In cases which accompany or follow measles and in uncomplicated cases where considerable areas of lung are involved, the temperature is higher.

The pulse in lobar pneumonia in the early stage is usually moderately rapid—120 to 160—strong and full, indicating strength, but soon becoming small and irregular (Loomis) In the lobular form

* Read before the Ontario Med. Association, June, 1892.

* Cyclopædia of Diseases of Children. —Keating.

it is more rapid, weak and feeble—a condition suggestive of asthma.

The pulse-respiration ratio is suggestive, not distinctive. In the lobar variety it is often 1-2.5 while in broncho-pneumonia it may be 1-2 or 1-1.5 and not very steadily maintained on account of paroxysms of dyspnoea which occur. Besides, in the latter, the respiration is frequently laborious, there is a sinking in with every respiration at the jugulum sterni and at the lower margin of the ribs, the so-called furrow of Trousseau (Forchheimer).* In lobar pneumonia it is quieter and less difficult, though it may be equally as frequent.

Appearance.—In the lobar variety a well-marked flush on one or both cheeks is so commonly present and exceptional in other febrile conditions, except phthisis, that it is a valuable diagnostic sign (Latimer, Baltimore); in broncho-pneumonia the face is pale or livid or less cyanotic and the patient looks exhausted. This is partly from previous disease. Rapid movement of the alæ nasi is nearly always noticeable.

Behaviour of the child.—It is usually passive, and willing and anxious to lie quietly and more frequently on the affected side. There is an indisposition to cry or resist examining the chest. Pain is referred to the epigastrium or side when the child is old enough to locate it. Frequently the expiratory moan is present. In lobular pneumonia the child is more irritable. There is also little or no expiratory moan if the pleura be not involved.

Part of lung involved.—The apex is far more liable to be involved in children than in adults. The right apex is more frequently affected than any other part, then the left apex, left base and right base (Holt).* In doubtful cases make a careful examination of the axilla. Always strip a child, and percuss gently in both axillæ. Many a time a slight dullness will be found here when no where else (Jacobi).*

Auscultation. In the early stage very little can be made out by auscultation. Râles are heard in both varieties. If dry râles are limited to one apex, we may reasonably look for the development of lobar pneumonia. Moist râles, ordinarily heard in broncho-pneumonia, may also be heard,

at times, in the lobar form. The physical signs are usually of service in making a diagnosis, only when the disease has been in existence some time. Even then, they are frequently of very little use, unless one takes into consideration the early history, the appearance of the patient, the temperature, the respiration and the pulse.

Yet the physical signs of fairly well marked cases of the two varieties differ considerably. In lobar pneumonia evidences of consolidation are in the great majority of cases confined to one side, while in the lobular form, more or less evidence of consolidation, may be found on both sides. In addition, the upper lobes are much more frequently involved in the former than the latter. In the lobar variety it is often easy to map out a good-sized dull area early in the course of the disease, while in the other kind, at the same period of illness, percussion may elicit nothing definite. This may be because the consolidation is deep-seated or because the lobules involved are not sufficiently near each other to produce a mass of such size as to modify the percussion-sound. The dullness of the lobar kind often approaches flatness while it is seldom or never so marked in the lobular variety.

In percussing an infant's chest one should remember certain points:

In the first place, on the right side posteriorly above the middle of the scapula, you will get, under normal circumstances, tympanitic resonance; this is true only in very young children. It is due to the fact that the right bronchus comes very near the surface. In the next place, do not percuss too hard. There is comparatively very little interstitial tissue in the lungs of an infant, and if you percuss too hard you obscure the normal tone and produce a cracked-pot sound. In the next place, if the child be crying very hard you cannot percuss for sound. You percuss for resistance. So far as percussion in infants is concerned, I usually percuss for resistance rather than sound. I simply percuss and feel. You can, with a little practice, feel where the resistance is increased and where it is diminished. I want to call your attention to a new method which has been introduced comparatively recently and promises good results. It has been found in experiments with the thermostat, that over parts that are influenced the surface temperature is higher than the surface

*International Clinics.

*N. Y. Medical Record, 1885.

*Trans. Am. Pediatric Socy., 1891.

temperature over spots that are not, so that over a pneumonic spot the temperature will be higher than over a healthy part of lung. And it has been found that without these surface-thermometers the difference of temperature can be felt by hands that are sufficiently sensitive. The way this is done, is simply to dip your hands into warm water and then run over the surface of their chest and in so running over it you will recognize the difference of temperature wherever there is an increased amount of blood the temperature will be elevated. In the experiments I have made with it the results have been only moderately good, perhaps because my hands are not sufficiently sensitive.

We have normally puerile respiration in a child and over the same spot mentioned above, namely, on the right side near the upper portion of the scapula, we have something approaching bronchial breathing in an infant. A diagnosis of pneumonia at this locality is often made in a perfectly healthy child. Listening over this region the vocal resonance will be increased; the vocal fremitus is also increased (Forchheimer). "In the lobar variety we get bronchial respiration quite early and much more frequently than crepitation. Yet, in a large number of cases they do not have broncophony. That is what the crying of a baby is good for. A pneumonic child, that says nothing deprives us of this symptom, but when he opens his mouth and screams, the difference of voice on the right or left sides is diagnostic and has helped me in many cases where the diagnosis could not be made otherwise. At the edges of the consolidation fine râles are often made out. Vocal fremitus is also present, though not so easily made out as in the adult" (Jacobi).

In the lobular form well-worked bronchial breathing is rare over consolidated areas; in place of it the breath sounds are weak and blowing. In the early stage dry and moist râles, both small and large, may be heard on both sides but later in the disease persistent sub-crepitant râles may be heard in several spots. Vocal fremitus and vocal resonance are usually wanting but may be heard where there are aggregations of inflamed lobules, of course overcollapsed vesicles of any extent the inspiratory sound as well as vocal fremitus is not heard.

The termination in lobar pneumonia, in a large proportion of cases, is, as in the dult, compara-

tively sudden, that is, by crisis. Yet Jacobi says there is in lobar pneumonia lysis quite as often as there is a crisis. In that case the lysis is rapid as compared with broncho-pneumonia. Crisis in the cases which recover usually takes place about the fifth to the tenth day. In broncho-pneumonia the duration of the disease is indefinite but nearly always longer than that of the lobar form. "Some cases will run their course in from twenty-four to thirty-six hours, in other cases it will take weeks to do so, the catarrhal process going from one place to another" (Forchheimer).

THE DIAGNOSIS OF LOBAR PNEUMONIA FROM BRONCHITIS.

It is only in the very early stage that lobar pneumonia is liable to be mistaken for bronchitis. In comparatively mild cases there should be no difficulty in making a diagnosis. Pneumonia usually begins suddenly with headache, vomiting, epigastric pain, delirium or convulsions. One or more of the symptoms usher in almost every case. In addition, there is usually a flushed face, an anxious countenance, a dry tickling, hacking, painful cough, which is often incessant. Usually there is a temperature of 102° to 104° or 106° F.; respiration 40 to 60 or 70, but not labored, and pulse 120 to 140.

In bronchitis the patient does not appear to be so ill. There is an absence of the initial symptoms of pneumonia. The comparatively low temperature, the mild painless cough, the slightly accelerated respirations and pulse and absence of dyspnoea and also the expiratory moan are suggestive of bronchitis, a milder disease than pneumonia.

But in very sharp and severe attacks, especially those involving the smaller bronchial tubes,—not the very smallest—and accompanied by grave constitutional disturbances it is impossible to make a diagnosis between bronchitis and pneumonia, except by the aid of physical signs.

In pneumonia the first abnormal sounds will probably be, bronchial resonance, bronchial respiration, vocal fremitus and fine crepitous râles heard only on one side and of limited extent. Of course one may have double pneumonia and as a consequence sounds will be heard on either side.

In bronchitis dry râles, large and small, are heard over both sides of the chest, particularly the posterior surfaces. Moist râles follow quickly,

or there may be a mixture of dry and moist ones, fine and coarse.

If the smaller râles are heard only on one side we may expect to find a pneumonia.

In a later stage of lobar pneumonia dilatation of the *alae vasi*, bronchial resonance, bronchial breathing, dullness on percussion, and probably fine crepitation, enables us to make a diagnosis without difficulty.

Pneumonia ends suddenly in the cases which recover in from five to ten days, while bronchitis ends gradually in from two or three days to about as many months.

In pneumonia in a child old enough to cough up any mucus the pneumococcus is to be found, while it is not present in the expectoration of bronchitis.

THE DIAGNOSIS OF BRONCHO-PNEUMONIA OR LOBULAR PNEUMONIA FROM BRONCHITIS.

"The more careful microscopic study made in the last ten years of the lesions in acute pulmonary diseases of young children, has placed it beyond dispute, that a very large number of cases classed formerly as "acute bronchitis," are really cases of broncho-pneumonia. This applied to nearly the whole group of cases formerly described under the heading of "capillary bronchitis." In infants, it seems almost impossible for an acute inflammation of the fine bronchi to occur, without the process extending to the alveoli which surround them, unless death takes place at a very early stage in the disease." (Holt).*

In the early stage of broncho-pneumonia or in the more advanced stage of comparatively mild cases it is frequently impossible to make a diagnosis. It is often necessary to wait a day or two before we can decide which disease we have to deal with.

"The main points of differentiation according to Earnest Holt in any case may be grouped under three heads: 1. The difference in temperature. 2. The severity of the general symptoms. 3. The character of the physical signs.

As to temperature—Acute bronchitis commonly begins with a rise to 102° to 103° F., usually after twenty-four hours have passed it falls to 100°, and remains between this point and 101.5° for several days, gradually reaching normal. If a case begins with this temperature and the fever rises on three or four successive days to 102.5° or 103° it is

almost certain that something more than bronchitis exists. We may be fairly sure of pneumonia. Yet a temperature below that mentioned does not exclude pneumonia.

The general symptoms—Cough, prostration, restlessness, dyspnoea, and cyanosis, are all, as a rule, less severe in bronchitis than in broncho-pneumonia. But it is the general severity of all rather than anything particular about each one, that is significant.

The physical signs of local consolidated patches dullness, vocal resonance, bronchial breathing, etc.,—are evidences of pneumonia, when the symptoms are doubtful. Their absence must not exclude pneumonia even if they are never obtained. Scores of times have I found quite large patches of broncho-pneumonia at the autopsy when on the day previous the most careful examination had failed to disclose any bronchial respiration, bronchial voice, or dullness. The explanation was, that the pneumonic areas were so separated by healthy pulmonary tissue that at no point was there enough hepatization to produce any of the ordinary signs by which consolidation is recognized.

Then in regard to the character of the râles. That does not afford much assistance, for in broncho-pneumonia it is the bronchitis which produces most of the abnormal sounds. The localization of the râles is of more value. The signs of localized bronchitis of the finer tubes are very suggestive of pneumonia. Localized sub-crepitant râles over both lower lobes behind are especially suggestive of pneumonia."

From well-marked cases of broncho-pneumonia, or cases that have run on some time, the diagnosis of bronchitis is not usually difficult. In the former localized consolidated patches, and in the latter, the bilateral character of the signs, anteriorly as well as posteriorly, an absence of constitutional symptoms—prostration, cyanosis, dyspnoea, etc.—help to clear up the diagnosis. But quoting Holt, again, "this can only be done by considering both the symptoms and the physical signs, and of the two the symptoms are the more valuable. And if we regard every doubtful case as one of pneumonia we will make very few mistakes, for such the doubtful cases almost invariably turn out, at shall the autopsy, to be."

With repeated daily examinations of the chest (and they should be made daily) in obscure cases we should be able to make a diagnosis after the lapse of a few days at least.

HYDROPHOBIA.

BY J. S. LEONHARDT, M.D., LINCOLN, NEBRASKA.

The almost inevitable fatal termination of hydrophobia, and the fact that it adds a new and peculiar horror to the already gloomy enough death-bed scene, make it one of the most dreaded in the whole catalogue of diseases. Homer's allusion to the malign influence of the dog star, and the statement that Hector behaved like a raging dog in his final and great contest with Achilles, would seem to indicate, that even in that ancient day mad dogs and hydrophobia existed. Since then it has always obtained in the old world in certain localities, and occasionally in the form of widespread epidemics. Until within the past two centuries it was unknown to the new world. History shows that its geographical distribution is co-extensive with the spread of civilization and the activity of foreign and domestic trade relations. I think it may be said, broadly speaking, that when hydrophobia occurs in the human subject it is the result of an infection received from the bite of some rabid animal, usually a flesh eater, such as the dog, wolf, jackal, fox, skunk, raccoon, etc. It has, however, followed bites inflicted by the ox, horse, goat, sheep, etc., and Van Swieten reports the case of an old woman who died with all the symptoms of rabies, after having been wounded by an irate cock.

The ratio of infection following rabific bites, is not a constant or regular one, but depends very much upon the depth and location of the wound; deep, lacerated wounds, and especially those inflicted on the face, hands, or other exposed parts being most virulent. After the reception of such a bite, a period of incubation ensues that varies from six to two hundred and forty days in dogs, twenty to thirty days in cattle, fifteen to ninety-two days in horses, twenty to seventy-two days in sheep, and from twenty to forty-nine days in swine. While this period is generally completed in the human subject from eighteen to sixty-four days, it occasionally happens that a single week is sufficient, and then again it may extend over several years, according to some observers.

