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MULTIPLE NEURITIS FROM ARSENICAL POISONING.

BY A. M'PHEDRAN, M.B.

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Thos. S., æt 58; followed no special occupation: personal and family history good.

In April, 1889, a tumor appeared behind the ramus of the jaw on the left side. It grew rapidly, and early in May was as large as a hen's egg. He consulted a so-called "cancer doctor," who applied a plaster, leaving it on for two days, and then a poultice for two more, and so on for about two weeks. These applications, the plaster especially, caused great pain. Before the end of the two weeks' treatment he found his legs becoming stiff and numb, with painful sensations shooting through them. In a few days he was unable to walk. The hands became affected also, and he could make little use of them, soon becoming unable to feed himself on account of the numbness and weakness, as well as of some inco-ordination in them.

He entered the Toronto General Hospital under my care June 29th, 1889. The legs were then almost completely paralyzed, the muscles being wasted and soft. He complained of great pain in the legs and feet, especially at night, an opiate being necessary to secure sleep. Anæsthesia in them was very marked, but they were acutely sensitive to painful impressions as, e.g., drawing the finger nail along the sole of the

foot, or pinching the muscles of the calf. Cold was easily perceived, but heat was not felt except when great, and then gave the sensation of cold. Kneejerk and other muscle reflexes were absent; likewise superficial reflexes. With the eyes closed he was not conscious of the position of the legs. To the faradic current there was no response in the feet or legs, and only a weak contraction in the thighs; none also in forearms and hands. There was no wasting of forearms and hands, but much anæsthesia and weakness with some inco-ordination. He could not pick up small objects without looking to see if he had hold of them. The skin everywhere was dry and showed a tendency to desquamate; the soles of the feet were scaling very freely. He said he had had no rash. The legs were deeply pigmented. There were no bladder or bowel symptoms. Appetite and general nutrition were fair. On the left side of the neck below the ear was a circular slough  $1\frac{1}{2}$  inches in diameter; it was beginning to separate.

He was given ʒss daily of potassium iodide, and the bowels kept open by salines.

He slowly improved, and was able to stand alone by September. He is now able to walk a little, but, chiefly on account of the anæsthesia, he still needs the aid of his eyes to enable him to maintain his equilibrium. The calf-muscles have lost their atrophied appearance and become quite large and firm. He can now easily tell the position of the legs. The extensor muscles are still weak, and there is therefore a

feeling of shortening of the tendon-Achilles—he says himself that “it feels as if it should be let out a hole or two.”

The anæsthesia of the hands persists, and he cannot pick up small objects without looking at them. Reflexes are still absent.

There is no room for doubt as to the nature of this case; still it is to be regretted that the urine was not examined for the presence of arsenic. The condition of the nerves in paralysis from arsenical poisoning has not as yet been ascertained by post-mortem examination, but there cannot be a reasonable doubt of a multiple peripheral neuritis, and that on this the symptoms depend. A cord lesion could scarcely cause such widely distributed symptoms without leaving permanent effects in some parts, nor would it likely give rise to such marked sensory symptoms. Then other toxic agents, causing similar phenomena, do so by setting up inflammation of the peripheral parts of the nerves. Alcoholic palsy closely resembles this case, and is to be distinguished only by the absence of the history of intemperance. Exposure and chilling occasionally cause very marked peripheral neuritis, but there is no history of such a cause in this man's case. The palsy produced by lead and mercurial poisoning is accompanied by such distinctive features that further remarks are not called for.

Peripheral neuritis may result from chronic poisoning by small doses, or from acute poisoning. It has developed in five or six days from the acute poisoning; in others again there were no signs for three or four weeks after the poisoning. The medicinal use of arsenic has never been followed by such severe symptoms, but not a few cases of herpes zoster, especially of the trunk, have been observed by Jonathan Hutchinson and Gowers, due to the medicinal use of arsenic. A case came under my own notice last summer in which a copious purpuric rash, especially on the feet and legs, was probably due to the free use of Fowlers' solution. It quickly disappeared on stopping the arsenic.

84 COLLEGE STREET.

## BISMUTH SUBIODIDE IN THE TREATMENT OF ULCERS.

BY CHAS. T. NOECKER, M.B., TOR. UNIV.,  
WATERLOO.

Since the publication in the June number (1887) of THE CANADIAN PRACTITIONER of Dr. Sweetnam's article on the preparation of bismuth subiodide, I have used this drug more or less extensively in the treatment of ulcers and wounds. The results were generally so gratifying, and occasionally so *eclatant*, that I have become quite enthusiastic over its therapeutic qualities, and, with the gentleman who brought the drug under our immediate notice, wish to induce others to give this remedy a trial. While the remarks of enthusiasts should perhaps generally be accepted *cum grano salis*, still in the present instance I fully believe that the anticipations of those unacquainted with the properties of this dressing will be more than realized.

The cases of ulceration to which these remarks more particularly refer, may be divided into those characterized by (1) want of action; (2) over-action.

Those ulcers characterized by some peculiarity of action, e.g., the syphilitic, rodent, etc., do not come under observation sufficiently often to enable me to report the results of treatment by means of bismuth subiodide. As all are acquainted with the appearances and usual situation of the typical indolent ulcer a description is superfluous.

My method of procedure is as follows: To order rest if possible in the recumbent position, elevation to relieve passive congestion, and poultices to soften the hard thickened margins, and favor the formation of granulations. After the expiration of 3 or 4 days the ulcer has likely assumed a more pleasing appearance, granulations may have begun to crop up, epidermis may have proliferated considerably. Bismuth subiodide is now dusted rather freely over the broken surface, a dressing of medicated cotton or gauze superimposed, and finally a bandage snugly applied. About the third day the dressing is changed. Considerable secretion may have collected, this is, however, I think, no objection, as the hardened tissues have thus been bathed, as it were, in an antiseptic solution.

We desire to direct attention to an advertisement showing that the office and residence of the late Dr. Yeomans, Mount Forest, are for sale.

After washing by means of an aqueous solution of carbolic acid, the dressing is applied as before, re-applied as often as necessary until cicatrization, usually rapid, is complete. Patients are advised, especially when varicosity exists or threatens, never to go about without the support of a bandage or an elastic stocking.

The results from the use of bismuth subiodide in the case of Mrs. M., æt. 50, emphasized the advantages over all ordinary dressings. This lady's left lower limb, disfigured by five ulcers, in size varying from a twenty-five to a fifty cent piece, was so enlarged and cumbersome, that walking was rarely attempted. As several medical men had exhausted their means, to no effect, the prospects were not particularly bright. However, after the preparatory treatment outlined above, bismuth subiodide broke the monotony of failures, and effected a cure in four weeks. This was looked upon as a marvellously short time in which to bring about a cure, for a year or more had previously been expended in attempts to close the gaps. As cicatrization was progressing the cedema gradually subsided, so that, at the end of the month, the patient was quite comfortable and able to go about.

Mrs. O., æt. 65, presented an ulcer the size of a twenty-five cent piece midway between knee and ankle. This patient was crippled by arthritis deformans, and suffered at this time with an ulcer of the cornea. The complication of ulcers corneæ indicated a disordered nutrition in a patient whose tissues generally were flabby and pale. As the ulcer was but of several months standing, with margins and surrounding tissues not yet in that thickened callous condition so frequently seen in ulcers of long standing, the effect of bismuth subiodide on the apparently dormant epithelial cells was awaited with considerable interest. When the dressing was removed on the third day the *solution of continuity* was no longer apparent. A covering of epidermis met the eye, a cover thin indeed, but still entire. Incidentally I may remark that about a week after this fortunate result I was hurriedly summoned to find her speechless and paralyzed along the right side. After the lapse of a week, patient regained almost complete control over the muscles that had been so suddenly disabled. Whether arrest of discharge from a chronic sore should be considered an etiological

factor in the production of apoplexy, or whether the supervention of apoplexy should be regarded in all such cases as merely coincidental, I would not say positively, though I incline to the latter view.

Where pain is a prominent symptom, not uncommon in ulcers situated over the malleoli, bismuth subiodide appears to act as a sedative of considerable value. The pain may, and not infrequently does, subside before healing can be said to have begun.

Ulcers characterized by over-action can best be treated by means of a caustic, as the chloride of zinc or nitrate of silver, and after separation of the slough, by applying the bismuth subiodide. Thus far the good points of bismuth subiodide have been set forth. Occasionally a failure has to be recorded, failure due perhaps more to inattention to details on the part of patients than to a want of control by the drug over the healing process. It is surprising, indeed to be regretted, that patients place so small an estimate on the value of rest in the treatment of sores.

While iodoform and a host of other drugs have their admirers and advocates, I feel confident that bismuth subiodide will stand well to the fore when a comparison is instituted; confident also that medical men, after better acquaintance with this and other new drugs, will realize that with the progress of time and of scientific researches, additions are being made to our armamentarium; additions of such value as to warrant the belief and hope that even medicine is destined to rank among the exact sciences, if not in the near future, at any rate long before that state of perfection A.D. 2000.