If knowledge is to be of any service to mankind, that which pertains to rabies as it occurs in the domestic animals, should certainly be mastered by

all who are liable to come in contact with these useful and ornamental creatures. The ability to recognize the initiatory symptoms of hydrophobia in the dog comes first in the order of importance. I am fully aware that if the following rules are rigidly obeyed some harmless cur may lose his worthless little life prematurely, but it were infinitely more humane that any number of \$1,000 bull pups be sacrificed than that a single man, woman, or child should perish from rabies. For a dog to suddenly change his habits without good and sufficient reason is a conspicuous circumstance, and that without regard to the season of the year. For an active, spirited animal to suddenly grow lazy, or dull, or for one of the opposite kind to become restless and irritable, is also a suspicious state of affairs. For a house dog that has lived on the delicacies of the season prepared by a high priced cook, to suddenly acquire a taste for straw, thread, pins, old paper, etc., and appear to relish the same, is very ominous. Infected dogs seem to lose all regard for their masters, playmates, and friends, although now and then the contrary would appear to be true. For a well-mannered canine to evince great irritability of temper, flying viciously at other dogs without any provocation and attempting to bite them, is more than suspicious. A bright, frank, sociable dog, that seeks seclusion and darkness, that takes his punishment with great pain, but neither howls nor whines, is probably infected. A dog in the habit, suddenly acquired, of barking at nothing, sneaking around as if looking for something and unable to find it, that delights in gnawing wood and tearing clothes, and running away from home for a day or two at a time, shows important signs. A dog that paws his mouth as if trying to dislodge something, that rolls his blood-shot eyes, and leerily turns his wrinkled head in the direction of some imaginary moving object at which he snaps savagely, stands self-convicted of rabies. The same may be said of one that gnaws, rubs and bites at an old wound long since healed, but now open, swollen, red, and tender. These form no part of the "paroxysms of wicked fury" that come on later in the disease. Then the eyes have a weird indescribable stare. He will rush headlong against anything that may stand between him and his liberty. Should he escape he is apt to make a long journey, biting at everything that disputes his right of way and

particularly creatures that excite him by any manner of noise or outcry. At last, nearly dead with fatigue, he returns to his home, fawning and crouching, but ready to bite, and that without any warning, any who may accidentally insult his perverted feelings. I know of no other animal that is more dangerous to a family than a trusted and beloved watch dog that has just returned from a prolonged "spree."

Do not for a moment longer believe in the old notions that a mad dog fears water, shuns polished objects, froths at the mouth, and carries his tail drawn up between his hind legs. Your faithful old watch dog would swim a river if it lay in the path of his hydrophobic journey, lick any bright smooth object that would promise to cool his red hot tongue, carrying his tail erect during the whole paroxysm, and not froth at the mouth until paralysed in the last stages of the disease, when dogs no longer bite. It is also a very popular error to refer rabies to the extreme heat of summer. Statistics show that the coldest and hottest months of the year furnish the least number of cases, that in May and September rabid dogs are most common, while March and April seem to affect wolves the most. The folly of muzzling a dog in July and August and turning him loose the rest of the year is therefore apparent.

Rabid cats are more reserved and timid than dogs; while they may not be aggressive, they are more apt to attack the face, neck and hands with teeth and claws. They utter a hoarse cry like that emitted in the rutting season. They are less dangerous than larger animals because they are not as strong and die earlier. A rabid horse is very restless, sensitive and easily startled. There is loss of appetite, trembling, and rubbing of the upper lip; he neighs, bites and kicks viciously. In frenzy he will gnaw his fore limbs, and lacerate his flanks terribly. His blood-shot eye and crazy brain know no master. Rabid cattle are also subject to anorexia, grinding of the teeth, licking the scar left by the infected wound, everting the upper lip, pawing and scraping the ground. They butt and kick and bellow. Rabid sheep and goats act similarly, bleat hoarsely, nibble at the old wound, tremble, kick and butt. Rabid swine show much fear and excitability, hide under the litter, start violently at unexpected noises, grunt hoarsely, champ the jaws, evince a disposition to bite and

tear at objects, their eyes are dark red, they gape and yawn much, and die in from three to four days. Wild beasts that are rabid, lose their natural reserve, enter villages and cities, attack people on the street without fear or provocation. Skunks steal up in the dark, bite some exposed part and slink away. It is said that their odor is suppressed.

It is a significant fact, another of several everlasting monuments to modern methods of thought and research, that rabies, heretofore almost invariably fatal, has, within the last seven years, been rendered ever so much less deadly. This may be due to the strange notions of treatment formerly in vogue, and it may not be a waste of time to relate a few of them. The ancients believed in plunging hydrophobic patients into a river, pond, or other body of water, and submerging them therein until almost completely asphyxiated. Pliny trusted in the efficacy of river crabs reduced to ashes, or the ashes of the tail of a shrew-mouse provided the animal had survived the amputation and had been at liberty. Others had faith in a clod from a swallow's nest, applied with vinegar; the young of the swallow reduced to ashes; the skin or old slough of a serpent, that had been cast in the spring of the year, beaten up with a male crab in wine. Dioscorides had confidence in the "ashes of river crabs burned with a fire made of twigs of the white clematis, and mixed with powdered gentian." Gallen believed in the same, but held that in order to make it infallible it was necessary to burn the crab on a copper plate, in the summer time, after the rising of the dog star, and with the sun in Leo. Aetius recommends the taking of oxalis, and the eating of a liver of the cormorant, the skin of the seal or hyena, or the flesh of the sea horse. Paul of Aegina, taught that the liver of a mad dog the blood of a partridge, mixed with garlic and onions, was much more efficacious. The Pauline doctrine has survived to the present day for our homœopathic friends give "hydrophobin," whatever that may be. An explanation of the *modus operandi* of these various procedures might be that they render the body too unpleasant for the disease to tarry longer therein, and maintain its pathological respectability. Dr. Percival of England first brought to notice the "serpent" stone of the Chinese, from which doubtless came the more modern notion of applying a "mad stone" in cases of bites inflicted by rabid or venomous

creatures. Dr. Dulles, of Philadelphia, has written of one Dr. Samuel Davis, of Petersburg, Va., who is said to have had one of these stones and applied it to his son who was bitten by a rabid-dog in 1801. He says that it remained on the wound, sucking out the poison, twelve hours at a time. When removed and placed in water, one could see the poison escaping from one corner of it in the form of numerous bubbles. The stone was wrapped in a piece of paper dated Charleston, S. C., 1740, and bore in print the following legend: Francis Torres, a native of France, is in possession of a chymical preparation called a "Chinese snake stone" which will extract the poison of the bite of snakes, spiders, and of a mad dog, and will cure cancers, and which are sold at half a guinea for the small and a guinea for the large ones." The owner of the stone in question, refused three hundred guineas for his—it must have been of great size and possessed of immense power! These mad stones are nothing but fossil coral of the genus *Favosites*, with one side cut smooth, the which is applied to the wound. The numerous pores draw in the blood by capillary attraction, and thus they adhere to wounds as long as they bleed, and quit sticking when the bleeding ceases. Statistics do not show that the death rate from rabies has been lowered since their introduction.

There remains another method of treatment to be considered, that discovered by M. Louis Pasteur of Paris, which acts both as a prophylactic and curative measure. Everybody has had an opportunity to read of it, for the press, secular, religious and indifferent has teemed with articles on the subject pro and con, serious and careless, good, bad and medium.

The method consists, briefly speaking, in inoculating patients suspected of infection or normal, in a certain regular and prescribed order, with a solution made from the spinal cord of a rabbit that had been inoculated from a dog suffering from "street rabies." The effect on the statistical death rate following bites proven to have been rabific, has been simply phenomenal. But like all great discoveries, that of Pasteur met with the most stormy opposition very soon after he had given to the world his remarkable find. His first inoculation on the human was performed July 6th, 1885. The patient was an Alsatian youth, aged nine years, who had been bitten by a rabid dog

about three weeks before. He was bitten in fourteen different places on the nates, legs, hands, etc., and symptoms of the dread disease had already manifested themselves when he was brought to M. Pasteur. It is a matter of history now, that the boy recovered and has since remained well. In less than a year from that date a committee was appointed consisting of M.M. Chantemesse and Charin to analyse the 1,333 cases of persons that had submitted to inoculation by the Pasteur method. These cases were divided into three classes: first, persons bitten by dogs, who, upon examinations by veterinarians were pronounced rabid; second: persons bitten by dogs that had communicated rabies to other dogs; third: persons bitten by dogs of whom nothing was known. Of ninety-six patients belonging to the first class one died—a mortality of 1.04 per cent.; of six hundred and forty-four patients of the second class, three died—a mortality of .46 per cent.; of the remaining patients, none died. These statistics compared with those of M. Lebacqz on "Hydrophobia in the Department of the Seine," gives a mortality rate of 7.5 per thousand instead of 160 per thousand. As to the forty persons bitten by rabid wolves, they cited seven deaths or at the rate of 140 per thousand, as against the heretofore regular death rate from such bites of 8.20 per thousand. The difference between the two results is more than great and startling. In following up their investigations, MM. Chantemesse and Charin have established special statistics of results of bites on uncovered parts such as face and hands. Of fifty-four persons bitten in the face and hands, by dogs known experimentally to have been mad, there was one death, or eighteen per thousand. Of four hundred persons bitten in the face and hands by dogs known clinically to have been mad, there were three deaths, or a mortality of 7.5 per thousand. In referring to the documents of the Council of Hygiene from 1862 to 1872 it was found that for bites of the face there was a death rate of 8.80 per thousand and for those of the hands of 6.72 per thousand.

The comparative prophylactic power of the three great inoculations against disease—variola, anthrax and rabies—can now be plainly shown. Before vaccination was practised, the death rate from variola was five hundred per thousand, it is now twenty-three; before veterinarians inoculated

against charbon, the death rate was about one hundred and thirty per thousand, it is now five; the mortality from rabbies before anti-rabic inoculation was known was one hundred and sixty per thousand, it is now seven. It is not necessary to say that this report astonished the whole world.

The British Government then appointed a commission consisting of Sir James Paget, Sir Joseph Lister, Sir Henry Roscoe, M.P., Dr. Richard Quain, Dr. Lauder Brunton, Professor Burdon Sanderson, Dr. George Fleming, Veterinary Surgeon of the British Army, and Mr. Victor Horsley, Professor Superintendent of the Brown Institution, to investigate the claims and methods of the newly-risen French biologist. In the report of that scientific body, whose superior ability none can question, submitted June 27th, 1886, we read, "that of two hundred and thirty-three persons bitten by animals in which rabies was proved, only four died. Without inoculation, at least forty would have died. Among one hundred and eighty-six bitten on the head or face by animals in which rabies was proved, only nine died, while the regular rate would have been at least forty. Of forty-eight bitten by rabid wolves, only nine died, instead of an expected thirty. It may hence be deemed certain that M. Pasteur has discovered a method of protection from rabies comparable with that which vaccination affords against smallpox. It would be difficult to over-estimate the importance of the discovery." The London *Lancet* of July 2nd, 1886, says of this report: "Their verdict is the most important yet pronounced upon the subject, and must go far to decide the question of the prophylactic value of the inoculations of Pasteur. The conclusion that the method has saved a considerable number of lives, and that it is at present, and probably will be for a long time, the only method of saving from death those who have been bitten by a rabid dog, affords strong support to Pasteur's conclusions, and, we need hardly say, must have important practical results." Says Dr. A. N. Blodgett, of Boston: "The general opinion is that inoculation in the way advocated by Pasteur, is not only an absolute protection to the patient against the outbreak of the rabid disease, but that it is itself entirely free from serious effects upon the inoculated person." Says Dr. D. T. Himes, of London: "The success of Pasteur's treatment has been brilliantly demon-

strated by statistics as well as by experiments. Pasteur has established a prophylactic treatment against rabies, one of the most formidable, and hitherto intractable, of diseases. He has thus crowned a glorious career of research directed to the benefit of man by a most notable discovery, primarily salutary to man himself."

The Academy of Medicine of Rome has sent delegates to study the Pasteur method of anti rabic inoculation, the German Government sent Koch and Virchow; the Bacteriological Laboratory of Harvard University has confirmed the claims of the great chemist; and it would seem that the report of the English commission must silence all objectors.

Selected Articles.

A CASE OF LETHARGY.

BY C. K. CLARKE, M. D.,

Superintendent of the Kingston Asylum, Kingston, Ontario.

The records regarding cases of lethargy are very incomplete and it is seldom indeed that one has the chance to study a typical case. Literature on the subject is scant, and it is my belief that we have much to learn regarding the actual condition of the nervous system in lethargy. The eminent physiologist, Professor T. Wesley Mills, has suggested to me that in certain cases we have a condition analogous to that of hibernation in animals; and truly at least one case in Canada, where the patient is awake all summer and asleep all winter, would give color to this belief. There are other striking points of analogy between animals during the period of hibernation, and some human beings in a state of lethargy. This subject is enticing from the standpoint of the evolutionist, and might profitably be discussed, but just now the time allotted for this paper will be taken up in describing a remarkable case of lethargy that came under my observation last year. This case is almost unique, and by a combination of happy chances it was possible to obtain accurate and minute details regarding the patient, and put on record observations that were divested of the element of the wonderful so generally supplied by the non-scientific observer. Several seasons ago I heard that there was a patient who had been in a trance for years, and from time to time word was brought to the effect that the condition still persisted, and all efforts to rouse the woman were without result. A little more than a year ago I obtained permission to visit the patient, but was not allowed to make

any extended examination. On entering the room I found a thin, old woman in bed, apparently fast asleep. Her respirations were irregular and varied much during the visit (almost half an hour), running all the way from 24 to 44 per minute. The pulse quickened in a marked way during my stay, and ran up from about 80 to 120. The woman had her eyes half closed, and to all appearances was oblivious to everything that was going on. The nurse gave many details regarding the patient and made a number of statements, some of which I shall repeat in a few minutes. Many of these statements we were able to verify at a subsequent period; others were undoubtedly inaccurate.

Before going into details regarding the every day life of this case of lethargy, as we saw it, perhaps it would be well to give a brief outline of the history of the patient. Unfortunately it has not been found possible to get as many important facts as could be desired in connection with this history, but great care has been taken to eliminate all doubtful points. The patient was born in 1820 or 1821, and when she came under observation was almost sixty-nine years of age. The neurotic history was pronounced on "both sides of the house;" evidence going to show that her father had suffered from melancholia. A reliable person states that the father died from "softening of the brain"—possibly general paresis. The patient's mother was subject (a member of the family states) to attacks of partial loss of reason, which could only be cured by change of air and surroundings.

Unfortunately it has not been possible to get an accurate account of these attacks of "partial loss of reason." The patient's early history is not well known, but it has been stated on good authority that she was "peculiar," and in childhood complained of some head trouble that caused her to keep her hair cropped short. She was married when very young, probably when seventeen or eighteen years of age, as she was but twenty-one when her third child was born. Three years after the birth of her last child she was noticed to undergo a change in disposition and acted "strangely." She could not be depended on, was untruthful and whimsical, and worried a great deal about trifles. It is from a subsequent date (three years later) that the history of this case must be dated.

The son (the youngest child) says: "The first recollection that I have of mother's sickness was when I was six years old. My little sister had died and I was just recovering from an attack of scarlet fever when she was taken down. I think the attack was caused by grief over sister's death, and over-exertion and want of rest. I do not remember how long she was sick at that time, but I recollect that her left side was completely paralyzed and that after a time a strong liniment was used, which partially removed the paralysis, and when she went to the country for several weeks she came back well.

"The second time that she was taken sick was when I was twelve years old. She felt poorly for some time and was then taken with fits, or convulsions, which lasted for, I think, three days, having sometimes four or five in an hour. She was confined to her bed for, I think, about two years, in very much the same condition as at present. I do not know what curative means were employed, but she gradually improved a little, and was again sent out into the country, where she seemed to recover. She enjoyed pretty good health for about six years, but had to be very careful; she never drank tea or coffee and always had to have the hair on the back of her head cut short. About this time her father was taken sick and we moved into his house to take care of him. This seemed to affect mother, and after a short time she was again taken with fits and soon went into her former condition. During this sickness, which lasted about two years, she used to sit up part of the time and appeared to be perfectly conscious. She knew father and those who waited on her, used to call me her boy, but appeared to be in a sort of a stupor most of the time. She was again sent into the country and came back well. Then ensued a brief interval of about two years, during which time she was in fair health, but was again taken down as before and was sick for nearly seven years. During part of this time she was very low, and we watched day after day at her bedside expecting each day would be the last; but she again rallied and gradually her bodily strength and reason returned to her. She was well for about five years, when she seemed to be taken with a low fever and gradually went down to her present condition."

Such is the son's account of the case, and from it we learn that the history of nervous trouble dates back at least forty years, and the inference is that the first indications of lethargy then made their appearance.

The details of the conditions that existed during the different attacks are almost entirely wanting, and it is unfortunate that we are left almost completely in the dark regarding the nature of the convulsive seizures that occurred. Subsequent history would lead us to believe that these were in all probability hystero-epileptic in origin.

About the year 1862 the patient fell into a state of lethargy that lasted for seven years or more. The condition was not one of complete unconsciousness, and although the woman appeared to sleep almost continually, occasionally she would wake up for a minute or so at a time and converse in a rational manner. It is not possible to make more than general statements in regard to these attacks, but it is beyond doubt that the conditions were not identical with those that characterized the last attack. Evidently the condition of lethargy was not so profound. The announcement of the death of a warm friend was the immediate cause of her

awakening. The return to even an approach to a normal condition of health was a very gradual process. She was lachrymose and childish for some time, and could not use her limbs properly for months; in fact, had to learn to walk again.

During the period of wakefulness that now ensued—seven years or more—the patient, to a certain extent, interested herself in the affairs of every day life. She went about the house, etc., but was very quiet and did not seem able to concentrate her mind on anything. Her memory was markedly deficient, and she seemed astonished to find people and places changed, and could not realize the fact that she had been asleep for such a long time. When waking up from her long sleep one of the first requests made was for beer; and strange to say the same want was expressed many years after when arousing up from a subsequent attack.

About thirteen years ago the patient gradually passed into the condition in which we saw her. At first she spoke occasionally but in a childish manner, and often made a request for meat and potatoes, invariably using the following words: "Meat and potatoes, a plate all full up to the top."

Before giving the details of the case as we saw it, it will be well to repeat in a general way the statements made by the nurses who had the care of the patient before she came to the Asylum. They say: "She seems to exercise a certain amount of discrimination regarding her food, and will eat enormously or not at all, and when her appetite is not lost does not seem to know when she had had enough. Her diet is made up of minced meat, potatoes, soft toast, milk, etc., and she is particularly fond of meat and potatoes, in fact will not touch anything until meat and potatoes are provided. She does not like sweet things. When not suffering from diarrhoea eats three times a day. Eats as much as any healthy, active woman of her age. Objects to nauseous drugs, and endeavors to push the spoon away with her left hand.

"The attitude during the day is quite different from that assumed at night, and the patient undoubtedly sleeps more soundly at night than during the day. In the day time her legs are extended; at night drawn up. In the day time she is put either on her back or right side, at night on her left side, and remains in this position until morning without moving—in fact, cannot roll over. Will not settle down for the night until a drink of cold water is given. In the day time, sometimes for an hour or so at a time, appears to be nearer a condition of consciousness than at any other time. This occurs generally after breakfast, but she has to be roused for all of her meals.

"When heavy bed clothing is put on the bed attempts to shove the blankets off with her left hand, and likes to be very lightly covered. The

eyes are three parts closed during the day and completely closed at night. The face sometimes becomes flushed. She never speaks, and in fact has spoken but once in eleven years or more, and that was quite recently (1890), when she said 'I am not asleep.' Her appetite has been better since she had been in the long sleep than it was before, and she eats things she would not touch when awake. At least once during the present attack she has, unassisted, got out of bed, and there is reason to believe she has done the same thing several times, but not within three years, as her physical condition renders it impossible. Several times the nurse fancied the patient was moving about the room at night, but for sometime could not actually prove that such was the case. At last, however, a fall was heard in the middle of the night, and the patient was found lying fast asleep at the bottom of the stairs, down which she had fallen.

"During the present attack she has fasted on several occasions, and once went fifteen days without food." It must be remembered that the nurses were speaking of the last attack and at a time when the patient had been in a state of lethargy for more than eleven years. In September, 1890, Professor T. Wesley Mills and I saw the patient. This was my second visit. We found the patient, an old woman, in bed. She was lying on her back with her eyes half closed. Her face when we first entered was somewhat flushed and respiration rapid.

On October 9th, 1890, the patient came under my care, and it was possible to make a series of observations of the most complete character. In this paper I shall merely indicate in a general way the conditions that were found to exist, but I hope to be able to publish more elaborate details before long.

The patient, a thin old woman, apparently not weighing more than sixty pounds, was carried into the infirmary from the ambulance, and placed in bed. She was asleep and did not seem disturbed by the jolting to which she had been subjected. Her temperature was $97\frac{1}{4}^{\circ}$, pulse 107, and respirations 20. Efforts were made to arouse her, but without avail. Friends stated that she had been in her present state of lethargy for more than eleven years. Her eyes were half closed, and it was found almost impossible to get her to swallow anything. Next morning her temperature was about normal; pulse 117, respiration 18; still asleep with the eyes half closed, as she remained nearly the whole time she lived. She was under observation from October, 1890, till February, 1891, when she died. In these four months she was closely watched, and until the last week of her life gave little indication that she had the slightest knowledge of the fact that she lived. She would remain in any position in which she was placed in

bed, and if not fed, would undoubtedly have died without making any sign that she required or desired food. Her temperature was almost invariably subnormal, sometimes falling to 95°, although occasionally it would rise to nearly 102°, without any cause that could be determined. Her appetite was capricious, although she undoubtedly had decided likes and dislikes in regard to food. She preferred beef and potatoes to anything else. The process of eating was very slow, and sometimes it would be more than an hour before she could finish a meal. When she drank anything, milk was evidently preferred. She was very clean in her personal habits, and never soiled the bed.

The quantity of urine passed was very small, not averaging more than one-seventh of normal. The bowels moved but seldom, sometimes only once in six or seven days. It was possible to rouse her for a moment or so, to the extent of making her open her eyes, but beyond this she would give no indication of consciousness, and went to sleep again immediately. Her legs were nearly always drawn up, although when the patient was admitted it was stated that she always straightened her legs at night. Her feet were almost invariably very cold, and the hands sometimes so. Occasionally her eyelids would tremble and quiver, just as they would in a patient suffering from hysteria. Generally when much bothered, would for a few moments make a sort of whining protest. The facial expression was quiet, almost deathlike, under ordinary circumstances, but sometimes when undergoing examination, an expression suggestive of pain would appear; at the same time it is questionable if pain was really experienced, as the heart and respirations did not show the least disturbance.

A large amount of food for one so frail was consumed in a day, although on some occasions the appetite was completely lost. Sometimes when suddenly disturbed would start nervously, and her hands would tremble. Trained Nurse Osborne, who was with her very constantly, seemed to think that there were times when she was nearer a condition of consciousness than at others, and as this statement was also made by her former nurses, possibly it is correct. Occasionally she would push down the bed clothes with her hands, and the history of the case would go to show that heavy covering was always objected to. Nearly every day she was propped up in a chair for half an hour. This did not seem to have any effect on her state.

I shall now detail several examinations made by Dr. Webster and myself. These will convey a general idea of the general conditions:

January 16th, 1891—Apparently asleep; cheeks, nose and chin much flushed; lying on left side; thighs and legs slightly flexed; skin moist; face and body hot; hands warm, feet and lower half of legs chilly, thighs and upper half of legs warm.

When placed on back, offered resistance; showed her annoyance by drawing down corner of mouth, and appearing to cry; eyes opened and she blinked a good deal; lips and jaw moved as if speaking; nothing audible; in a few seconds relapsed into her former state, gradually turning her face over to the left. Left hand spread out over chest, palm down and fingers spread out; fingers could not be retained in any other position except by force, and were quite rigid. When arm was placed in another position, not immediately returned, but was after a time, especially if the patient was disturbed. Right arm by side, hand partly closed; this seemed the favorite position, for when moved was after a time returned; when the hand was forcibly opened, not immediately closed again. Pulse 104; fairly good. Five minutes later 90. Ten minutes later 100. Pulse quickened when patient was disturbed, but the quickening was very slight.

Respirations 24, regular and deep; abdominal in character. Temperature in mouth, 98.3 (5 minutes.) Temperature, axilla, 98.2 (10 minutes.) Reflexes—Cornea good; merely tickling the face seemed to cause no annoyance. Epigastric reflex very slightly marked, much less than it was when we examined the patient a few days ago. Patellar reflex entirely absent. Plantar reflex present to at slight extent, but not marked as it was before. Some œdema at ankles.

January 30th, 1891—In company with Dr. Webster examined the patient this afternoon. When we entered the room, it was observed that E. B.'s face, nose and chin were much flushed. The nurse informed us that this flushing is frequently much more marked than it was this afternoon. Respirations taken before the patient was disturbed were 28, very irregular. Pulse taken before the patient was disturbed 95, irregular. When I describe it as irregular, I may state that this description was based on the fact that in one half minute we would get 45 beats and in the next half minute 50, and so on. As usual whenever the patient has been visited by us, the right hand was tightly closed, the left spread out. Feeling that there might be an element of doubt in regard to the temperature tracings furnished by the nurse, a tested thermometer was taken for the examination, and for the sake of comparison. The result showed that the readings furnished by the nurse are to be depended on, as several comparisons of thermometers showed but one trifling fractional variation. Temperature—Left axilla (5 minutes), 1st thermometer 98; 2d thermometer 98. Right axilla, 1st thermometer 98½; 2d thermometer 98½.

Eyelids and lips were twitching, and lids and tongue trembling. Reflexes—those of the face and eye normal, abdominal skin reflexes present, but not good; plantar reflexes not well marked,

although undoubtedly present; patellar reflex, left side absent, and probably absent on right side, although at one time we thought a trace was to be found. Tickling the feet did not, as on former occasions, seem to deepen the respiration, and during the whole of the examination the respirations were shallow, and of an abdominal character. Hands fairly warm, feet chilly, but not so cold as usual. Circulation in other parts of the body excellent. Feet œdematous. Respirations after examination 25, somewhat irregular. Pulse after examination 97, quite changed in character. When we first entered the room it was full and of good quality, now it was weak and thready in character.

Early in February, 1891, a marked change took place in the patient's condition. Diarrhœa developed, and the woman was evidently suffering pain. On the 4th of February was undoubtedly awake, and in the evening spoke in a hoarse whisper asking for a sour drink. This was the second time she had spoken in thirteen years. On the morning of the 5th of February again asked for a drink, yawned twice and fell asleep again. In the afternoon was again awake, fed herself in an awkward way, and in the evening spoke again in a natural manner. I sent for her friends and they endeavored to get her to take notice of them, but she did not appear to know them, and went to sleep as usual. The trained nurse's notes for the next few days are as follows:

"February 6th—Will feed herself with bread or anything dry. Hand shakes too much to use a cup or spoon. Will ask for anything she wants, but will not speak at any other time. Always uses her left hand.

"February 7th—I was called in about 4 a.m., and found her lying on the floor; she would not speak, but from all appearance no one had touched her; she had evidently gotten out of bed herself."

On the 16th she was slightly better and asked for beer and cocoa, and said she felt as if she were burning up. From this time she steadily grew worse and died on the 26th.

I might here state that Dr. Ruttan, of McGill University, made elaborate analysis of urine sent to Montreal from time to time, and without making any detailed statement here I may say that the general conclusions arrived at were as follows: The whole of the urine passed in six days was sent, and he says the total amount, if representing six days urine, is about one-seventh the normal. This contains all constituents in about normal quantities in relation to the volume of the urine, except the phosphoric acid, which is about one-third what it should be.

AUTOPSY.—Nutrition poor; body much emaciated; apparent age, 65 to 70; weight, about 50 lbs.; rigor mortis complete. A.M. staining on hands and feet; P.M., staining on back of

trunk; bed-sores on sacrum, tip and ball of great toe; feet and ankles œdematous; legs flexed on thighs by contracted tendons; no teeth, and jaws much absorbed.

HEAD.—Scalp thin and easily dissected; calvarium of average thickness; tables thin however, diploe being in excess; Dura Mater not adherent to the skull, slightly opaque at vertex; one slight adhesion to brain at margin of longitudinal fissure; ante-mortem clots in longitudinal and lateral sinuses, the clots in the lateral sinuses being particularly well organized.

BRAIN.—The brain weighed about 35 oz.; microscopically, it was healthy in appearance; in fact in asylum experience I have never seen as healthy a brain in the post-mortem room.

Convolutions well marked and sulci deep; grey matter abundant; brain substance firm; ventricles free from evidence of disease; brain not examined microscopically.

THORAX.—Sub sternal adhesions—Emphysema of cellular tissue beneath sternum; cartilages not ossified.