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## Selections.

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### THE ABUSE OF UTERINE TREATMENT THROUGH MISTAKEN DIAGNOSIS.

BY WILLIAM GOODELL, M.D.,

Professor of Gynecology in the University of Pennsylvania.

While the treatment of uterine diseases received a great impulse from the writings of Simpson in England, of Kiwisch and Scanzoni in Germany, and of Huguier and Recamier in France, it is to Bennet that we chiefly owe the common use of local applications and the popularization of the speculum. The former gynec-

cologists wrote about the more strictly surgical diseases of women, which were, and will ever be, relegated to specialists. But Bennet as early as 1843 in French, and 1845 in English, published his work on *Inflammation of the Uterus*, of which the last edition was issued in 1861. In it he contended that inflammation of the cervical canal is the main factor in female diseases; that from it come ulceration, displacement, leucorrhœa, menstrual derangement, and ovarian disorder; and that the inflammation, being limited to the cervical canal, can readily be dislodged by strong caustics. Written with dogmatic zeal, advising a definite treatment to a reachable and a seeable object—a treatment which the humblest yeoman of the profession could carry out—few books of modern times have exerted so great and so widespread an influence. That riddle of the Sphinx—the cause of woman's ill-health—had been read and interpreted! The profession was taken fairly by storm; the effect was as electric as the appeal of Maria Theresa to Hungarian nobles. From Arctic to Antarctic oceans, from the Mississippi to the Volga, countless speculums of varied form leaped from their bags and flashed in sunlight boreal, tropical, and meridional. Cauterics actual or potential, applied to actual or potential uterine sores, became the order, in fact, the ruling passion of the day. In the general enthusiasm it was soon forgotten that every mucous membrane secretes, and that it must of course give evidence of its own secretion, just as every nose contains its mucus. Hence, every examined womb, being found to contain mucus, was, as it were, invalidated—that is to say, it was put on the speculum list. Naturally, then, not a womb being found healthy from the speculum standpoint, this much abused organ was charged with being the cause of almost all the ills that female flesh is heir to, and it was treated—that is to say, maltreated—for every imaginable disorder that could not be referred off-hand to some other organ. Bennet, the medical Frankenstein, had evoked a monster which could not be curbed, and for five and thirty years the speculum ran riot.

But in this age of unrestful progress, at every turn of the hour-glass of time, some cherished creed, some accepted dogma, is proved a heresy, and Bennet's cervical theory fared but

little better. A wholesome reaction set in. As experience grew, it was found that pelvic inflammations and strictures of the cervical canal came from this treatment. This discovery led to the abandonment of the more heroic caustics. Then, again, it gradually dawned upon truth-seekers that far more than inflammation, passive congestion of the womb and of its annexes, together with resulting structural changes, that uterine displacements and injuries, and that ovarian and tubal lesions played important rôles in the female economy. In keeping with this knowledge is the far more rational and beneficial treatment of the present day.

Still, granting that the treatment of actual, visible, and tangible uterine disease leaves little for improvement, the whole truth has not been reached—for truth evolves slowly and does not, like Aaron's rod, bud and blossom in a night. The ball-and-chain of tradition still drags at the heel of this branch of science, and the medical mind, in close touch here with the lay mind, tends to give the reproductive organs undue importance—to attribute, in fact, altogether too much to their influence. By a very large number of practitioners, even by specialists working in other fields of medicine, these organs are too often wrongfully made a scape-goat for headaches and nape-aches, for spine-aches and back-aches, for weakness of vision, for aural disturbances, for sore-throat and weak lungs, for irritable heart, and also for a host of so-called uterine symptoms. Yet these very symptoms may be due wholly to nerve-exhaustion, or malnutrition of nerve-centres, and not to reflex action, or to direct action, from some real or some supposed uterine disorder. I say this advisedly, because I too have thus erred, and because hardly a day passes without my seeing cases of supposed uterine disease which have been so treated for months—even for years—when the whole trouble, or the most of it, lies—not in the reproductive organs, but—in the nerve-ganglia. This abuse of uterine treatment, through a mistaken diagnosis, is, in my opinion, the great medical error of the day.

Once I was asked by a medical friend to see an exceedingly bad and acute case of pruritus vulvæ. Very naturally attributing it to uterine disease, he discovered a small cervical tear, and I was called to decide the question of repairing

it. I, too, was, at first led astray, but the suddenness of the seizure and the lack of consistency in the behavior of the symptoms, put me on my guard, and we soon found out the cause to be an acute attack of jealousy.

To this day a lady rallies me upon a wild-goose chase which I made after a uterine cause for her neurasthenic symptoms. Carefully overhauling her pelvic organs I discovered nothing but a torn perineum, and attributing to that lesion all her ills, which were legion, I restored it, making at the same time the rash but honest promise of her complete restoration to health. The rent was a bad one and needed repair, but it had existed for years without doing harm, and it had nothing to do with her symptoms, although they were largely uterine in expression, notably a bearing-down feeling. They became, in fact, worse after the operation than before, and it was only after recognizing the nerve element of her disease, that I was enabled to do her any good. Many such mistakes, of attributing too much to the reproductive apparatus, have I seen in the practice of other physicians; but my own blunders in the same direction have made me feel very charitable toward them. Out of many examples let me give a few:

Not many years ago I was asked by one of our best and most conscientious physicians, himself a gynecologist and a medical teacher, to see a very delicate and refined lady. She had passed through most of the trials which beset a clergyman's wife, and had borne two children, the younger one ten years before. Having for many years enjoyed fairly good health, she lately had suffered a great bereavement, and she was now prostrated by nerve-exhaustion. Her symptoms were markedly of a uterine character. These were pain in the back, an irritable bladder, a pelvic bearing-down, an inability to walk, aches in the left groin, menorrhagia and leucorrhœa. These uterine symptoms had led my friend astray, and finding an insignificant cervical tear, he attributed to it all his patient's ill-health, and, against my advice, operated upon it. The wound healed perfectly, excepting in one suture track on one side of the cervix, where a small fistula remained. His patient becoming none the better, and rather the worse, he laid the

blame on this fistula, and tried to close it. Not succeeding, he again called me in. Now, this small fistula had no more to do with the lady's general ill-health than the carring holes in her ears, and her disease was clearly a neurosis. Yet I could not bring my friend to my way of thinking—the uterine symptoms were too much for him, and he tinkered away at the fistula until it finally healed up, but the lady became no better. Finally, he adopted my theory of neurosis, put his patient upon an appropriate treatment, cured her, and then had the manliness to thank me for my advice. My friend is now, alas! no more, else I would not have told this story; and I have done so simply to show how hard it is for a bright and progressive mind, even for a gynecologist and a medical teacher at that, to free himself from the bias of tradition.

By breaking down the nervous system, the brain-cramming, the intellectual rivalry, the buckram propertics, and the unwholesome confinement of our boarding-schools and public schools, breed a host of sickly girls, who swarm in every class of society. Manifold diseases, both functional and structural, date from the recitation room. They are mostly of a uterine complexion, for at that time of life the sexual sphere dominates, and the brunt of the nervous and of the vascular disturbances which form the essence of nerve-exhaustion, falls on the most exacting organs—the reproductive. Hence these suffer from neuralgic pains or from congestion and the lesions coming from prolonged congestion. Yet physicians, misled by the urgency and the number of the so-called uterine symptoms, mistake the effect, or more often the counterfeited effect, for the cause, and give a local treatment when it should be a constitutional one.

So common is it for girls in boarding-schools to suffer either from amenorrhœa or from irregular menstruation, as to create a general impression in the community that in these schools some drug is secretly given in the food in order to lessen the laundry work. In one school of great repute so many girls missed their monthly periods that the family physician of several of them wrote to me, asking whether it were possible, as his patients averred, "that as their clothes were laundried in the building, something was given in their food or their drink to

produce the effect, for the purpose of saving the laundress the disagreeable task of washing the napkins." My reply was, that if laundresses were acquainted with a drug that could arrest menstruation, they knew more than the profession; and that his patients had lost their monthly periods, not from secret drugs, but from loss of health due to an unwholesome system of education.

Another physician, the worthy chairman of a school-board in a young city, became awakened to the fact that a great proportion of the girls in the public schools were failing in health from backache, wakefulness, weariness, and disordered menstruation. Full of philanthropic and architectural zeal, and with the uterine idea firmly implanted in his head, he wrote to me, asking whether the long flights of stairs in the school-houses were not to blame for these female ailments. I replied in words to the effect that were a higher culture literal, being perched upon the top of some Eiffel's tower, like Simeon Stylites upon his pillar, and were girls obliged to climb up to it, the muscular effort would no doubt put them out of breath, and repeated intellectual excursions in the same direction might in the end cause—not uterine diseases, but—the heart diseases of athletes and of Alpine climbers. I further contended that stair-climbing *per se* could rarely produce uterine disorders, and that the girls in his school were suffering—not from uterine disease, but—from the nerve-counterfeits of uterine disease, viz., from the relaxes of a nerve-exhaustion resulting from an unhealthy, and therefore faulty, system of education. My arguments evidently failed to convince this honest gentleman, for the correspondence abruptly ended at this point, and I have a shrewd suspicion that he carried out his architectural plans. Should any of my readers journey westward, and see in some growing city a girl's school-house fashioned like a covered rope-walk or a skating-rink, depend upon it, it will turn out to be the philanthropic but mistaken evolution of my correspondent. The traveller would no doubt find education very effectively taught on the only floor—the ground floor—of this building; but doubtless, also, he would see as many pale faces, and would discover on inquiry no fewer backaches, spine-aches, womb-aches, and menstrual

disturbances, than when the recitation rooms were on the third or the fourth floor.

In a parous neurasthenic woman, a leucorrhœa, a slight prolapse of the womb, a small tear of the cervix, or an insignificant rent of the perineum, each plays the part of the will-o'-the-wisp to allure the physician away from the bottom factor. To these trifling lesions—because they are visible, palpable, and ponderable, and because he has, by education and by tradition, a uterine bias—he attributes all his patient's troubles; whereas a greater and a subtler force, the invisible, impalpable, and imponderable nervous system, may be the sole delinquent. She may be a bereaved mother, a grieving widow, or a neglected wife, and all her uterine symptoms, yes, every one of them, may be the outcome of her sorrows, and not of her local lesions.

Often the victim of this misdirected treatment is a young unmarried girl, whose nerves have been upset by some secret grief, perhaps a cross in love, or by ambitious over-study. Misleading symptoms now set in, which I cannot better describe than by a quotation from one of my own articles on the subject (*Lessons in Gynecology*, third edition, p. 523):

"She looses her appetite, lies awake at night, and grows pale and weak. She has cold feet and blue finger-nails, and perhaps complains of infra-mammary and ovarian pains. Headache and backache, spine-ache, and an oppressive sense of exhaustion distress her. Her monthly periods, hitherto without suffering, now begin to annoy her more and more, until they become extremely painful, and at these times dark circles appear under her eyes. Her linen is stained by a leucorrhœa, and bladder troubles soon set in. She is wearied beyond measure by the slightest mental or physical exertion; the short visit of a friend upsets her for the rest of the day; 'a grasshopper is a burden' to her, and she finally becomes very nervous or hysterical. Now, very unfortunately, the idea attached to this group of symptoms is that the womb is at fault. A moral rape is, therefore committed by a digital or a speculum examination, and two supposed lesions will be found—first, as a matter of course, the natural virginal anteflexion; and, secondly, a slight uterine catarrh. These are at once seized upon as the prime factors,

and she is accordingly subjected to a painful, an unnerving, and a humiliating treatment for the false flexion and the sham endometritis. Unimproved, she drags herself from one consulting-room to another, until finally, in despair, she settles down to a sofa in a darkened room, and becomes either the spoiled pet or the vampire of the family."

That this is not an over-wrought picture, every one of my readers will attest. For what physician has not had the original as a patient, and cursed his stars for the possession?

At the present time there are in my private hospital seven ladies who are rapidly recovering from general nerve-exhaustion and from its sham uterine symptoms. They will get well without any local treatment whatever. Yet all were pronounced by their physicians to be cases of uterine disease, and had been so treated for months, and even for years, without benefit. One of them was urged by an excellent authority to submit to the removal of her ovaries; another, to have her slightly torn cervix sewn up; a third, to have a trifling rent in the perineum repaired. Whilst the fourth, a young girl whose nerves have given way from hard study, had a perfectly healthy and a perfectly poised womb, propped up by an ante-flexion pessary, treated every other day, for weeks, by an application, and deluged twice a day with gallons of hot water.

Many of us have laughed at the quaint but kind doctor in one of Bulwer's novels, who prescribes a special pellet for each emotion, and calms a passion by its appropriate *parvule*. But are we, the physicians of the nineteenth century, a century of infinite progress, are we, I say, a whit the wiser? We who seek to cure the nerve-reflexes of grief, of love, of neglect and of jealousy, not by harmless infinitesimals, but by the removal of the ovaries, and by operations upon the cervix and the perineum; or try to salve brain-wounds and heart-pangs by ante-flexion pessaries, by uterine applications and by vaginal douches of a temperature of 110°? Can the rankest materialism be pushed further than this?

Fortunately for the reputation of my professional brothers, and fortunately for my own—for I, the heavy Mentor of this homily, have also sinned and in like manner—this grave

error of diagnosis is not without excuse. The symptoms of nerve-prostration so greatly resemble those of even coarse uterine lesions that the nerve-mimicries can very readily be mistaken for signals of actual organic disease. Nor, indeed, are they always distinguishable the one from the other, for the marvellous kinship between mind and matter is a tangled skein not yet unravelled by dead-house or by laboratory.

What, then, are these symptoms? Their name is legion, but the most common ones are, strangely enough, those which lay and professional tradition, with singular consent, have labelled as the symptoms *par excellence* of womb disease. They are, in the order of their frequency, great weariness, more or less of nervousness and of wakefulness; inability to walk any distance and a bearing-down feeling; headache, nape-ache and backache; cold feet; an irritable bladder, spinal tenderness and pain in one ovary, usually the left, or in both ovaries. The sense of exhaustion is a remarkable one: the woman is always tired, and she passes the day tired, she goes to bed tired, and she wakes up tired, often, indeed, more tired than when she fell asleep. She sighs a great deal, and her arms and legs tremble or "fall asleep" so frequently that she fears palsy or paralysis.

Other symptoms not quite so common are the cerebral ones: such as low spirits, bad dreams, nightmares and night-terrors; explosive sounds in the head, a loss of memory, suicidal thoughts, the fear of impending insanity, the dread of being left alone or of being in a crowd. Some patients are unable to protrude the tongue, or they may have weakness of vision, or a morbid keenness of smell or of taste. Others are kept away from church on account of spinal thrills and locking of the jaws, whenever they hear the lower or the tremulous notes of the organ.

The uterine reflexes are: uterine, pelvic and ovarian aches; pendulum pains swinging from one groin to the other, jerking muscles which cannot keep still, a trembling or a quivering in the abdomen, or a feeling that it needs support, which is often given by pressure with the hands. The intestines display their interest in the general neurosis, by flatulence, by noisy borborygmi, and by the belching of wind in large volumes. They usually keep bound, but some-



times they are loose, or the two conditions alternate. One very common symptom is great exhaustion after a movement of the bowels, and these movements are often caused at unseasonable hours by any simple excitement, such as the ring of the door-bell or the call of a friend.

Dyspeptic symptoms are rarely absent, sometimes they are very marked, while the tongue looks perfectly clean, even when nausea, vomiting, or diarrhoea are present.

Some nervous women are annoyed by clammy hands and feet, or by profuse sweats, which often are not general, but either local or unilateral. Thus I have seen one-half of the face always wet, while the other half kept dry. One of my patients perspired so profusely from the tips of her fingers, that they were constantly dripping and she could not wear gloves. Once I saw a hysterical nose distilling a clear serum, which for weeks dribbled away, almost in a stream. The annoyance was great, yet no treatment whatever did the slightest good; but one day it vanished as mysteriously as it came. Many nervous women are frightened by muscular cramps, or by tinglings, by loss of sensation, or by numbness in the extremities, which are deemed the precursors of paralysis. Nor does the skin escape the general sympathy. It becomes dry, harsh and scurfy, and pigmentary deposits appear under the eyes, around the nipples, and on the chin and forehead. Blondes are likely to get a mottled complexion, and brunettes may become disfigured by brown patches. Sometimes the whole complexion changes to a darker hue. In one instance this was so marked, that both the family physician and the consultant diagnosed a case of nerve-bronzing to be one of Addison's disease.

Another very remarkable, and often very misleading, symptom is an aneurismal pulsation of the aorta in the epigastrium. Repeatedly have patients been sent to me with the diagnosis of aortic aneurism, when their sole disease was nerve-exhaustion. Lastly, abnormalities in the sexual feeling are not wanting. In the majority, all desire is quenched, or intercourse is painful; in some the sexual feeling is increased; in yet others, it is urgent, but it cannot be gratified; in a few, the dreams are erotic.

From this wealth, from this positive exuberance of symptoms, one would suppose that the diagnosis could not offer any difficulty whatever; but this is far from being the case. The laws governing woman's complex organism cannot be codified; nor can we correctly label the lesions of cerebation proper or of innervation in general. Then the instinct of causality in man leads him to forget that things seen may come from things unseen, and to attribute preferably to the seecable and to the touchable like phenomena, which may come from the unseeable and the untouchable. Naturally, then, we are likely to be misled: First, by symptoms which by common consent are deemed peculiar to uterine disease, secondly, by the co-existence of actual uterine disease, to which we attach undue and overshadowing importance. Apart from these reasons there is yet another one: the human mind, bewildered by a multiplicity of details, does not catch the meaning of their aggregate. So Goethe's traveller missed the forest by reason of the wilderness of trees around him, and the hero of our own national caricature "could not see the town, there were so many houses."