HEART.—Small; weight, 3½ oz. Pericardial fluid, average quantity; blood in great veins, and right auricle fluid; walls of right auricle and ventricle unusually thin; valves normal; small post-mortem clot in left ventricle; walls of left ventricle hypertrophied; left auricle normal; valves of left side normal.

AORTA.—Ascending aorta dilated into a fusiform aneurism; capacity about twice that of normal; arterial coats not thinner than normal; no evidence of atheroma; no pressure effects noticed; varicose veins on posterior walls of the heart; abdominal aorta atheromatous; ante-mortem clots in abundance.

LUNGS.—Right: Very adherent at apex; small adhesions all over surface of lung; apex, a mass of tubercle; in fact, tubercles were found scattered throughout the whole lungs, and in the apex a small cavity existed; hypostatic congestion marked. Left: In this lung a certain amount of hypostatic congestion was apparent, and an occasional tubercle was found; otherwise the lung was normal; cord-like adhesions of pleura on surface.

ABDOMEN.—Liver adherent to chest walls and diaphragm; whole capsule tore off in taking out, and remained attached to diaphragm, and abdominal wall; weight, 20 oz.; three vertical furrows present on anterior surface of right lobe; these furrows were about two inches in length; centre one distinctly marked; nutmeg condition present.

STOMACH.—Large; about two inches from pyloric orifice was a constricted portion. This condition was undoubtedly not the result of any inflammatory action, but the natural shape of the

stomach, giving rise to an appearance suggestive of a rudimentary second stomach.

INTESTINES.—Small; evidences of an old peritonitis; adhesions everywhere; there were several constricted portions from three to six inches long; in no place was there complete stricture, and no scars were present. Above the constricted portions the intestine was much distended.

CAECUM.—Walls much thickened and much venous congestion; inner surface dark red, and roughened; had appearance of numerous varicose veins in wall.

ASCENDING COLON.—One portion constricted, and part preceding dilated; transverse colon, normal; descending, slightly dilated.

KIDNEYS.—Right: Very small, about $2\frac{1}{4}$ inches long; apparently normal. Left: about an inch longer than right; apparently normal; capsules non-adherent.

CASE II.—In a recent issue of the *Journal of Insanity*, I published an account of a Case of Lethargy. Dr. Wesley Mills, of McGill University, has placed at my disposal notes by Dr. Robinson, of Annapolis, on a patient who hibernates in an extraordinary manner. Many points of similarity between my Case of Lethargy and this man are to be found, such as neurotic family history, sub-normal temperature, etc. It is a pity that more extended notes are not to be had, as the case is unique.

Notes by Augustus Robinson, of Annapolis, N. S., on a remarkable Case of Lethargy.

John T., son of a pensioner, is now about sixty-two years old. When he was twenty-eight years of age his father committed suicide by cutting his throat in a fit of insanity. Before his father's death, John had shown symptoms of melancholia. He would sit by the hour over his father's bench (cobbler's), laughing and talking to himself, and working himself into a frenzy, fighting imaginary foes, and going into immoderate fits of laughter.

I cannot ascertain, after much enquiry, how long this condition of things lasted before he lapsed into his present state; but this much is certain, for the last thirty years or more, about the end of September every year he falls into a deep sleep or stupor, and, as his present condition is a fair sample of the manner in which his winters have been passed since he was first attacked, I will describe him as I found him on Monday, December 10th, 1888, and repeat what I was told by his friends regarding his attack this autumn:

About August 31st, Jack went to bed after eating his evening meal as usual, without exhibiting anything out of the common in his manner or otherwise, or giving any reason for the supposition that he was out of sorts in any way. On the following morning he did not get up, nor has he shown any more vitality than any sleeping man up to this time. His sleep is very quiet without

any stertor, indeed it is as calm as that of a child. Twice in every twenty four hours he is taken up, a person supporting him on each side, holding a vessel for his convenience. He knows enough to voluntarily empty his bladder. The urine is high in color and scant in quantity. About eleven o'clock every night he seems to show rather more life than at any other time, and advantage is taken of this to pour a little thin oatmeal gruel, beef-tea or soup down his throat, he opening his lips to allow them to do so, and slowly swallowing it. He only takes a very little each time, and, if urged to take more, simply keeps his mouth shut. About once in every thirty days, not exactly at regular intervals, during the evening generally, the family will hear a peculiar chattering noise. They never take any notice of it, for they know it is Jack going down to the out-house to empty his bowels. He then returns to his bed and sleeps. He knows enough to throw a quilt over his shoulders at such times.

At the time of my visit I found his temperature 96° F. pulse 60, regular, though not strong; respirations 14, easy and quiet, skin cool. A pin stuck into his arm caused no apparent change, and he might be pinched until black and blue without its causing him the slightest uneasiness.

My first visit to Jack was about twenty years ago, when I first came to live and practice in this vicinity, and it came about in this way. Of course there was a talk about the new doctor and what he could do, so I was called to see this queer case. I got all the particulars from the friends and neighbors, and what means had been tried by other doctors, and then I promised to try what I could do. On the following day I went again, accompanied by my brother, also a physician. We took with us a good galvanic battery. One of the handles was placed in each hand and bound closely to the fingers with wet bandages. We then put on the full power of the instrument. Poor old Jack was out of bed in an instant, and I shall never forget his look of astonishment and horror as he yelled out "Damnation, what's that?" I can also well remember my own feelings of satisfaction and complacency when the natives contrabulated me on my success in this, my first case. I walked off as if saying to myself, "I knew I could do it." Well, Jack remained awake about three days, and then I got a message that my patient was off again. I went up and tried the battery a second time, with only the effect, however, of making him open his eyes and grunt out "Eh," in a querulous manner, and, after looking about him for a half-hour or so, he lapsed into his former condition. Next day I again tried the battery, but without the slightest effect, so I gave it up as a hard case.

This is all I have to say about this singular object, except that, of course, he becomes very

thin and haggard before he rouses finally in the spring, and he does not fairly waken until the end of May or first of June. During the summer months Jack does exactly the work he is told to do, but he must be told over again every day; for example, if desired to bring the cows from pasture, he will do so, but will not milk them until told to, nor will he turn them afield again without being desired. He does not seem to know what to do next, even though the same routine is carried out every day. An exception, however, must be made in one respect. He does not require to be told when dinner or tea-time arrives, and is blessed with an excellent appetite. Jack is always ready for his hash, and is not particular about quality, so that quantity is there. He will talk quite rationally on any subject when spoken to, and recollects distinctly most of the incidents of his childhood. He will hold animated confab with the cows, dogs, trees, wheel-barrow, or any other object which happens to be in his way, and may be noticed sometimes lecturing a tree for some time, breaking out occasionally into uproarious fits of laughter.

INVOLUTION FORM OF THE TUBERCLE BACILLUS AND THE EFFECT OF SUBCUTANEOUS INJECTIONS OF ORGANIC SUBSTANCES ON INFLAMMATIONS.

Prof. Robert Koch announced in 1882 the discovery of the cause of Tuberculosis. He claimed that consumption was produced by a *peculiar bacillus of a special shape*. This he described as a rod-shaped micro-organism with rounded ends, either straight or curved, and frequently beaded. This simple form was accepted as a constant character until the summer of 1889, when I first observed, in an artificial culture on an Agar glycerin nidus, a slight inclination to bud in one or more places along the rod, without the production of any particular angle, some relations forming an acute while others formed a right or possibly an obtuse angle. A single bud could only be recognized with a high power objective focussed and illuminated with particular nicety. The indications, however, were so often repeated in each field as the slide was moved upon the stage of the microscope that I was sufficiently convinced of the presence of branches to review the life-history of the tube in which they were found and to speculate upon the factors likely to have brought about the evident evolution. The result was the production of germs with decided *branches*, some of which were quite as long as the parent rods or stems. This result was published in the *Medical News* of October 19th, 1889. In 1891, Prof. Allen J. Smith observed branched forms of tubercle bacilli

in human sputum. Since then Prof. Klein, Heren Fischel, Mafucci, et al., have described the branching of this germ. In the summer of 1892 I observed the bacillus in this cycle of life in the liver of the Green Jay, of Mexico, *Xanthoura luxosa*. This discovery, coupled with my observations of 1889, and corroborated by the statements of other scientists, must now compel the bacteriological world to recognize a more complex form of the tubercle bacillus than that observed by the great German bacteriologist in 1882. Since the discovery of the branched form of the tubercle germs in 1889, I have been able to continuously reproduce them on artificial mediums. While the young germs seem to be quite simple in form, appearing in straight rods and rods bent upon themselves, those which have arrived at the age of four weeks, particularly in the presence of an excess of glycerin and in a temperature of 40° C., become branched. The young bacilli, when introduced into the animal tissues, produce tuberculosis, while the older cultures gradually lose their virulence, in all probability owing to their inability to reproduce themselves. This fact indicates that the branched form represents an involution life-cycle of the germ. Notwithstanding the fact, however, that the devitalized, dying or dead bacilli cannot produce consumption, they, with their products, effect a decided increase in tubercular inflammation, which inflammatory process even results in necrosis of the tissues. These phenomena led to investigations proving the correctness of the hypothesis first published in my monograph on Immunity (*Medical News* of October 19, 1889) to wit: "It is possible that, by a thorough filtering out of bacilli from tuberculous material, a filtrate might be obtained and attenuated so that by systematic inoculations a change might be produced on living tissues that would enable them to resist virulent tubercle bacilli. In this line of experimentation I proved that the presence of the germs was not necessary to produce the hyper-inflammatory condition of the tuberculous tissue but that it was a *product* of the bacillus that caused the reaction upon the tuberculous animals tissues. This, since called *Tuberculin* and introduced into the human economy for the purpose of curing tuberculosis when introduced into animal suffering with artificially produced tuberculosis, often destroyed the condition called consumption and in many cases appeared to produce immunity to the poison of tuberculosis." The process, however, was not quite so successful in animals which had contracted tuberculosis through one of the natural channels. In these cases tissues surrounding that which was recognized as tuberculous afterward became infected with consumption. While this was and still is discouraging we had good reason to believe that *Tuberculin* will be permanently established as a remedy for this pathological con-

dition. The toxic albumose causing inflammation of tissues markedly tuberculous, coupled with the fact that it is found in such tissues, led me to inquire whether or not some other constituents of animal tissues, pathological or normal, would produce reaction if introduced in excess into the general circulation. This line of experimentation was begun by first using an albumose of the goat, a comparatively immune animal. This material, however, if at all active as a remedial agent in tuberculosis, is so slow in its effects that I have heretofore failed to produce any marked changes. When, however, in the course of my investigations I overloaded the animal system with some of its waste products, Dr. William L. Zuill, M.D., D. F. S., who has kindly carried on the clinical work on animals for our Bacteriological Laboratory, reported in the *Times and Register* of September 26th, 1891, a reaction by the Amidé group on inflammatory tissues, the animals experimented on being tuberculous. As this group included that which we believe to produce the inflammation of gout, I was led to review my experience with tuberculosis in relation to lithemia. Studying this field with the lithemic and tuberculous habits in view I was soon impressed with the fact that when these diseased conditions were present at the same time in any individual we could claim it to be an exception to the rule.

To determine the special action of the Amidé group upon inflamed tissues when introduced into the circulation, a case of lupus vulgaris was selected and first treated by the subcutaneous introduction of .03240 gm. of kreatinin, alternated twice weekly with .130 gm. of taurin, urea and uric acid. The average temperature during treatment was slightly raised, though not to any marked degree, under the influence of such small doses. The more recent patches of lupus, however became markedly inflamed, being accompanied with a burning sensation. On the third day after the first injection, a marked granulation could be detected around the outer edge by the aid of a strong amplifying pocket glass. This apparently healthy granulation has continued for ten days, in which time the patch has one half of its original area healed. The result shown at this early stage of the experiment is sufficiently encouraging to warrant not only a continuation of the treatment in this case but in other forms of tuberculosis. The only other subjects upon which these injections have been tried have been cases of pulmonary tuberculosis in a very advanced stage, where there was too much lung-tissue already destroyed to warrant the expectation of a favorable result. The fact that we apparently have an action on the lupus and no marked result with *small* doses on advanced cases of pulmonary tuberculosis causes me to realize that the line of experimentation must not be confined to tuberculous inflammation

but extended to the action of these organic substances on the entire group of inflammatory growths the effect being produced, possibly, by supplying that in which the pathological tissues are deficient. This line of inquiry, which had its origin in the Bacteriological Laboratory of the Academy, has opened up a new and wide field of important scientific medical investigation. The main object of this communication, at this time, is to conform the original discovery of the *branched form* of the tubercle bacillus by recording the observations of the life-cycle of that micro-organism found in animal tissues. I have, however, ventured to advance theories and results regarding the action of substances far removed from the bacillus, because they were suggested during my studies of the branched form of that organism.—Samuel G. Dixon, M.D., Philadelphia.

TUMOR OF THE LIVER IN WHICH REMOVAL WAS ATTEMPTED.

M. F., aged sixty years, was admitted to the Woman's Hospital May 24, 1892, with the following history :

From girlhood she had enjoyed almost uninterrupted health until a comparatively recent time, when she suffered a great deal with indigestion and pain under the right shoulder and left breast. She was a married woman and had borne six children. About four months before applying for treatment she noticed, when undressing at night, a lump in the right side of the abdomen about as large as a fist, which seemed very hard. This growth had, she thought, increased very rapidly, and had extended somewhat to the left side of the abdomen; it was the seat of some tenderness on pressure. The notes, however, do not seem to indicate that she suffered any very great inconvenience from this abnormal condition.

The physical examination of the patient showed nothing abnormal in the lungs or in the heart, except that the latter was rather weak. The urine contained no albumin or sugar; was acid in reaction; had a specific gravity of 1015, and was voided to the amount of thirty ounces in twenty-four hours. It contained amorphous phosphates and uric acid. She had no jaundice. Examination of the pelvic organs showed nothing especially wrong. Palpation of the abdomen disclosed a hard, smooth mass in the right hypochondrium, which did not seem to extend back into the kidney region, and was so prominent anteriorly that it made a distinct elevation of the abdominal parietes, which was evident on mere inspection. The abdomen was not tympanitic, and showed no evidence of inter-peritoneal fluid. The tumor was localized and moved upward and downward during the

respiratory act. It seemed on careful investigation, to be probably connected with the liver, though this diagnosis was not definitely determined. An explanatory incision was recommended and carried out on June 3rd, with the ordinary aseptic precautions observed in laparotomy cases.

An incision in the middle line was made, and extended for about seven inches, one-half of which was above and the other half below the umbilicus. Upon opening the peritoneal cavity I found in the right lobe of the liver a tumor resembling in shape a flattened cobble-stone, circular in outline and about three inches in diameter. It was perhaps an inch and a half thick, and located in the anterior portion of the right lobe of the liver, involving the edge, which was thickened by the infiltrated growth. The mass lay directly above the gall-bladder. There were no adhesions between the tumor and the intestines, omentum, or abdominal wall. The limit of the healthy liver tissue surrounding the tumor was readily discernible, because the growth, though not encapsulated, had a distinct outline where it came in contact with the uninfiltated liver tissue. The surface of the growth was of a dirty brownish-white color, and showed irregular puckerings of the peritoneal investment of the liver, as though the peritoneum was thickened by chronic interstitial inflammation. No other growth was found in any part of the liver which could be reached by careful exploration with my hand. Although I believed the tumor to be a malignant one, I considered it a proper case for excision, because there was no infiltrated tissue beyond the immediate seat of the tumor.

My intention was to excise the mass with a Paquelin thermo-cautery knife, and I began by separating the gall-bladder from the under surface of the tumor by means of the hot knife. Before I had dissected the gall-bladder loose a quite free hæmorrhage occurred from the surface of the liver from a vein the size of a goose quill, which was opened by the cautery. Just at this time one of the rubber bulbs of the thermo-cautery burst and destroyed the instrument for further use. Not expecting to use the Paquelin cautery I did not have a second instrument in readiness; I was, therefore, obliged to abandon the operation because of the evident risk from profuse hæmorrhage, which would probably be uncontrollable without the use of the cautery. It did not seem wise to allow the patient to wait under ether with the abdomen opened until another instrument could be obtained. I was also deterred from proceeding by the fact that the operation was, under the best circumstances, grave, and the permission of her friends had been given somewhat unwillingly. To arrest the hæmorrhage from the large vein I stitched the gall-bladder in its former position against the liver, so as to close the opening in the vein by pressure. This was done with several

silk sutures, and answered admirably. I intended, after the patient recovered from the immediate effects of the operation and gained strength, to reopen the abdomen and, with two thermo-cauterics at hand, make a second attempt at removal of the growth. The patient was put to bed, did well, and the temperature remained about normal. During the time of convalescence, however, she was quite weak, complained occasionally of pain in the abdomen, and had a little irritation of the bladder, causing her urine to dribble. The stitches in the belly wall were removed in a few days, but the patient was not discharged until July 12. There was no marked change in the liver growth that could be appreciated through the flaccid abdominal wall. Her detention in the hospital for so long a time was due to her feebleness and to the fact that in the latter part of June she had what appeared to be a slight attack of pleurisy. This, however, did not cause her temperature to rise much over 100°. She was feeble during the whole time of her stay in the hospital, her pulse varying from 100 to 112; even when she was discharged the pulse counted over 100.

The condition found by the exploratory incision was described to her and to her friends, and an effort made to obtain their consent to a second operation definitely planned for the radical removal of what was believed to be a malignant growth, which could only have a final fatal issue. The feeble condition of the patient, however, did not permit me or Dr. Fullerton to urge the operation as much as we would have done had the patient been younger and in vigorous health. It was impossible to obtain the consent of her friends to the operation, and the case, therefore, passed out of my hands.

It seems to me that hæmorrhage would be greatly diminished by encircling the growth, before excision, by a series of enterlocking sutures of strong silk carried through the entire thickness of the liver. This, as I told the hospital class, would probably be my method of guarding against bleeding. The excision would then have been made with the cautery. There would have been left, of course, a large hemispherical wound in the anterior portion of the liver.

The patient died September 17, 1892, but I was ignorant of the fact until after she had been buried. Her physician, Dr. C. K. Rowe, writes that before death the patient's skin became of a decidedly yellow hue, that the tumor had increased somewhat in size, and that two or three small tumors were discovered on the back and neck. She became very much emaciated, and apparently died from exhaustion.

At the time that the patient whose history is recorded, was under my care I was not familiar with the report of Dr. L. McL. Tiffany of the case of removal of a small tumor of the liver, or of the

details of Dr. W. W. Keen's case of excision of a cystic adenoma from the liver. I had heard that Dr. Keen had successfully removed a growth from a liver, but I had not seen the report. These two cases, so far as was known to Dr. Keen at the time his paper was written, were the only instances of resection of the liver for the removal of tumor that had occurred in America.

Dr. Tiffany's patient was a man, aged twenty-five years, from whom a small tumor was taken from the left lobe of the liver, leaving a cavity in the surface of the liver an inch in depth and an inch and a half in diameter. Previous to the removal of this growth the parietal peritoneum was stitched to the liver around the area to be operated upon. Excision of the tumor was then performed by means of scissors, and the Paquelin cautery was applied to the bleeding surface. The tumor, which had been a painful one, "was composed of liver tissue in which there was much exudation, while scattered through the growth were many fine grains of sand—no doubt, minute calculi."

The patient operated upon by Dr. Keen was a woman, aged thirty-one years, who had suffered with a slowly-growing lump in the right side of the abdomen for about two years' time. The tumor proved to be a cystic adenoma of the bile ducts; it was three and a half inches vertically and nearly of the same dimensions transversely; at its base where it joined the liver substance it was two and a half inches thick. Its internal border lay next to the gall-bladder, which had to be dissected loose for one-half inch, in order to afford access to the growth in the operation of removal. Dr. Keen's first idea was to ligate the thick border of attachment before applying the cautery to cut through the liver tissue; he, therefore, put one stitch directly through the liver substance near to the gall-bladder. After this was tied he used the cautery. The cautery knife acted so satisfactorily that he found no necessity for further ligation of the liver substance surrounding the tumor, but removed the growth partly by the use of the cautery and partly by enucleation with the finger-nail. The large veins that he met with while making the incision with the hot metal were ligatured, as they were discovered, before the cautery divided them. The two flaps of liver tissue left by the removal of the growth were then sutured together, very much as flaps are stitched after amputation of a limb.

The cases of Drs. Tiffany and Keen both recovered, and were in good health months after the operation. Dr. Keen's paper includes a list of twenty reported cases of removal of hepatic tumors, which was compiled by Dr. T. S. Westcott after thorough search through a large mass of literature.

Consideration of these cases induces Dr. Keen to believe that quite a large portion of the liver

can be removed without extreme danger to the patient; that the entrance of bile into the peritoneal cavity is not necessarily fatal; and that bleeding can be managed by searing the surface of the liver, by ligation, or by fastening the stump to the abdominal wall in a manner similar to that used by Dr. Tiffany in his case to which I have just referred. Hæmorrhage need not be great, as the divided vessels can be tied separately or in mass, or treated by pressure, by the cautery, or by a combination of all of these hæmostatic measures. The mortality shown by the cases tabulated by Dr. Westcott is about ten per cent.—John B. Roberts, M.D., Philadelphia.

SUPRAPUBIC PROSTATECTOMY.

Mr. Buckston Browne read a paper on this subject.

The President commended the conclusions so cautiously formulated by the author. He had seen Mr. McGill's preparations, and these certainly comprised a great deal more than strictly intravesical growths. Overgrowths of the third lobe of the prostate had several times been removed accidentally in the course of lithotomy. He himself when performing cystotomy in a patient whose condition was well-nigh desperate, pulled away a piece of the prostate the size of a walnut along with the stone. Having ascertained that more growth was present, he proceeded to clean the floor of the bladder, and the ultimate result was excellent, for though it was five years since this was done the patient was now in good health, and had never since been obliged to have recourse to the catheter. Enlargement of the prostate was the cause, and not the consequence, of bladder disease. He deprecated the use of the silver catheter, preferring the rubber catheter, which was much more easy to manipulate and less dangerous.

Mr. Reginald Harrison disclaimed any desire to pit one operation, so to speak, against the other, but asked whether the author would limit operative procedure in enlarged prostate to that described in his paper.

Mr. Bruce Clarke said it had often occurred to him while making *post-mortem* examinations how easy it would have been to treat the case if only one had been able to diagnose exactly where the enlargement was situated. It was generally situated within the urethra, less frequently at the neck of the bladder, and, lastly, within the bladder. Of course, when within the bladder the growth ought to be removed. The situation of the enlargement could be made out with approximate accuracy by observing how long it took before the catheter reached the water, and in these patients it was often possible by bimanual examination, under chloroform, to map out with the finger the

size and outline of the enlargement. The most difficult cases to treat were those in which the urethra was compressed, but it was, above all, a question of diagnosis. These outgrowths on the surface of the urethra amounted to stricture. In small diffused growths it was often sufficient to touch them with the actual cautery—galvano-cautery or Paquelin's—which set up absorption or shrinking. He thought the author had somewhat exaggerated the hæmorrhage attending these operations. Hæmorrhage did not seem to have been a very important factor in determining the fatal issue in the unsuccessful cases.

Mr. Swinford Edwards concurred in the view that the electric light did not render any great assistance in the diagnosis, and more might be learned by means of the finger in the rectum with a short beaked sound in the bladder. He had performed suprapubic prostatectomy a year ago on a patient aged 50, who presented a distinct enlargement of the prostate with a sessile tumor projectly into the bladder. This he removed with scissors. He had used Gouley's instrument for puncturing the enlarged prostate on several occasions, but though immediate relief followed recurrence soon took place. He demurred to the proposal to abstain from operating early in catheter life. If one diagnosed a growth lying over the vesical orifice and causing obstruction, then the sooner it was removed the better, and unless the existence of an intravesical pedunculated growth could be made out he would not operate at all.

Mr. Marmaduke Shield urged that the use of silver catheters ought to be altogether discarded in cases of retention due to enlarged prostate. The variable vascularity of the prostate would account for the occurrence of severe hæmorrhage in some cases and not in others. He had only performed suprapubic prostatectomy twice, and had been struck by the amount of hæmorrhage. The condition of the kidneys must necessarily influence the surgeon in deciding upon the propriety of surgical intervention. The worse cases for this operation were undoubtedly those in fat elderly men in whom obesity was associated with emphysema and chronic bronchitis.

The President agreed that so far as he had been enabled to observe, sexual indulgence did not play a great part in determining enlargement of the prostate. He facetiously recalled the old belief that the enlargement was closely associated with the love of money.

Mr. Browne, in reply, said that in many cases in which growths or tumors had been removed by the perineum by accident in the blades of the stone forceps, though the wound had healed, the power of the bladder had not been restored. That might, however, be due to the operation not having been performed in a scientific manner. In the case alluded to by the President, there had been a long-

continuing urinary fistula. He admitted their indebtedness to the President for introducing the vulcanised rubber catheters, which were undoubtedly the best in prostatic cases, but it could not be denied that the rubber catheter did not "go." There were two catheter traps at the very neck of the bladder. These were enlarged prostatic sinuses, one on either side of the verumontanum. When the middle lobe was enlarged, that pocket was well open, and formed a very firm obstruction to soft instruments. Though Mr. Harrison had been fortunate in respect of hæmorrhage and urinary fistula, his own experience had not been by any means so satisfactory. Moreover, this unsatisfactory experience had not been his alone, but he had observed it in the hands of others. Statistics were valueless in respect of this operation, their number being comparatively small, and the individual cases differing so much from each other. Keyes, of New York, described it as "the most horrible operation in surgery." He agreed that as a general rule the use of silver catheters was not advisable, but at the same time there were cases in which they were indispensable in order to effect an entrance into the bladder. As to the kidney disease, he observed that these were desperate cases, and the surgeon would not stop to weigh possibilities in endeavouring to afford relief.—Dr. Browne in *Brit Med Jour.*

THE ACTION OF QUININE, ATROPINE, PILOCARPINE, ANTIPYRIN, AND ANTIFEBRIN ON THE ELIMINATION OF URIC ACID BY THE URINE, AND ON THE NUMBER OF LEUCOCYTES IN THE BLOOD.

In an able research, J. Horbaczewski (*Revue de Thérapeutique Générale et Thermale* September 20, 1892; *Sitzungsberichte der K. K. Wiener Akademie der Wissenschaften*, t. c., sect. 3, p. 101) appears to have demonstrated the relation that exists between the number of leucocytes in the blood and the quantity of uric acid eliminated under the influence of alimentation. When under the influence of food, the leucocytes increase in number in the blood, there is at the same time, an increase in the elimination of uric acid. Under certain circumstances, the leucocytes give rise to the formation of uric acid; and, on the other hand, this is also dependent on the disorganization of the leucocytes, which undoubtedly takes place in the organism, especially in the case of mammals. In other words, the chemical substances which act upon the leucocytes influence the production of uric acid, and inversely. It has long been established, particularly by the researches of Ranke, Kerner, Prior, Kumagawa, and others, that qui-

nine diminishes the elimination of uric acid; and, according to Binz, the drug similarly decreases the number of leucocytes in the blood. This has been confirmed by recent researches.

Atropine, in daily doses of one milligramme, has, in three cases, produced the same effects as quinine,—that is, a lessening in the number of white cells in the blood, and in the amount of uric acid eliminated by the kidneys.

With the hydrochlorate of pilocarpine the results have been different,—that is, there is an increase in the number of leucocytes and a correlative increase in the quantity of uric acid. The dose of the drug administered by the mouth was 1 centigramme in each of the three cases observed, and of 1½ centigrammes in the fourth instance. In other experiments performed in lower animals, the pilocarpine given hypodermically, in doses of from ½ to 3 centigrammes per kilo of the body-weight only produced an increase in the size of the spleen. This result is more remarkable, since the drug is an excitant of the contractile elements of the muscular fibre; it has a similar action on the intestine, causing a constant diarrhoea. The author calls attention to the contrast existing between the effects produced by quinine and those caused by pilocarpine. Quinine, without influencing the contractile elements at all, diminishes the volume of the spleen; while pilocarpine, acting on these contractile elements, produces an increase in the size of the same organ. The observer believes that these changes in the spleen, caused by the two medicaments, occur independent of any action exercised by the drugs on the contractile elements of the organ.