From a large experience I humbly offer to the reader the following watch-words as broad helps to diagnosis. In the first place, always bear in mind what another has pithily said, that "woman has some organs outside of the pelvis." *Secondly*. Each neurotic case will usually have a tale of fret or grief, of care and care, of wear and tear. *Thirdly*. Scant or delayed or suppressed menstruation is far more frequently the result of nerve-exhaustion than of uterine disease. *Fourthly*. Anteflexion *per se* is not a pathological condition. It is so when associated with sterility or with painful menstruation, and only then does it need treatment. *Fifthly*. An irritable bladder is more often a nerve symptom than a uterine one. *Sixthly*. In a large number of cases of supposed or of actual uterine disease which display marked gastric disturbance, if the tongue be clean, the essential disease will be found to be neurotic; and it must be treated so. *Seventhly*. Almost every supposed uterine case, characterized by excess of sensibility and by scantness of will-power, is essentially a neurosis. *Eighthly*. In the vast majority of cases in which the

woman takes to her bed and stays there indefinitely, from some supposed uterine lesion, she is bed-ridden from her brain and not from her womb. I will go further, and assert that this will be the rule, even when the womb itself is displaced, or it is disordered by a disease or by a lesion that is not in itself exacting or dangerous to life. *Finally*. Uterine symptoms are not *always* present in cases of uterine disease. Nor when present, and even urgent, do they *necessarily* come from uterine disease, for they may be merely nerve-counterfeits of uterine disease.—*Med. News, Dec. 7th.*

### FORCIBLE FLEXION OF THE BODY IN LOCOMOTOR ATAXY.

At the thirteenth Congress of the Italian Medical Association, recently held at Padua, Dr. P. Bonuzzi communicated the results of a number of experiments which he had made on the dead body with the view of ascertaining the physical effects produced on the spinal cord by suspension. These experiments led him to the following conclusions:

1. During suspension the spinal cord undergoes a marked change in its relations to the vertebral column, being displaced upwards to the extent of from three to four millimetres, this result being due to slight increase of the distance between the vertebræ owing to relaxation of the muscles and stretching of the vertebral ligaments.

2. The roots of the spinal nerves, with the exception of the cauda equina, do not seem to be appreciably stretched, although they are slightly altered in position.

3. The tension of the cerebro-spinal fluid is increased.

5. During suspension the vertebral column is apparently lengthened to the extent of from one and one-half to three centimetres, this elongation, however, being due more to separation of the spinous processes than of the bodies of the vertebræ. The body, as a whole, is lengthened to the extent of from two to three centimetres during suspension.

In a second series of experiments Dr. Bonuzzi proved (to his own satisfaction) that by bending the body forcibly forward, so as to bring the knees into contact with the abdomen, the spinal

cord and the cauda equina are subjected to very considerable stretching. Having made an opening into the vertebral column and inserted a needle perpendicularly to the long axis of the cord, he noted that on bending the body forcibly forward the needle was carried downwards for a distance of from eight to twelve millimetres, the spinal cord itself becoming thinner and more resistant, and the cauda equina becoming extremely tense. Dr. Bonuzzi found that traction on the sciatic nerves stretched the cauda equina, but did not draw down the cord more than two millimetres. In forcible flexion the vertebral column undergoes an apparent lengthening of from six to fourteen centimetres. Dr. Bonuzzi also observed that as the body was bent forward a considerable amount of venous blood escaped from the opening into the vertebral canal, this result being due, according to him, to the pressure on the spinal veins caused by the forcible flexion of the body.

The inference drawn from these experiments by Dr. Bonuzzi is that by forcible flexion all the therapeutical advantages of suspension can be obtained without its drawbacks. He has as yet only once had the opportunity of trying this method on the living subject, but in that case the results were very encouraging. The patient was a woman, who had had all the characteristic symptoms of locomotor ataxy in a very marked degree for nine years. Flexion was applied in the following manner: The woman lay on her back, and the legs were drawn up, by means of a towel twisted loosely round the ankles, till the knees touched the abdomen; she was kept in this position at first for half a minute, and then for gradually lengthening periods up to three minutes. The treatment was applied on alternate days, forcible flexion being carried out two or three times on each occasion. After three sittings the lightning pains became less severe, and after eight sittings they almost entirely ceased. The power of locomotion was so far regained that the woman was able to carry a bucketful of water from room to room, a thing she had not been able to do for three years. She could also stand with her eyes shut for half a minute without falling. The irregularity of the pupils and the absence of knee-jerk remained as before. In other respects improvement was progressive and lasting.—*Tondon Med. Recorder.*

VOMITING OF PREGNANCY TREATED WITH MENTHOL.—The most unpleasant symptom accompanying pregnancy is undoubtedly the vomiting which often occurs, and this is especially serious because our present knowledge of its therapy is most unsatisfactory, and, in many instances, the physician is at a loss to know how to proceed. It is not unfrequent that all therapeutic measures fail and relief is only obtainable by the induction of abortion. Guided by the fact that the trouble must be regarded as a reflex neurosis, and that, theoretically, drugs which would depress the reflex excitability should also act beneficially in this complication, Dr. Sigmund Gottschalk, of Berlin, has used menthol in this disorder with marked success. He employed a solution containing fifteen grains of menthol in five and a half fluid drachms of alcohol and five fluid ounces of distilled water. Of this he gave a tablespoonful hourly. In a case so treated, and reported in the *Berliner Klin. Wochenschrift*, October 7, 1889, the vomiting ceased after the third dose, although previously other remedies had been used unsuccessfully. The patient was able to retain food and subsequently made a rapid recovery. The drug was continued for three days, the dose being gradually decreased. The use of menthol is continually widening, and there seems to be good reasons on purely theoretical grounds for expecting that the results obtained by Dr. Sigmund were not in the nature of a coincidence, but that they indicate a rational addition to the therapeutics of the vomiting of pregnancy.—*Med. and Surg. Reporter*.

ADMINISTRATION OF ANÆSTHETICS.—At a meeting of the Brooklyn Surgical Society, June 6, 1889, Dr. Pilcher said: The experience of the past ten years has led me to give preference to that very popular and common inhaler known as the Allis inhaler. I am convinced that in a very considerable portion of cases the use of ether as an anæsthetic is dangerous, and have been rejoiced to see the tendency, which is so marked in the profession at present, to study the advantages and dangers of different anæsthetics with regard to different patients, and to suit to particular patients the anæsthetics which experience shows to be the best adapted

for them; so that there is rapidly becoming less partizanship with regard to this or that anæsthetic. It is a marked feature for which I think all thoughtful surgeons should rejoice in the conditions of to-day. The long administration of ether is certainly depressing. Even the short administration of ether has a more or less irritating effect upon the respiratory passages. Ether to any considerable extent has also an irritating effect upon the urine secreting apparatus, and it is certainly wise for us to take these things into account in choosing our anæsthetic; and if for any reason we feel we must use ether as an anæsthetic, it seems especially wise that we should take advantage of some such device as this which has been presented to us this evening, which would diminish as much as possible the irritating effect of that particular anæsthetic. In many cases I am convinced that chloroform should be used as the anæsthetic rather than ether; in all cases where there is recognizable irritation of the bronchial and pulmonary tissues, also where there is a diseased condition of the urinary secretive apparatus; that in young children, likewise, who as a class have been shown by experience to be peculiarly pleasantly affected by chloroform, it should be used; and at the other extreme of life, in the aged, who as a class either already suffer from or are on the verge of renal or pulmonary degenerative changes. Now, as to the methods of administering chloroform: The most convenient and safe inhaler is always at command in a common tumbler or a common teacup, into the bottom of which a handkerchief can be put so that it shall be an inch or two away from the nostrils or mouth, and which when put over the mouth and nose, cannot be forced so close down upon the cheek upon either side that there will not always remain still considerable apertures at those points for the abundant admission of air with the chloroform vapor. This is nothing new, but I have had occasion so many times to suggest it to men of large experience and of age in the profession, whom I have seen attempting to administer chloroform in both wasteful and dangerous methods, that possibly it may not be out of place to notice this method in this connection.—*Brooklyn Medical Journal*.

## Therapeutic Notes.

CARTER'S LITTLE LIVER PILLS.—Weight of twelve pills about  $7\frac{1}{2}$  grains, of which probably 2 to  $2\frac{1}{2}$  grains is sugar coating. They contain podophyllin and aloes, made into a pill and coated with sugar. On the above we deduce the following formulæ as closely resembling the original:

Podophyllin,	$1\frac{1}{2}$ grs.
Aloes, Socotrine,	$3\frac{1}{2}$ grs.
Mucilage of acacia,	q. s.

Mix, divide into twelve pills and coat with sugar.—*The New Idea.*

LOZENGES OF PYRETHRUM AND PILOCARPINE FOR RELIEF OF DRYNESS OF THE THROAT AND MOUTH.—I have used with much satisfaction for the relief of the uncomfortable sensations of heat and dryness which characterize many acute and chronic affections of the mucous membrane of the mouth and throat, a lozenge made according to the following formula:

Fluid extract of pyrethrum	2-3 minims.
Pilocarpine hydrochlorate	$\frac{1}{32}$ grain.
Pure extract of licorice	2 grains.
Powdered acacia	2 grains.
Glycerine	1 minim.
Sugar, enough to make	20 grains.

The lozenge is allowed to dissolve in the mouth, and one is used every two, three, or four hours, as may be indicated. Should more frequent use be necessary the quantity of pilocarpine should be reduced. The addition of two grains of ammonium chloride will often be beneficial in subacute inflammatory conditions of the mucous lining of the respiratory tract; while in more chronic affections, two or three minims of the oleoresin of cubebs will serve a good purpose. The lozenge has a pleasant pungency, and its effect in keeping the parts well moistened is quite marked. Speakers and singers have told me that the use of a lozenge just before lecture or performance has made it possible to do work comfortably which otherwise would have caused much pain and fatigue. It is possible that a little extract of coca might be advantageously added for special occasions of this nature.

The lozenges are skilfully prepared by Mr. Frank S. Morgan, of this city, and are dispensed by him under the name of *trochisci pyrethri et pilocarpine*.—*Solomon Solis-Colen in Med. News.*

TREATMENT OF ACNE OF THE FACE.—The most rational treatment of facial acne should be based upon the following two principles: first, to allay the congestion of the skin as far as possible; second, to remove all causes which could give rise to hyperæmia of the face. To obtain these results, both internal and external remedies may be used. The direct care of the skin demands the principal attention. Every morning and evening the face should be washed with a fine sponge. The temperature of the water should be as high as the patient can possibly bear it. After washing, the skin should not be dried. Such a washing renders the skin extremely hyperæmic. As soon as the water begins to evaporate from the face, the superficial blood-vessels become contracted, and gradually regain their lost tone. In many cases this simple treatment will be all that is needed, and a speedy recovery will follow. In severer cases, however, the following solution may be employed:

℞.—Hydrarg. bichlor. corros.,  
Ammon. muriat. aa gr. xv.  
Emuls. amygdal. amar. fʒ vij.  
M. et fiat lotio.

Sig. Apply morning and evening.

The following formula will be found to be of equal if not of greater efficacy:

℞.—Aquæ destil fʒjx.  
Sulphur. sublim. fʒj.  
Ætheris sulfuric fʒiij-fʒjv.

M. et fiat lotio.

Sig. Apply morning and evening.

The practitioner may, however, come across cases of such a stubborn nature that even these lotions will fail to effect a permanent cure. In such cases, the only remaining course of treatment is scarification. This procedure never fails to quickly relieve the congestion of the skin, and also causes the acne pustules to rapidly disappear. Regarding the best advisable diet to be pursued during the treatment of acne, little need be said, other than that highly spiced and heating foods should be avoided.—*Allg. Med. Central-Zeitung, Med. and Surg. Reporter.*

THE  
**Canadian Practitioner**

A SEMI-MONTHLY REVIEW OF THE PROGRESS  
 OF THE MEDICAL SCIENCES.

*Contributions of various descriptions are invited. We shall be glad to receive from our friends everywhere current medical news of general interest.*

*When a change of address occurs please promptly notify the Publishers, THE J. E. BRYANT COMPANY (Limited), 58 Bay Street.*

TORONTO, JANUARY 1, 1890.

ANNOUNCEMENT.

Beginning with the present number the editorial management of THE CANADIAN PRACTITIONER will be under the sole charge of Dr. A. H. Wright; Dr. Graham and Dr. Aikins retiring. It is but just to the retiring editors to say that the excellent standing which is now held by THE CANADIAN PRACTITIONER among the medical journals of this continent is largely due to their reputation as physicians, and their ability as editors. To Dr. Aikins especially should the thanks of all well-wishers of THE PRACTITIONER be extended, as his labors in behalf of the journal have been most unremitting and zealous.

PROSPECTIVE.

In entering upon the fifteenth year of our publication, it is fitting that we should say a few words as to what our aims are in conducting this magazine, and as to our hopes for the realization of these aims. We state frankly, that our aims are to make this magazine second to none on this continent for the promotion of medical science, for the improvement of the art of medicine, and for the elevation of the professional status of the medical practitioner.

THE PRACTITIONER will endeavor to view the great and broad field of medicine in all its aspects, but especially as a science and an art. The wonderful advances of medicine as a science were well shown in the addresses of the distinguished men who took part in the opening exercises of the new building of the Biological

Department of the University of Toronto. The city of Toronto is highly favored at the present time in possessing an exceptionally good class of teachers in Chemistry, Anatomy, Biology and Pathology. We are happy to be able to announce that we shall receive the active and cordial assistance of a number of these men, men who are of undoubted ability in the various departments we have mentioned, and that our efforts to present to our readers what is best worth knowing in connection with the science of medicine will be seconded by these coadjutors in every way that lies in their power.

We have no desire, however, to see science cultivated at the expense of art. The scientific and practical should be combined. We will, therefore, try to avoid the fault of exalting the importance of diagnosis and pathology by depreciating that of treatment. With this end in view, special attention will be paid to the department of Practical Therapeutics. And again we have pleasure in announcing that a number of our most prominent physicians and surgeons, both in and out of Toronto, will contribute towards those of our columns which are devoted to practical medicine and surgery.

Arrangements, too, have been made by which we will give in every issue reports of interesting cases, from both hospital and private sources. We hope this will encourage our friends at a distance to send us brief notes or reports of cases of interest occurring in their practice. We will set apart as much space as we can spare for reports of various medical societies. Some of these reports will be very complete, as, for instance, those of the Pathological Society of Toronto, which, we are happy in saying, we have made arrangements to give very fully.

But in addition to purely medical literature, all matters of special interest to the profession will be considered. We will loyally support the Medical Council of Ontario in its efforts to suppress quackery and elevate the standard of medical education and of the medical profession in the Province. And we will assist the profession in their efforts to procure changes in some of the old-fashioned requirements of the Council's curriculum.

Our programme is full, our aims, as above described, are high, but our hopes are strong.

We desire to publish a medical journal which will be a credit to Canada and deserving of continental recognition. Our plan of operations is well organized. Our co-workers are possessed of high attainments and peculiar fitness. We believe we are justified in saying our success is assured.

### THE OPENING OF THE UNIVERSITY BIOLOGICAL BUILDING.

The proceedings connected with the formal opening of the new building of the Biological Department of the University of Toronto, Dec. 19th and 20th, were in the highest degree interesting. The plan of inauguration and the methods of conducting the ceremonies were conceived by the Vice-Chancellor, whose wondrous zeal, endless energy, and rare discretion have done so much to place the Medical Faculty in its present high position. To Professor Ramsay Wright was entrusted the important duty of carrying out the programme. The results show that he was the man for the occasion. The medical Faculty and its friends have long felt that he was a tower of strength to the cause of higher medical education in Ontario. On the formal opening day of the improved Biological Department he demonstrated conclusively, not only that he had a grand building with magnificent appliances for the purposes of Biology, but also that he was second to none in the world as a teacher of this important subject.

We had on this important occasion from the United States the best quartette of medical Scientists that ever appeared before any Canadian audience. It was a matter of great interest that this quartette included *our own Osler*, who, on his merits, has obtained one of the highest positions in the medical world. We owe a debt to these distinguished visitors that we can never repay. Their addresses commanded the closest attention of the large audiences. When taken in connection with the opening address of Prof. Wright, they formed the best demonstration of the vast importance of science, and the close connection existing between science and art, that ever was given in Toronto.

Those present, including a large number of representative practitioners from various parts of the Province, were filled with an enthusiasm

which must bring forth rich fruit in the near future. It was a great surprise to many to learn the extent of the facilities of the University for teaching the sciences after the most approved modern fashions. It was a matter of deep interest to others to learn something of the great advances in these subjects. The students were delighted far beyond their expectations, and showed their appreciation by a series of resolutions, flattering alike to their Faculty and to the visiting scientists.

These proceedings will give to the cause of higher medical education in Canada a stimulus the results of which are likely to be far-reaching. Obstructions in the path of progress, and sneers at those who are advancing, are likely to become less common. The shafts of small wit fired at the pillars of science will probably fall flat by the way. Increased interest will be taken in the subjects of chemistry and biology. Let us hope that this is only a beginning of rapid and continuous advances of scientific medicine. The University of Toronto slept too long, while some of the great Universities of the United States and the old world were steadily forging ahead. Let us hope that she has cast aside her lethargy forever.