Antipyrin, in doses of 2 grammes, and antifebrin in amounts of 5 grammes, produce what may be called opposing results,—that is, a diminution in the quantity of uric acid eliminated by the urine, and an increase in the number of leucocytes in the blood. The author affirms, therefore, that the actions of antipyrin and antifebrin, on the one hand, and the effects of quinine, on the other, are not identical, or at least cannot be considered as such.

Kumagawa has observed an increase in the elimination of uric acid under the influence of large doses of antipyrin, and an increase in the elimination of nitrogenous principles under the action of large doses of antifebrin. These two drugs, according to the author, influence nutritive changes differently from quinine. For example, under the action of antipyrin there occur no atrophic changes in the spleen, as it happens in the case of quinine. Finally, the influence exercised by the latter drug on the production of leucocytes differs from that of antipyrin and antifebrin, which, in large doses, increase the number of said leucocytes in the blood.—*Therap. Gaz.*

THE PHYSICIAN'S LIABILITY FOR MALPRACTICE.

This subject is one of the many regarding which the law is an inchoate mass. The only rule to be followed when sued for professional negligence is to consult an attorney and see what the "latest guess" of the supreme court of your State has been on the subject.

At the same time, there are certain common-sense rules which should be familiar to the practitioner, and the knowledge of which may save him from the loss of many hard-earned fees.

Any one-man-power business is liable to be conducted imperfectly. The lawyer or doctor who goes through life without making errors is more than human. The tired and over-worked brain cannot work perfectly. But we must recognize the fact that one who holds himself out as a physician is bound to accept the responsibility that attaches to his employment.

The doctor must exercise ordinary care, and such care as is commensurate with the duties of the particular case. He is not always held liable for failing to employ the latest methods of treatment; certainly not, when the worth of the latest methods is not generally admitted. The decisions defining the degree of care run through the whole gamut, from "slight" to "extraordinary." Some courts have announced that the physician must be possessed of the amount of knowledge and exercise the degree of care, usual among the physicians of his community; reasoning that the country doctor of limited practice and poor clinical facilities cannot be expected to display the skill of the practitioners in large cities, or to keep as well abreast with the process of the science. Others assert that the physician in general practice cannot be held to the same degree of care in special treatment, such as of the eye and ear, as one who confines himself to practice as oculist or aurist.

To recover against the physician for negligence, it must be shown that his want of care was the immediate or proximate cause of the injury complained of. The doctrine of contributory negligence sheds its kindly light upon the physician as well as upon corporations. So where a physician and surgeon was sued for malpractice in treating a diseased foot, and it appeared that he commanded absolute rest for his patient, which injunction was disregarded, and the injury complained of was partially produced by the failure of the patient to follow such instruction, it was held that no recovery against him could be had, even though his treatment had also helped to produce the injury. This holding, has been attacked, however, many decisions holding that where the doctor is primarily at fault, the fact that the patient or the nurse was negligent can only be shown to mitigate the amount of damages.

When doctors form a partnership in their practice, the firm is liable for the negligence of either member. When a physician and surgeon contracts with a corporation to treat persons injured through its negligence, and he and his assistants are guilty of malpractice in such treatment, it has been held that the corporation can recover from him for damages sustained by the corporation for such malpractice. This decision is somewhat questionable.

The measure of damages is the same as in other cases of negligence. The proper elements of damage are loss of time sustained by reason of the malpractice, expenses for medical and surgical attendance, nursing and medicine incurred in effecting a cure, mental and bodily suffering, and the prospective injury, if any. All these are comprehended under the term "actual damage."

Exemplary damages—or damages awarded by way of punishment of the defendant—are the discretion of the jury when it is shown in evidence that the physician's negligence is so gross and wilful as to raise a presumption that he was conscious of the probable consequences of his carelessness, and indifferent to the injury liable to follow.

In conclusion it is always advisable to consult competent counsel the moment a suit of this kind is threatened. Correspondence with the plaintiff or his attorney is apt to prove awkward later on. In a recent New York case the patient had consulted another physician who instigated the bringing of an action against the doctor first employed. The defendant, thinking that by a private interview with his successor he could so explain his method of treatment as to convince him it was proper, called at his office. The result was that his admissions made during the interview lost his case, and heavy damages were recovered.

Innocent-looking letters and brief conversations of parties to suits are the bane of a lawyer's life. Then, too, a large proportion of plaintiffs in suits of this kind are unscrupulous enough to distort casual talk into serious admissions. It is enough to say, "See my attorney;" for the rest silence is golden.—*Med. Mirror.*

THE DOCTOR, A GENTLEMAN.

In speaking of a physician as a gentleman, I do not mean simply a finely-dressed man, nor go so far as to claim he should be a Chesterfield in manners, nor a Beau Brummel in dress, nor even a fantastical Alcibiades, with his canine follower, but in every respect a gentleman in the true acceptance of that term. Of course, the term has various significations, according to the country you may be in or speaking of. In this country it means a man of good manners, pleasant address, social disposition, and an honest man. But a

physician should possess more than these qualities; he should be a man of kind, sympathetic feelings, and liberal in character. We might cite as a fair sample a man of our own guild, the celebrated and venerable Autocrat of the Breakfast Table, Dr. Oliver Wendell Holmes.

In England the term gentleman has a different signification from what it has with us. In that country it means a member of the aristocracy, with but little regard to his personal qualities.

A physician, however, should occupy a high plane in the community in which he lives, and so conduct himself as to be worthy not only of the confidence of his patrons as a physician, but also as an example for his neighbors to imitate. He should, if possible, be well informed on most ordinary subjects, especially such as his friends are interested in, and thereby be able to render advice and instruction when called on.

As a rule, the family doctor is looked up to as a man who should know something of almost everything, and is frequently asked for information on various subjects. In a few words, the doctor should not be a fool on any subject.

But the principal reason inducing me to write this paper is to say a few words in regard to the social and professional status existing among many members of the profession. Unfortunately for good fellowship among our fraternity, there exist unkind feelings, engendered, no doubt, in many instances from slight causes, and again in other instances without any cause at all, if the matter was properly investigated. Sometimes this bad feeling is brought about through the love of gossip or tattling by enemies on one side and pretended friends on the other, which has not the least foundation in fact. But, unfortunately, in other instances there exist true grounds for unkind feelings between medical men. And right here we find lacking those characteristics which go to make up the true gentleman.

It should be understood by every man entering the medical profession that it is not one of competition in trade, where tricks and misrepresentations can be practiced with impunity, but he must regard it as a noble calling, wherein a member is to be governed by an honorable code of ethics, which should never be violated. In fact, I have always thought the Code of Ethics governing medical men, as it pertains both to the etiquette which should exist between themselves as well as the relations they sustain to the public, should be especially impressed upon the minds of the students, and believe, were this the case, many practitioners would avoid doing many things which are unpleasant to each other, and thereby preserve that friendly and social relation which should exist among all medical men.

On account of unfriendly feelings existing among neighboring physicians, especially in the country,

many times consultation is refused, when the sick man is compelled to send some distance for a friendly compeer to meet his family doctor, thereby involving greater expense.

How often do we find it the case that in small towns where two or more physicians are located, they are hardly on speaking terms. This fact soon becomes known to the public, and partisans of each physician will soon spring up, taking sides with their favorite doctor. These factions may soon engender strife and bad feelings among themselves, and intensify that already existing among the doctors.

This condition of things is unfortunate for any community, and should always be avoided. One may ask, What connection can there be between a condition of affairs as described and gentlemanly deportment? It requires many traits of character to constitute a gentleman, one of which is suavity in manners. Do nothing to offend your neighbor in word or action, and a state of friendship will likely be maintained. Believe nothing you hear that your neighbor has said or done respecting you until you have satisfactory proof of its truth. Many friends have been made enemies through gossipy inuendo, without any foundation in fact. If a medical brother should, in his relations to other practitioners, violate the Code of Ethics, he should be reprimanded in a gentle manner, and if he is a good man he will not repeat the offence.

There are some things connected with the Code of Ethics that should regulate etiquette between medical men that might be regarded by young practitioners as so trivial in character as to be violated with impunity. They may think it no harm to solicit patronage, even in families who employ another physician; or they may regard it a harmless matter to advertise themselves as superior to their neighbors; or to give it out that they have a great deal to do even when there is but little sickness. Some go so far as to employ partisans to sound their praises as skillful physicians whenever opportunity offers.

These matters look like small things among the people, but are very repugnant to the feelings of a sensitive physician, and are regarded by him as tricky in character and unbecoming a true gentleman. No doubt many young men in the profession, in the outset, are so anxious to succeed in practice that they regard these offences against the Code in the light of small matters, and if properly tutored could be reclaimed from such violations.

But, unfortunately, we now and then meet with a man who is entirely devoid of any compunction of conscience as it respects the violations of the Code. A few of this class I have had the misfortune to meet during my protracted practice, but am glad to say they have been but few in number.

I believe, however, that many members of the

profession are unfriendly with each other on very trivial grounds, and that if proper interviews were held amicable relations could be restored. There is nothing more unpleasant to my ears than to hear my medical brethren talk disparagingly of each other, especially so when I regard the parties involved as my particular friends. It has been a rule, with me since I became a member of the profession, now nearly a half century ago, not to speak slightly of any brother member. If I cannot say a good word for him I keep silent; but, as a rule, there are but few doctors we can not say a good word for in some particular; and it always does me good when I can frankly speak in praise of my medical brother.

I think if we all could take this view of the matter, and practice it, that there would be much less unkind feeling existing among medical men. In a few words, let us all endeavor to be gentlemen in all the various significations of the term.—T. B. Greenley, M.D., in *Am. Prac. and News*.

SALICYLATES IN THE TREATMENT OF PLEURISY WITH EFFUSION.—1. Salicylic acid and its salts are among the most effectual agents in the treatment of pleurisy with effusion.

2. In effective doses the remedy is harmless, and, with proper selection of the preparation, and care in administration, causes little or no discomfort to the patient.

3. Salicylates act most promptly in pleurisies with serious effusion of recent origin or of long standing, but they are efficient in simple dry pleurisy, and often act favorably in secondary pleurisy.

4. There is no evidence that they are useful in suppurative cases.

5. The drug acts as a diuretic, but may have an effect on the pathological process, or on the cause of the disease.

6. Salicylates have a more marked action in pleurisy than have the diuretics, commonly so called.

7. "The duration of the treatment with salicylic preparations is less than with diuretics, common salt, or roborant medication." (Engster.)

8. The remedy can be used at the earliest period, and favorably effects all symptoms.

9. The drug may be given in the form of the acid, or any of its salts, in doses of a drachm of the former, or 1 to 2 drachms of a salt daily. In ordinary cases it is not necessary to give the large doses, and 60 to 90 grains of sodium salicylate or salol daily may be considered full beginning doses, to be diminished one-third or one-half after the effect is manifest.

10. The ordinary precautions must be observed in giving the drugs, and during their administration the total amount of urine should be measured daily.—*Therap. Gaz.*

THE CANADA LANCET.

A Monthly Journal of Medical and Surgical
Science, Criticism and News.

☛ Communications solicited on all *Medical and Scientific* subjects, and also *Reports of Cases occurring in practice.* Address, DR. J. L. DAVISON, 12 Charles St., Toronto.

☛ Advertisements inserted on the most liberal terms. All *Letters and Remittances to be addressed to* DR. C. SHEARD, 320 Jarvis St., Toronto.

AGENTS.—DAWSON BROS., Montreal; J. & A. McMILLAN, St. John, N. B.; GEO. STREET & Co., 30 Cornhill, London, Eng.; M. H. MAHLER 23 Rue Richer, Paris.

TORONTO, MAY, 1893.

The LANCET has the Largest Circulation of any
Medical Journal in Canada.

ALCOHOL AS A MATERIA MEDICA.

The title delimits the scope of the article, and should make it impossible to stray afield in a disquisition upon the merits and demerits of alcohol not as a drug but as a beverage. Frequent distributions of campaign literature from the total abstainers are made upon the medical profession, full of the usual *ex parte* and frequently very extreme statements of "eminent practitioners," and bristling with clinical data from such authorities as the National Temperance Hospital of Chicago, whose chief physician declares, as the seventh dictum in the code, that "there is no disease affecting the body that cannot be more successfully treated without than with the use of alcohol." Mere physiological reasons, based mainly upon laboratory experiment, should not determine the guarded or candid practitioner's conclusion, nor should the effects of alcohol in any form or dose upon the healthy individual be admitted as sufficient generalizations as to the value of the drug in sickness. We do not adopt these lines of observation in studying the action of any other drug, say belladonna, or opium; why then are they adopted in the controversy upon alcohol? Mainly because observers study the action of the drug as a beverage. No medical man breathes who does not freely acknowledge the deplorable effect of the indiscriminate use of the poison, and who would not rather have as patient in any severe illness or accident a total abstainer or at least a temperate man than a *habitué* to the drug.

Clinical observation and experience alone would seem to have the right to determine the question, and it is very improbable that medical men more than one in a hundred will ever be so blind to results as to say that alcohol has no place of value in our drug-list. It would be interesting and profitable to trace the history and geography of medical opinion and practice on the question. We should probably find that in a country like this, where total abstinence is the rule, the profession have vastly less trouble with patients in the matter of dietary, wine-list, enforced abstention from alcoholic beverages during sickness, than say in England or in France. It is more than likely too than when physicians here do prescribe alcohol wisely as a drug they find much more speedy response to its action, and are able to do more good by its exhibition, than their *confrères* in beer or wine drinking communities. Physicians a generation ago were perhaps, and we say it deferentially, too ready to order alcoholic beverages to all kinds of patients for all kinds of disease, as witness the wine depots and dispensaries established by the charitably disposed in so many districts in Britain in the early part of the century, that the poor might have the same generous and stimulating luxuries as the rich. The authorities of to-day show a strongly discriminating bent in their recommendations. Even so long ago as the days of Graves and Armstrong, the following wise rules were laid down for the use of alcohol in fevers, which might even yet be remembered with profit.

1. If the tongue become more dry and baked than before;
2. If the pulse become quicker;
3. If the skin become more hot and parched;
4. If the breathing become more hurried—alcohol is doing good and should be used.