### THE SURGERY OF THE LIVER.

The surgery of the liver is the subject of a communication by Mr. Lawson Tait, in recent issues of the *Edinburgh Medical Journal*. In speaking of the advances made of late in the treatment of diseases of the liver by surgical means he says: "The diseases of the liver which have up to the present time, yielded to the persistent determination of the modern school of surgery to leave no stone untouched in the advancement of the art, are gall-stones, hepatic abscess, and hydatid tumours. There are others, and, I am ashamed to say, unknown diseases, which seem to yield to surgical treatment applied to them by accident, and these unexpected successes may some day lead us on the road to other victories, but how these are to be achieved we cannot as yet say. Certainly nothing looked less attractive as a field for surgical research during my student life, some quarter of a century ago, than that which I now regard as the most fruitful upon which I have engaged—the liver."

The operation of cholecystotomy as it is now performed was proposed as long ago as 1570 by Petit, but the brilliant conception was never put into actual practice until Dr. Marion Sims performed an unsuccessful operation in 1878. Mr. Tait attributes the want of success in this, the pioneer case, to "the tinkering delay which is fatal to so much good surgery" and against which he says "it is the duty of good surgeons unceasingly to protest." The case was one of multiple gall-stones and the patient lived eight days after the operation. Dr. Sims sums up in the following words the great lesson that his case teaches us:—"In dropsy of the gall bladder, in hydatid tumours of the liver, in suspected abscess of the liver, and in gall-stones, we should not wait till the patient's strength is exhausted, nor till the blood becomes bile-poisoned, producing hemorrhages, but we should make an early exploratory incision, ascertain the true nature of the disease, and then carry out the surgical treatment that the necessity of the case may demand." Mr. Lawson Tait was the first to follow out Petit's proposal and Dr. Sims' plan, successfully. The patient, a woman aged 40, was subjected to an operation in August, 1879. A year previous to her admission to hospital, she began to suffer from spasmodic pains of a severe character in the right side, a swelling appeared at the seat of the pain and slowly increased. The pain increased in intensity, her appetite failed and she lost strength and flesh rapidly; on admission she presented an emaciated and almost cachectic appearance. She also suffered at that time from incessant headache and sickness and obstinate constipation. An examination was made under ether but no decided diagnosis was made, and it was then agreed that the abdomen be opened for the purpose of ascertaining the nature of the tumour. The abdomen was opened in the middle line to the extent of four inches, the umbilicus forming the centre of the incision. It then became at once evident that the tumor was a distended gall bladder. An aspirator was passed into the apex, and from twelve to fifteen ounces of a white starchy looking fluid withdrawn. The gall bladder was then opened at the point of puncture, a large round gall-stone was found lying loose in the cavity and removed. A larger stone was detec-

ted at the entrance of the duct impacted in it, and evidently the cause of the dropsical condition of the gall bladder. This was adherent to the mucous surface and its removal was a matter of very great difficulty, the danger of tearing the walls and thus killing the patient was very great. A very careful and prolonged lithotomy was performed, and the stone removed piecemeal. The cavity was washed out repeatedly. The wound in the gall bladder was stitched to the upper part of the wound in the abdominal walls by continuous suture, leaving the aperture into the bladder quite open, the rest of the abdominal incision was closed in the usual way. The operation was performed with complete antiseptic precautions and the anæsthetic employed was ether. Bile continued to flow from the wound for eight days; the stitches were removed and the wound was entirely healed on the fourteenth day. The patient has since remained in perfect health.

Mr. Tait has performed the operation of cholecystotomy fifty-five times and fifty-two of the patients have recovered. One old woman died of suffocative catarrh some weeks after the operation and two others died of the cancer of the liver which was probably the cause of the distended gall bladder in one of them, for Mr. Tait found no gall stones which could be removed. In the second the death of the patient four months after the operation revealed excessive cancer with suppuration of the liver. In not a single instance did the patient die from the operation.

An argument against cholecystotomy is that biliary fistulæ remain occasionally and permanently. This must be due to the fact that the operation had been performed at a time when a gall-stone or gall-stones had become impacted in the common duct. The fact that a biliary fistula has been known to occur after cholecystotomy is really one of the strongest arguments against the rival operation of cholecystectomy and the greatest argument in favor of the operation of Petit. We now know perfectly well that we can overcome the discomfort and trouble of a biliary fistula by making an artificial junction between the gall bladder and an adjacent coil of intestine. In this way we can secure the return of bile to its proper route, and free the patient from the discomfort of a fistula.

This has recently been proved to be a successful operation, by Mr. Mayo Robson, of Leeds. Mr. Tait states that in all probability, the larger number of cases of biliary fistula resulting from obstruction of the common duct by a stone lodged there at the time of operation, may be completely relieved by the operation of cholelithotripsy—that is, to make a fresh opening in the abdomen and crush the stone outside the walls of the duct by means of padded forceps.

Mr. Tait holds that accurate diagnosis within the abdomen is rarely possible. He relates as an instance a case of large abdominal tumor which presented all the appearances and signs of a parovarian cyst, and which was recognized as such by him; on opening the abdomen he was amazed to find an enormously distended gall bladder.

In some instances unknown diseases seem to yield to surgical treatment applied to them by accident. Mr. Tait has more than once drawn attention to the astonishing disappearance of tumours after mere exploratory incision. These have mainly been cases of diseases of the liver, spleen, and head of the pancreas; other cases in which the exact site of origin of the growth could not be accurately ascertained have also been known to disappear. Mr. Tait is satisfied that the mere opening of the peritoneal cavity has a direct influence in setting up the process of absorption of the tumor. That some emphatic physiological change is at once set up by opening the peritoneal cavity is clearly indicated by the uniform onset of a most distressing thirst, which lasts for days, and is not seen so markedly after any other operation. Let the incision in the abdominal wall be made down to the peritoneum and let the serous cavity remain unopened, and this thirst is not marked. But let the peritoneum be opened but a finger's breadth, and the result is marked.

The treatment of tubercular peritonitis by abdominal section has shown us that we can cure permanently and speedily cases which have gone even as far as suppuration, by opening and cleansing. In the bad cases, in all probability the cleansing is never complete no matter how much time and care is spent on it. And in non-purulent cases Mr. Tait very often does no cleansing at all, but he merely empties out the serum, and puts in a

drainage tube. Yet the majority of these cases are cured by these simple means.

Four cases are recorded in which the abdomen had been opened for the purpose of removing enlarged spleens, in all of these cases the operation was not proceeded with on account of the hopeless outlook. Strange to say, in three of these the tumour has disappeared. The fourth patient succumbed to the exploratory incision.

Modern surgery is to be congratulated upon the distinct advance it has made in the treatment of abscesses of the liver, and hydatid tumours of that organ. Mr. Tait has even deliberately and successfully opened the tissue of the liver, to remove a hydatid tumour.

#### NOTES.

MR. MULOCK, the Vice-Chancellor of the University of Toronto, entertained the members of the Senate, the Medical Faculty and the American visitors at a dinner in the Toronto Club on the evening of December 21.

THE *Medical News* VISITING LIST 1890.—This visiting list is prepared and sold by Messrs. Lea Bros. & Co., the well-known medical publishers of Philadelphia. It is very conveniently arranged for the practitioner, and, in addition, contains much valuable information on doses of drugs, treatment of emergencies, methods of examining urine, the use of disinfectants, etc.

DR. GOODELL'S ARTICLE.—Acting on the suggestion of one whose opinion always commands the highest respect in Ontario, we publish in this issue the excellent article by Dr. Goodell which appeared in the *Medical News*, although it occupies more space than we usually allow for selections. Dr. Jacobi, of New York, says "it is the best and probably most useful paper published in a medical journal these many years."

POST-GRADUATE COURSES IN VIENNA.—The number of English and American physicians attending courses in Vienna is large. In November there were eighty fresh arrivals. More than sixty courses of four to six weeks are conducted during a session. The courses in



laryngology, ear diseases, and gynæcology are apparently the best attended. An Anglo-American Association has been formed with the approval of the Austrian Government.

FOOT BALL CASUALTIES have been rather common during the last season in England. The Rugby appears to be more dangerous than the Association game. In the latter part of November a student at the training college, Winchester, was so violently kicked that his spine was seriously injured. At Hungerford Downs a player had his collar bone broken. At Belfast there was a leg broken and a knee-cap fractured. These are only a few among many casualties reported.

THE SCIENTIFIC ADDRESSES AT THE OPENING OF THE NEW BUILDING OF THE BIOLOGICAL DEPARTMENT.—We will publish in our next issue the admirable addresses of Professors Ramsay Wright, Osler, Welch, Minot, and Vaughan, if we have space. If we have not room for all we will publish as many as we can, and give the remainder in the following issue. In this number we give a full report of two meetings of the Pathological Society of Toronto. One of these was unusually interesting in consequence of the prominent part taken therein by the distinguished visitors from the United States.

THE CREDIT SYSTEM IN MEDICAL EDUCATION.—A curious system prevails in some of the French medical colleges of the province of Quebec as pointed out by the *N. Y. Medical Journal*. Young men without means when properly recommended (whatever that means) can obtain their tuition and degree in due course, in return for which they give their promissory notes. These notes are to be redeemed when success in practice enables these pauper graduates to pay their debts. Many frequently forget to do this, and in two cases lately the delinquents were sued by the medical college.

For anæmic women, subject to fainting fits and attacks of pain in the region of the solar plexus (*Medical Brief*), valerianic ether has proven (when given in pearls containing five minims) a very useful stimulant.

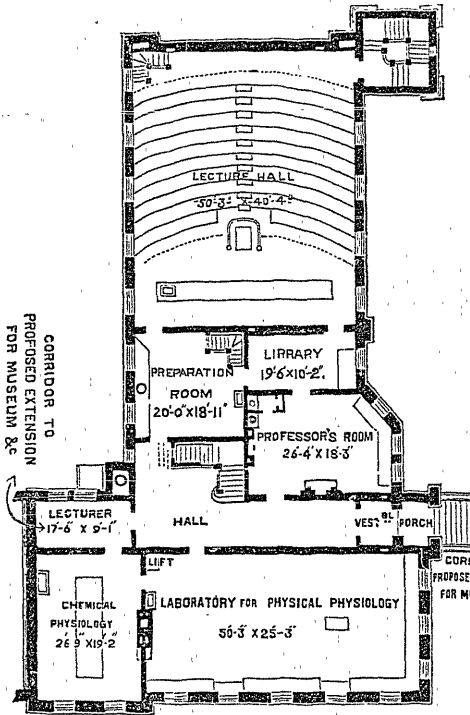
## THE NEW BIOLOGICAL DEPARTMENT, UNIVERSITY OF TORONTO.

At the opening exercises of the new building of the Biological Department, Dec. 16 and 20, the following with others were present:

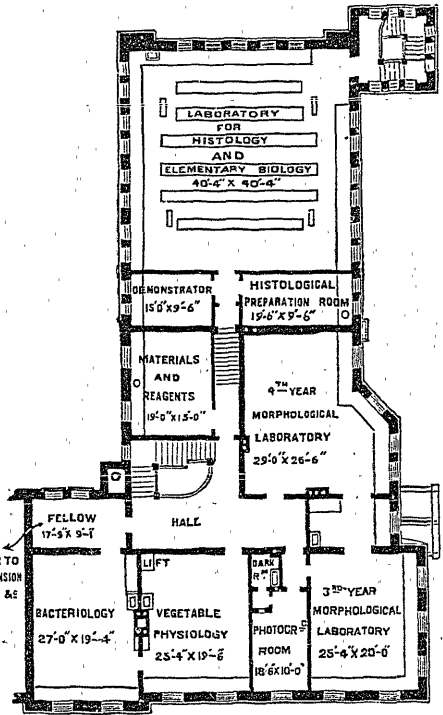
The President of the University, Sir Daniel Wilson, in the chair. Prof. Welch and Prof. Osler, of Johns Hopkins University, Baltimore; Prof. Minot, of Harvard University; Professor Vaughan, of Ann Arbor University; Prof. W. T. Aikins, the Dean of the Medical Faculty; Dr. McMahon, M.P.P., Dundas; Dr. Buck, Palermo; Dr. Bonner, Bolton; Dr. J. D. Bonner, Buffalo; Dr. Husband, Hamilton; Dr. Freeman, Milton; Dr. Rae, Oshawa; Dr. Ross, Dundas; Dr. Robinson, Brampton; Dr. McKinnon, Guelph; Dr. King, Port Colborne; Dr. Savage, Weston; Dr. Gardiner, London; Dr. Lesslie, Hamilton; Dr. Hillary, Aurora; Dr. McLennan, Trenton; Dr. Wilson, Richmond Hill; Dr. Howland, Huntsville; Dr. King, Port Hope; Dr. McNaughton, Erin; Dr. More, Brampton; Dr. Gowanlock, Warsaw; Dr. Bogart, Whitby; Dr. Langrill, Cheltenham; Mr. Waldron, Collegiate Institute, Whitby; Dr. Warren, Brooklin; Dr. MacCallum, London; Rev. Dr. Birchill, Mount Forest; Mr. Sylvanus Phillips, B.A., Mount Forest; Dr. Dillabough, Hamilton; Dr. Walters, Little York; Rev. Father Henning, Dr. Canniff, Rev. Dr. Sheraton, Rev. D. J. Macdonnell, Prof. Loudon, Prof. Ashley, Prof. Baker, Prof. Hutton, Prof. Ellis, Dr. Winnett, Dr. Garrat, Rev. G. H. Sandwell, Dr. Wallwin, Dr. Barton, Dr. Cassidy, Dr. H. Robertson, Dr. E. Langtry Hall, Dr. Ray, Dr. Bryce, Dr. Patullo, Dr. Scadding, Dr. Greig, Dr. May, Dr. B. E. McKenzie, Dr. Jas. Ross, sr., Dr. Dame, Dr. A. M. Rosebrugh, Dr. Armstrong, Dr. Bentley, Dr. Carlyle, Dr. Cotton, Dr. N. Bethune, Dr. Newman, Dr. I. H. Cameron, Dr. Acheson, Dr. Spragge, Dr. Grant, Dr. Carveth, Dr. Gardner, Dr. Morson, Dr. Thompson, Dr. Lehman, Dr. Price Brown, Dr. W. T. Stuart, Dr. F. A. Knapp, Dr. McIntyre, Mr. A. Blue, Mr. Robert Awde, Mr. D. B. Dick, Prof. Richardson, Prof. Oldright, Dr. Peters, Dr. Adam Wright, Dr. Ferguson, Dr. W. P. Caven, Dr. J. E. Graham, Dr. Primrose, Dr. T. McKenzie, Dr. A. B. Macallum, Dr. J. Caven, Professor Thorburn, Dr. McPhedran, Dr. W.

W. Ogden, Dr. U. Ogden, Dr. D. Clark, Dr. J. M. MacCallum, Dr. J. F. W. Ross, Dr. Rose, Dr. J. Wilson, Dr. Chamberlain, Dr. Ghent, Dr. Harley Smith, Dr. Reeve, Dr. Burnham, Dr. Féré, Dr. Atherton, Dr. Spencer, Dr. A. Jukes Johnson, Dr. T. S. Coventon, Dr. Sheard, Dr. Temple, Dr. Carson, Dr. Merritt, Dr. Machell, Dr. Stevenson, Dr. Burns, Dr. McFarlane, Dr. Powell, Dr. Jones, Dr. W. H. Aikins, Dr. Avison, Dr. Bray, Dr. Cuthbertson, Dr. C. M. Foster, Dr. Little, Dr. Nesbitt, Dr. G. B. Smith, Dr. Sweetnam, Dr. Thistle, Dr. Baines, Dr. A. A. Macdonald, etc.

ing is a substantial structure in the Scottish Norman style, harmonizing with the University itself, but simple and unpretentious in character. The materials used are brown and grey Credit Valley stone for the basement and general face of the walling, and brown stone for the dressings. The principal feature of the eastern elevation is the lecture hall, which is at the north end of the building, with a staircase tower and bell turret at its north-east corner. This staircase is exclusively for the use of students, and gives access to the waiting-rooms, lecture hall, and large laboratory over it, without the necessity for passing



Plan of Ground Floor.



Plan of First Floor.

DESCRIPTION OF THE NEW BUILDING OF THE BIOLOGICAL DEPARTMENT OF THE UNIVERSITY OF TORONTO.

The Biological building is situated on the west side of the crescent in the Queen's Park, on the site of the old brick building which served, for so many years, as a home for the Toronto School of Medicine, and is therefore associated with the student days of many readers of the PRACTITIONER. Within recent years it has been occupied by the students as a gymnasium and place of meeting of the college societies, and has been known as Moss Hall. The new build-

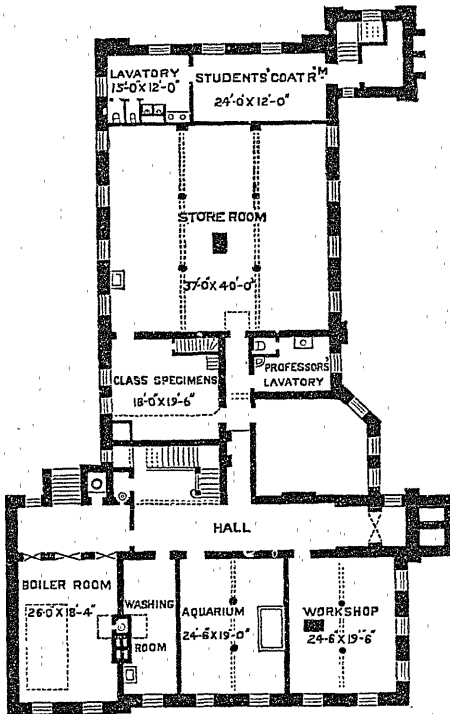
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through the main building. The principal entrance is through an arched porch on the east front, and opens on the main corridor running east and west, from which the main staircase rises. Opening on this corridor, on the north side is the professor's private laboratory, communicating through the preparation room, and a small library with the lecture hall. This is a very handsome room, seated for 250 students, but having floor space which is available for many extra seats, as was apparent on the opening day. The seats are comfortable theatre-chairs, each being provided with a folding tablet

for note-taking. The staging on which the seats are fixed is arranged on an "acoustic curve," the height of the steps increasing as they recede from the front, with the result that the occupants of the back seats can see over the heads of those in front of them. On the south wall of the lecture room are various devices for illustrating lectures, a fixed blackboard has a movable one suspended in front of it, and at either side are diagram frames running on guiding wires, which may be raised and lowered at pleasure. In front of the blackboards a plaster disc of 8 feet diameter can be pulled down. The disc was