It may be said that at either extreme of life, infancy or old age, alcohol is more universally useful. The main indication for its use in any acute illness is the state of the heart; not so much the rate and rhythm of the pulse as the character of the heart sounds. If when the fœtal rhythm is heard, the first sound approximating the second in length, and the two intervals the same, alcohol be given, the heart beats will nearly always improve, and the patient may be tided over a critical period of collapse to a safe recovery. Its effect on the heart had better be observed by the stethoscope. The stage in any acute illness at which its admin-

istration should be begun is determined mainly by the heart. As an antipyretic it is only secondarily useful, but it would seem undoubtedly to diminish the excretion of urea, that is, the amount of tissue waste going on during pyrexia. It is well known that in febrile states amounts are taken without any intoxicating effect that could not be tolerated in health. Ringer says, among many excellent maxims about alcohol, that "there can be no doubt that alcohol is not required in all febrile diseases; on the contrary, many cases are best treated without it." He deprecates the giving of large amounts at long intervals, fearing collapse after the period of strong stimulation following on the ingestion of large quantities, and recommends the more gentle continuous action of smaller amounts frequently given. The age of the patient as well as his disease must be considered. As prostration comes on early in the old, it should be anticipated. Previous habits must be reckoned upon. While in drunkard's pneumonia enormous quantities are necessary, and usually from the start, young and sthenic cases frequently need none at any time during the attack. The use of the drug in chronic ailments, such as dyspepsia, is quite another matter, and the responsibility of the physician in ordering it is frequently most serious, especially if his patient be a female. Heredity should, in all such cases, be carefully considered, and the possibility of the formation of a habit, a calamity which is very unlikely to occur as the result of an acute illness, but not unlikely if it be chronic ailment.

THE MEDICAL AND PHARMACY ACTS.

The present Legislative session is invested with considerable interest both for the medical profession and that of pharmacy.

A radical bill of amendments to the Medical Act has been introduced by Dr. Meacham, who acted as sponsor for that of last year, which met with a disaster. Did space allow, we would like to discuss the various details of the proposed bills, but it is sufficient to say for the information of the profession, that the amendments asked for are much in the same line as the circular issued some ago by the Medical Defence Association. It would, perhaps have been better had the controversial

points been settled by the members of the profession without the interference of the Legislature, and though such reconciliation failed to be effected at the joint-meeting of the committee held last autumn, the time for the election of a new Council is not so far distant, that any interests would greatly suffer, were these disputed matters left in abeyance for the voice of the electorate.

The turmoil in affairs medical, has accomplished at least one good purpose, in leading many medical men, who had hitherto thought but little of council affairs, to give them a fair share of attention.

It is to be hoped that our Legislature may see the wisdom of advising the profession to settle its family disputes under its own roof; but if not, we have no doubt that, as is an everyday occurrence in the courts of the land, a fair and amicable settlement of the differences will be effected at the last moment between the opposing litigants, and that thereafter harmony shall reign.

As to the proposed changes in the Pharmacy Act, of which we gave the main points in our March number, we believe that the Legislative Committee promptly took such steps as led to the abandonment of every clause that might in the slightest degree conflict with the vested interest of medical men.

MEDICAL EXAMINATIONS.

TRINITY UNIVERSITY.

Final Examination for M.D.C.M. Class I.—Gold medal and certificate of honour—W. Glaister. Silver medal and certificate of honour—T. Douglas. Certificates of honour—J. C. Stinson, E. Tomlinson, R. E. Macdonald and J. T. Robinson (æq), C. H. Bird, F. J. Burrows, D. J. Dunn, R. Brodie, F. W. Mulligan. The following are also in the first class: J. K. M. Gordon, P. J. Moloney, W. J. Ross, R. J. Corbett, J. A. G. Wilson, J. H. McGarry, R. King, W. A. Thomson, N. Campbell, J. H. Austin. Class II.—W. F. Wakefield, J. H. Hudson, F. G. E. Pearson, W. T. Arnott, A. F. Rykert, J. J. P. Armstrong, C. W. Beemer and W. Doan (æq), H. McKendrick, T. W. Carlaw, J. E. King, W. W. Andrus and J. R. Roseborough (æq), J. B. Ferguson and J. M. Rogers (æq), Miss M. M. Brander, F. J. Ball, C. Carter, L. Lapp, R. J. Teeter, R. S. Dowd, J. R. Bingham, D. D. Wickson, C. J. Taylor, W. H. P. Tufford. Class III.—H. H. Alger, I. Bowie and R. E. Darling

(æq), C. J. Laird, J. H. Duncan, R. D. Alway, S. H. Large, A. B. Singleton, J. R. Hopkins, Miss E. J. Ryan.

TRINITY MEDICAL COLLEGE.

Final Fellowship Degree. Certificates of honor—Candidates who obtained 75 per cent. and over—Charles Harold Bird, John Coplin Stinson, Wm. Glaister, Edward Tomlinson, Francis James Burrows, Fred Wm. Mulligan, Thomas Douglas, Ralph Brodie, David J. Dunn, Robert Elgie Macdonald, J. T. Robinson, Wm. A. Thomson, Warren Doan.

70 per cent. and over—Innes T. Bowie, R. T. Corbett, J. R. Roseborough, R. J. Teeter, J. A. G. Wilson, R. A. S. Dowd, T. W. Carlaw.

60 per cent. and over—W. J. Arnott, J. J. P. Armstrong, H. H. Alger, J. R. Bingham, C. Carter, N. Campbell, R. E. Darling, J. B. Ferguson, J. E. King, Robt. King, S. H. Large, W. J. Ross, D. D. Wickson.

Passed—J. H. Duncan, A. B. Singleton.

Dr. Sheard's prize in Physiology—F. G. Wallbridge. Dr. Ryerson's prize in Applied Anatomy—F. J. Burrows.

Scholarships—The 1st first year's scholarship, \$50, J. R. McRae; the 2nd first year's scholarship, \$30, J. H. Oliver; the 3rd first year's scholarship, \$20, A. V. Hart and W. H. Weir (æq); the 1st second year's scholarship, \$50, J. C. Hutchison; the 2nd second year's scholarship \$30, Frederick Parker.

Medals.—The second Trinity silver medal, Wm. Glaister; the first Trinity silver medal, John Coplin Stinson; the Trinity gold medal, Charles Harold Bird.

TORONTO UNIVERSITY.

Final Examinations for M.D.—H. A. Bruce, M.B.; C. J. McNamara, M.B.

Degree of M.B.—R. D. Away, F. J. Ball, C. W. Beemer, F. Blanchard, W. F. Brown, R. M. Calder, T. Coleman, B.A., G. S. Glassco, F. E. Grant, J. R. Hopkins, C. J. Laird, W. H. Lambert, W. J. McKenzie, J. A. McMillan, B.A., J. A. McNaughton, F. Martin, W. E. Olmstead, F. G. E. Pearson, J. M. Rogers, A. F. Rykert, B.A., H. H. Sanderson, J. H. Shouldice, E. H. Stafford, H. A. Wardell, J. A. Armstrong, J. H. Austin, W. Chambers, W. Elliott, T. B. Futcher, E. E. Harvey, J. N. Harvey, B.A., V. W. Hill, J. E. Lehmann, D. McAlpine, J. H. McGarry, H. F. McKendrick, J. R. Mackenzie, D. Marr, A. H. Nicol, B.A., W. F. Park, H. D. Pease, J. B. Peters, F. W. Pirritte, T. E. South, S. G. Story, C. J. Taylor, C. W. Thompson, P. D. Tyerman, W. F. B. Wakefield, J. J. Williams.

MEDALS AND SCHOLARSHIPS.

Faculty Medals.—Gold, J. N. Harvey, B.A.; silver, 1st, T. E. South; 2nd, W. Elliott; 3rd, T.

B. Futcher. E. E. Harvey, equal, subject to the granting of a second medal by the Faculty of Medicine.

Scholarships.—Third year, 1st, W. J. McCallum; 2nd, J. H. Bull. Second year, 1st, T. W. G. McKay; 2nd, J. R. Lancaster. First year, 1st, W. Goldie; 2nd, E. L. Roberts.

QUEEN'S UNIVERSITY.

Final Examination for M.D.—G. H. Austin, A. N. Baker, B. F. Black, J. E. Countryman, J. H. Cormack, J. J. Gibson, J. L. Gibson, G. C. Giles, H. J. James, N. P. Joiner, J. A. Locke, Miss M. Leavitt, R. S. Minnes, M.A., W. G. Malcolm, J. E. Murphy, H. McDonnell, G. McGrath, M. J. Neville, A. C. Robertson, F. S. Ruttan, Miss C. Ryae, R. G. Smith, W. Walkinshaw.

ON THE DECADENCE OF TRUE HOMŒOPATHY.—The *Homœopathic Physician* utters (*Med. Standard*), the following melancholy wail over the decadence of homœopathy:

There are between twelve and fourteen thousand physicians in this country who claim to be homœopaths, and if a vote were taken upon the subject to-day as to whether similia is a universal law and should be strictly adhered to in all medical cases, at least sixty per cent. would vote against it; and there is no such a universal since "homœopathy is only a system of medicines, and not the only true system of cure; that similia similibus curantur should be written similia similibus curenter (Hughes and numerous others), and similia would answer in some cases, but in others we claim the right to the armamentarium of all the schools of practice, and the physician who would not do so should not be allowed to practice, and be put down as a bigoted hahnemaniac (the last pronounced with a slur)." Now why is this the case? If you should speak of them about "The Organon" many of them would not know what you meant; they would very likely ask, is it some new medicine, or is it something good to eat? and who has gotten it up, or what is it made of? I have never heard of it before." Were you to tell them that it was Hahnemann's promulgation of the law of homœopathy, and that no one could practice homœopathy until he had made himself familiar with the law (the teachings of "The Organon"), and that it can be obtained nowhere else but from "The Organon," they will laugh in

your face and tell you that you are one of those new-fangled hahnemaniacs, and that they have no use for it; that "Hahnemann was an old foggy," that he may have done well enough in his day, but we are progressionists and have long since outgrown him; that we have learned a great many things that Hahnemann never knew, or ever thought of. No, I do not think I want it." Should this appear strange when "The Organon" has not been taught in any of the colleges—that it has been left out of their curriculum? Could anything else be expected when many of the professors of these misnamed colleges have never perused a page of "The Organon" in their lives? Then how could they teach it (the law) to their students? Is there not something wrong here? Shall we allow it to continue?

THE GENU-PECTORAL POSITION IN CERTAIN UNFAVORABLE PRESENTATIONS. — The following communication to the *Brit. Med. Jour.* from Dr. E. T. Ensor, speaks for itself. The writer might have included prolapsed funis as an accident calling for the adoption of the genu-pectoral position: "In the first volume of the *Brit. Med. Jour.* for 1880, page 888, I drew attention to the fact that delivery was easily effected in a case in which the head, hand, and foot presented—and in which I had failed to accomplish it whilst the patient was lying on her side—by placing the woman in the knee-chest position. I have recently had another case in which the same method of procedure served me well. Mrs. W., a very stout woman, aged 39, one child born seventeen years before, never pregnant since, was taken in labor at the eighth month. I found the membranes ruptured and the child presenting by the breech. Labor proceeded normally until all but the head was born, when a delay occurred. Passing my fingers, I discovered the head of another child occupying the pelvis, interlocking that of the first. The patient being on her left side, I found that I could not, without using an unjustifiable amount of force, disengage them. The condition was exactly that illustrated in Dr. Playfair's plate of locked heads. Remembering my former case, and obtaining the aid of my assistant, I found that by placing the patient on her knees and chest, and thus allowing the uterus and its contents to fall forward, I was able with very slight exertion to push the head of the

second child above the brim. The delivery of the first was then easily effected, and a few pains completed the birth of the second. The mother did well, but the children were stillborn, the first having been dead before the advent of labor, as was proved by its macerated condition. I think these two cases tend to show that in the useful, if somewhat indelicate, genu-pectoral position, we have a method which may be used with advantage, possibly, in rectifying unfavorable conditions such as face presentations, or to aid the operation of turning."

WHITE STOOLS.—The fact (*Med. Rec.*) of persistent white stools being passed when the patient is on a mixed diet, raises the question whether colorless motions necessarily imply absence of bile. Dr. Walker has shown that when the pancreatic duct is obstructed, white stools result, and argues therefrom that the pancreatic secretion is a necessary ingredient of the coloring matter of the fæces. In the only necropsy of a case of psilosis which has been reported, the liver, pancreas and their ducts were all normal (*London Lancet*). Dr. Wynter Blyth made an analysis of the stools of a patient of Dr. Thin, and showed that more than half of the organic solids consisted of neutral fats, apparently milk-fats, which had passed without being digested or saponified. Nearly six per cent. of bile acids were present as soap, thus showing that bile was not altogether wanting. As the fat in the stool was only a fraction of the quantity taken in the milk, it followed that a considerable portion of the milk-fat had been digested, thus affording clinical evidence of the presence of the pancreatic secretion. In fact, milk is the only diet many of the patients affected with this disease can take. The practical importance of these observations is obvious. It has generally been held that colorless stools denotes serious interference with the function of the liver or pancreas, either due to disease of the organs themselves or to obstruction of their ducts. We see, however, from the observation which we have just considered, that such is not necessarily the case; and it is a question well worthy of serious consideration, whether in numerous other cases we are right in concluding that the liver and pancreas are not acting normally, because this symptom (colorless stools) is present. Dr. Thin suggests that the coloring matter of the fæces in

psilosis is destroyed low down in the intestinal canal by bacterial action, and until some other agency is discovered, or the theory shown to be untenable, we must conclude that the views hitherto held as regards the white stools, although probably correct in the majority of cases, are not complete, and further information is necessary before the matter can be considered satisfactorily settled.

TEA, COFFEE AND COCOA.—Every point scored for temperance (*Lancet*) is a gain to national health, and we have satisfaction in noticing such an advance as is indicated by a lecture delivered recently by Dr. W. Woodward on behalf of the Worcestershire Health Society. The subject was "Tea, Coffee and Cocoa," As might have been expected the first-named of these beverages received the largest share of consideration. Its varieties, its different qualities, its chemical properties, its modes of preparation true and erroneous, were discussed at some length and with the happy result that it may still be regarded as a wholesome stimulant and restorative of the nervous system which, if properly made and used in moderation, is guiltless of after ill-effects. A comparison between the different known methods of preparing tea is of some general interest, the Japanese plan—which allows infusion for about a minute and a half, and which does not require boiling water, cream, or sugar—having evidently an attraction for the lecturer. For general use, however, he recommends the ordinary British custom, the infusion being drunk whilst recent and not strong. In this country we stand in equal, if not greater, need of teaching in regard to the qualities and preparation of coffee and cocoa. The former of these wholesome luxuries was treated of in considerable detail. We should have welcomed a somewhat fuller exposition of the properties and uses of the latter. A recommendation of cocoa in the nourishment of infants is, however, noteworthy and should prove of some practical service. The question of cost was not forgotten. The estimate for a cup of good tea ($\frac{1}{3}d.$) and of good coffee ($\frac{1}{3}d.$) is instructive when the prices charged in many restaurants for infinitely poorer stuff are held in mind.

THE SURGICAL TREATMENT OF PERITYPHLITIS.—Von Bergmann, in a recent lecture (*St Petersburg medicinischrift*, 1892, No. 41), called attention to

the confusion which exists in the classification of inflammation about the cæcal region. It is necessary to distinguish more carefully between typhlitis and perityphlitis than has heretofore been done. Cases called perityphlitis that recover after expectant treatment have been either cases of typhlitis, and should be so placed, or acute attacks of chronically inflamed vermiform appendices, which do not go on to perforation. Typical cases of typhlitis will rarely require surgical treatment unless there is obstinate constipation or ulcerations of the bowel. In describing affections of this region, that name should be used which will indicate the seat of the original trouble. When doubt exists in regard to diagnosis, much information can frequently be gained by examining the patient under an anæsthetic.

In one hundred sections for perityphlitis, Weir found the vermiform process perforated in eighty-four instances and the seat of inflammation three times. Einhorn found the appendix diseased ninety-one times in one hundred sections for perityphlitis. Matterstock, in one-hundred and forty-six operations in adults, found the process diseased one hundred and thirty-two times, and in forty-nine children in thirty-seven cases.

The earliest sign of an abscess is a positive indication for operation. In intra-peritoneal abscess, the possibility of multiple foci must always be borne in mind. If there is an extra-peritoneal abscess, it probably communicates with an intra-peritoneal collection. The radical excision of the vermiform process is to be done in the intervals between attacks. Cases of general peritonitis are unfavorable for operation, and one is justified in declining this measure.

SULFONAL.—Apart from its uses in simple insomnia and some of the neuroses (*Albany Med. An.*) sulfonal appears to have been of value in controlling such symptoms as reflex spasm and the uneasiness following traumatic injury. We note (*Medical Record*, July 2, 1892,) that Dr. Edmund Andrews, of Chicago, speaks of sulfonal as a certain remedy in the treatment of muscular cramps of the legs appearing during the night, and especially those accompanying those of the long bones. In a case of recently fractured femur, fifteen grain doses gave immediate relief. In the after-treatment of laparotomy, Dr. A. F. Jonas (*Omaha*

Clinic, August, 1892,) says that the symptoms of sleeplessness occurring in these cases should always be relieved lest insomnia seriously complicate recovery; he usually gave sulfonal in such conditions. Dr. Althous (*Am. Jour. Med. Sci.*) recommends sulfonal for the insomnia liable to occur in the treatment of post-grippal psychoses. Dr. Alexander J. C. Skene has employed sulfonal in the after-treatment of laparotomy. He writes as follows in *Med. Mag.*, March, 1882:

"Sulfonal does remarkably well as a sleep-producer, and is much preferable to bromide, chloral, or any combination of such remedies. It produces the desired result in the great majority of cases that are not kept from sleep by severe pain. This remedy is worthy of note as rather new, and is certainly one that will cause sleep with no other perceptible effect, good or bad."

BILIOUS HEADACHE.—Dr. Eccles, an English surgeon, recently read before the British Medical Association an able paper (*Bact. World—Med. Rev.*), on the treatment of what is commonly known as bilious or nervous headache, in which he called attention to the fact that the locality of the headache appears to be identical with a distribution of the nerves connected with Arnold's branch of the pneumogastric. In the words of the author, "The irritation of the gastric fibres is reflected or referred to the sensory fibres of the pneumogastric in the head (auditory branch). In the treatment of a large number of cases of this sort, we have observed, on examination, tenderness of the pneumogastric in the neck, invariably in the side affected the most frequently, and there is usually corresponding tenderness in the region of the solar plexus, or in one or both lumbar ganglia of the sympathetic. Massage is recommended by Er. Eccles as a salutary remedy in these cases, as he has uniformly observed dilatation of the stomach and deficient peristalsis of the stomach and intestines."

Our observations respecting the frequency of dilatation of the stomach agree very closely with those of Dr. Eccles. We have found, however, the quickest means of relieving nervous or sick headache is lavage to the stomach, which acts with unflinching and almost instantaneous certainty. The majority of patients declare themselves feeling better by the time the stomach washing is fairly completed, and in a few hours are fairly

restored to their usual health, although accustomed to suffer many hours, or sometimes days, with the headache, when treated in the ordinary way.

TERPENE HYDRATE IN BRONCHIAL CATARRH.—Says Dr. Wm. Murrell (*Med. Age*), I am desirous once more of calling attention to the value of terpene hydrate in the treatment of affections of the bronchial and nasal mucous membranes. Its properties have been well known for many years, but in this country it has never been a popular remedy, and its claims seem to have been overlooked in favor of pure terebene and other similar compounds. It is a hydrate of turpentine, and is made by treating oil of turpentine with nitric acid and alcohol. It is a solid, and has somewhat the appearance of chloral hydrate. Its odor, which is slight, resembles that of pure terebene. The great difficulty in the way of its administration is that it is practically insoluble in water. It is usually said to dissolve in alcohol in the proportion of 1 in 10, but many specimens are far less soluble. On the Continent, where it enjoys a high reputation in the treatment of bronchial affections, it is used as a popular remedy in the form of an elixir. For some months past I have prescribed it in a solution containing 5 grains to the half-ounce, made up with simple elixir and flavored either with tincture of Virginia prune and syrup of tar or with the aqua laurocerasi. For patients who cannot take sugar the elixir may be made with saccharine. Terpene not only relieves cough and lessens bronchial secretion, but is a diuretic, and has been used with advantage in neuralgia.

EXTRACTION OF BITS OF STEEL OR IRON FROM THE CORNEA.—It is not infrequently (*Va. Med. Monthly*) the case where small bits of iron or steel have been imbedded in the cornea—especially when they have come from a heated piece of metal—that after their removal the corneal wound shows no tendency to heal rapidly, and that the irritation and discomfort of the wound continue. According to Dr. John Dunn, Chief Clinic of the Richmond, Va., Eye, Ear and Throat Infirmary, examination of these wounds with artificial light will most frequently reveal at their bottom what at first sight appears to be small bits of the original foreign body. They are not so, however; but are either

small areas representing the action of oxidizing iron on the corneal tissue, or are partly burnt corneal tissue. These small areas act as foreign bodies, and the corneal wound shows little tendency to heal as long as they remain. Often, when the corneal wound is deep, they require considerable skill to detach them. At times they may be scraped away; while in other cases, after detaching them, they have to be cut off with a small pair of scissors. They should be carefully sought for after the extraction of every piece of steel.

THE SENSITIVENESS OF THE PERITONEUM.—T. R. Jessopp, F. R. C. S., Eng., sends a short but interesting communication to *The Lancet* on this subject, in which he says: "Having occasion, a few days ago to perform inguinal colotomy, I asked Mr. Moynihan, our resident surgical officer, to test the sensitiveness of the exposed peritoneum so soon as the patient should have completely recovered from the anæsthetic. Mr. Moynihan informs me that he pricked, scratched, and handled the exposed bowel (which appeared to be in no way altered from its normal condition), with the result that the patient declared her sensation was as if she were being "lightly touched with a feather." A similar result was obtained from like tests applied to the turned-up edge of the parietal peritoneum. At the same time the patient felt acutely the prick of a pin applied to the skin in the neighborhood of the wound and elsewhere."

The above is instructive when we bear in mind the extreme pain caused by acute inflammatory affections of this membrane.

UPRIGHT AND SLOPING WRITING.—The educational journals are beginning to discuss the question of vertical as against the old fashioned sloping writing. It will be fortunate if the result should be the introduction of the reform in our schools, fortunate not only for pupils, but for those who pursue clerical avocations after leaving school. The hygienic bearing of the question is most important. The *Boston Medical and Surgical Journal* recently remarked: "Mayer, as a result of the study of forty schools in Bavaria with over two thousand pupils, finds that with upright writing fifty-five per cent. of the children sat in a good position, whereas with sloping writing only five per cent. were found to do so. He finds that the

better the position of the pupil the less the letters incline, and that if vertical writing is taught, children sit in a good position with far less trouble."

SCIENCE AND WOMEN.—Professor William James, of Harvard (*Med. and Surg. Reporter*), announces that women develop early and then cease to grow mentally. Professor Crichton Browne, finds that women's brains are smaller than men's, and their frontal lobes less richly supplied with blood. Professor Louprouse finds that women are less sensitive than men, and as regards their receptive and perceptive organs represent an incompletely developed type. Altogether, science is bearing down very hard on the ladies. Yet we do not learn that they are becoming any the less popular. The poet has said metrically that without them the extremes of life would be without solace and its middle without joy. The testimony of the poet will probably continue to be received by the mass of human kind, even if the greatest cranial circumference of the gentler sex never rises above fifty centimeters.

TREATMENT OF LEAD COLIC BY LARGE DOSES OF OLIVE OIL.—Dr. Weil, Lyons, France (*La Semaine Medicale—Med. and Surg. Rep.*) has treated five cases of lead colic successfully with large doses of olive oil. He administers a glass of the oil per diem, and in all the cases a cure was effected in three to five days, concluding with the appearance of copious stools, produced by the oil. But, before the stools, considerable diminution of the pains takes place, thus proving that, besides its action as a purgative, it exercises a certain analgesic effect upon the intestine. In one of the patients two glasses were rejected by the stomach, while the third produced an amelioration and a cure. Another patient, in whom belladonna and purgatives brought about no results, was relieved by the first glass of oil and cured by the fifth. In all the cases of plumbism the oil not only caused a disappearance of the colic, but also of the other symptoms—myalgias, arthralgias, cutaneous anæsthesia, headache and vertigo.

PERSONAL.—The profession at large will be glad to learn that the Pathological Society of Toronto expect the honor of entertaining in this city, some time in May, Prof. Hans Virchow, the son of

Prof. Rudolf Virchow, the famous father of Pathology, on whom the world's highest medical honors have already been bestowed. He is in this country on a visit to Chicago, and is expected to spend about a fortnight here. Due notice will be given in the dailies of the special meetings of the Society, at which Prof. Virchow, Prof. R. R. Wright, and others, will speak on subjects of interest to the profession.

APPLICATIONS FOR BURNS.—A German hospital surgeon recommends (*Munch. Med. Woch.*) the following :

R—Linseed oil, ℥ iv.
Lime-water, ℥ iv.
Thymol, gr. vj.

Dissolve the thymol in the oil before adding the lime-water.

SCROTAL ECZEMA :

R—Hydrarg. chlor. mit. ℥ i.
Zinci oxidi, grs. xl.
Bismuthi subnit, ℥ ijs.
Lanolin, ℥ i.
Vaseline, ℥ js.—M.
Ft. ungt.

Sig.—Wash the scrotum in hot borax water, and apply the ointment night and morning.

We owe an apology to our readers for the lateness of this issue. An accident occurring to the printing press has made it unavoidable.

Books and Pamphlets.

A PRACTICAL TREATISE ON DISEASES OF THE SKIN. By H. G. Piffard, A.M., M.D., Clinical Professor of Diseases of the Skin, University of the City of New York, Consulting Dermatologist to the Board of Health, etc. Assisted by Robt. M. Fuller, M.D., with fifty full page original plates and thirty-three illustrations. New York and London. D. Appleton & Company.

It is difficult for one not a specialist in this subject to criticise very intelligently a work such as this, but it is quite within the competency of any general practitioner to say whether or not he can derive any benefit from its perusal. The general impression given by reading this *edition de luxe* is one not so much critical as admiring. The plates and illustrations, including the photomicro-

graphs, are admirable, done by artificial light, which has been found to lend itself better to the reproduction of minute detail than ordinary diffuse day light. The paper and binding are monuments of the bibliographic art. As to the method and general plan of the work, the author has most skilfully and sensibly preserved the unities, to borrow a phrase of literary criticism. He has laid stress on disease common in this country, and left unusual ones to assume their proper place in the perspective of the needs of the American and Canadian practitioner. Eczema, acne, psoriasis, vitiligo, epithelioma, lupus, are dealt with at due length, leprosy and rarer ailments being dismissed in shorter order, and the subject is introduced by a chapter on diagnosis, which for lucid common sense and simplicity, will be accepted with the heartiest thanks of any unfortunate who has been grappling with the cumbersome system of classification prevalent in older and indeed in some recent works. The treatise does but add to the already often acknowledged indebtedness of the profession at large to the American School of Dermatologists as distinguished from those of Britain and the Continent.

A HANDBOOK OF DISEASES OF THE EYE, AND THEIR TREATMENT. By Henry K. Swansy, M.A., M.B., F.R.C.S.I., Surgeon to National Eye and Ear Infirmary, and Ophthalmic Surgeon Adelaide Hospital, Dublin, etc. Fourth edition, with illustrations. Philadelphia: P. Blakiston, Son & Co., 1012 Walnut Street.

The fourth edition of this most excellent and practical treatise upon diseases of the eye and their treatment has just been issued, and is considerably better than the former editions, which is saying a great deal, for Prof. Swansy has long been recognized as one of the foremost of ophthalmologists in Europe, and has compressed into his neat little work the result of many years of patient and practical research into the field of ophthalmology. This work is a general favorite, not only with students, for whom it is mainly intended, but also with practitioners, who will find within its covers a clear, concise exposition of all diseases of the eye. In an appendix, Holmgren's Method for Testing the Color Sense has been described in greater detail than in the three previous editions, while several new illustrations have been added.