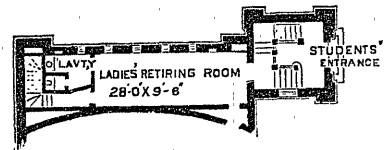
rapidly by drawing down painted shades, which run behind strips attached to the window-casings. Advantage is taken of the space under the staging of the lecture hall to form a ladies' waiting-room, which is entered from the tower staircase, but has also a private stair up to the lecture hall for the exclusive use of the lady students.

On the south side of the main corridor are the laboratories for physical and chemical physiology in charge of Dr. A. B. Macallum, whose private room is at the end of the corridor. The large physiological labora-

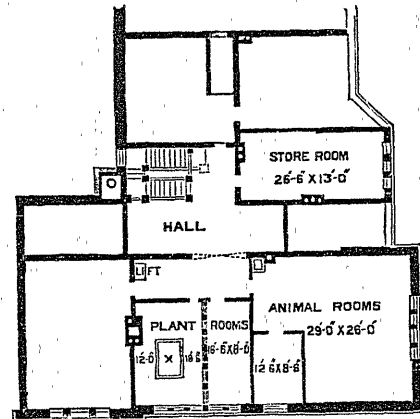


Plan of Basement Floor.

cast upon a plate glass surface with the finest plaster, so as to afford a suitable surface for receiving the images of microscopic preparations projected by the Zeiss projection microscope. It is also employed for receiving ordinary lantern projections. A brick column independent of the floor rises from the room below, and prevents any vibration of the projection instrument. At present there is no electric light in the building, but the gases for lime light are stored in cylinders in the basement, and the water pressure can be turned on to these in the lecture room. The room can be darkened



PLAN OF MEZZANINE UNDER LECTURE HALL



Plan of Second Floor.

tory can be darkened in the same way as the lecture room. It also has an independent brick column for galvanometric work, as well as stone and wooden benches suspended on the east and south walls for supporting other instruments which require to be free from vibration.

The first floor contains the laboratory for histology and elementary biology, arranged for one hundred students working simultaneously, when the tables in the centre are occupied, but generally only used for classes of forty, engaged in microscopical work. The walls are occupied by

lockers, in which the students keep their histological reagents, etc.

Attached to this large laboratory are a private room for the use of the demonstrators, and a histological preparation room, in which the material is prepared and stored for the classes in histology and elementary biology.

These rooms over the lecture-hall communicate with the rooms over the front of the building by means of a flight of steps. The latter rooms are chiefly used by the senior students of the Arts Faculty, and include special morphological laboratories for third and fourth year students, with a small common room between them in which there are facilities for imbedding, injecting, etc. Each laboratory contains a large case with specimens and models illustrating the prescribed work for each class. A full set of Ziegler's models, illustrating the development of the vertebrates, *e.g.*, occupies the greater part of the case in the fourth year room.

There are also on this floor two rooms devoted to vegetable physiology and bacteriology, at present under the charge of Mr. J. J. Mackenzie, Fellow in Biology. A photographic room, with separate dark room, both finished in dead black throughout, have been specially arranged for photomicrographic work. There is a second floor over the southern portion of the building which contains besides several rooms for other purposes, two plant rooms, so arranged that a different temperature can be maintained in each. The whole of the front and roof are of glass, and face the south so as to get the sun all day. The floors are of concrete, supported by iron beams and brick arches, and are impenetrable to water, while the walls are finished in cement, so that the hose can be used in these rooms and in the adjoining animal rooms as in an ordinary greenhouse. The basement contains the aquarium, workshops, storerooms for various purposes, lavatory accommodation, and the heating apparatus. The heating is by steam, mostly by direct radiation, but the indirect system is also used to a certain extent for purposes of ventilation. Stacks of steam radiators are enclosed in boxes under the basement ceiling, into which cold, fresh air is brought from the outside, warmed, and delivered to the rooms above through tin tubes and registers. The foul air is extracted into a duct which is led to the base of the main

chimney shaft, which is about sixty-five feet high, and up which it passes. This consists of a brick shaft of about four feet square, and inside, it is the smoke pipe from the boiler, the waste heat from which warms the air in the shaft. This is supplemented by a large coil of steam pipes placed at the bottom of the shaft, so that a steady upward current is maintained at all times. The heating apparatus in the lecture-hall and some other rooms is controlled by the Johnson electric heat-regulating apparatus. By means of a thermostat placed in the room and an electric wire, a compressed air apparatus is made to act upon the valves of the radiators, opening or closing them as the temperature of the room falls or rises. By this means the temperature is so regulated that at the end of a lecture it is found not to have varied more than one degree from what it was at the beginning. The difference which the use of this system makes to their comfort is appreciated both by professors and students. The compressed air for this purpose is obtained by an air pump actuated by the water pressure and connected with it by a pressure-reducing valve, so that the pump stops when the pressure in the cylinder attains twelve or thirteen pounds, and works again when the pressure falls below this point. The compressed air is also available for use at other places for blast or for injecting purposes. The plumbing throughout the building is of the best and most modern description. The building, including fittings, has cost about \$55,000, and was erected from the designs and under the superintendence of the University architect, Mr. David B. Dick.

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## Meeting of Medical Societies.

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### PATHOLOGICAL SOCIETY OF TORONTO.

REGULAR MEETING, Nov. 30, 1889.

Dr. Reeve, President, in the chair.

Adjourned discussion on case of Multiple Cerebral Abscesses.

Dr. J. E. Graham asked if any cause was known for the pyæmia; the post-mortem report and the history did not show any.

Dr. W. P. Caven thought the fact that the abscesses were multiple pointed strongly to their being of pyæmic origin.

Dr. Graham asked if multiple abscesses occur oftener in the brain from idiopathic than from traumatic pyæmia. Multiple abscesses do occur in the brain when there is but one depot of pus elsewhere.

Dr. R. A. Reeve wanted to know how the pus had been transmitted in this case. Had it been by the lymphatics or by the blood vessels? In cases of purulent otitis we find abscesses surrounded by healthy brain tissue and no traceable connection between the diseased bone and the abscess.

Dr. Graham suggested that the green color of the pus was due to some peculiar micrococcus.

In the absence of Dr. J. Caven, Dr. James MacCallum presented the following specimens: Enlarged Prostate, Hypertrophied Bladder, Obstructive Nephritis, Phleboliths in Prostatic Veins. The specimens were obtained from a man of about sixty years of age, who died in the Toronto jail. The bladder was markedly hypertrophied; there was a very great enlargement of the middle lobe of the prostate, fibromyomatous in character. The lobe had diminished considerably in size while in spirit, but was still the size of a walnut. Both ureters were dilated, and the usual condition of the kidneys as a consequence of obstruction was well marked. The heart was enlarged, a universal hypertrophy, not merely a hypertrophy of the left side as is usually found in disease of the kidney. The lungs were pale and emphysematous; the lower lobes, cedematous, and presenting an approach to hypostatic pneumonia. The radial arteries were atheromatous. This case is interesting not only on account of the great enlargement of the middle lobe of the prostate and the size and number of the phleboliths, but because of the relation of all the morbid conditions, which seem directly traceable to the original bladder condition; although it is quite possible that there may have been another causative element, as shown in the atheromatous radials. When first removed from the body the enlarged lobe of the prostate seemed almost large enough, in a contracted state of the bladder, to block up the orifices of the ureters.

Dr. Primrose thought that the urine could pass up through the mouth of the ureters. He had seen a dilated and very tortuous ureter fully

three-quarters of an inch in diameter, and he thought that urine could pass up such an one. He considered that the sequence of events in this case probably was:

1. Obstruction at the bladder orifice of the urethra, due to enlarged prostate.

2. Distension of bladder and consequent closure of ureters.

3. Distention of ureters throughout their entire course, including enlargement of orifices into the bladder: subsequently regurgitation could occur.

Dr. Cameron agreed with Dr. Primrose that if there was dilatation of the ureter there might be regurgitation, especially when, as in this case, there was an enlarged prostate preventing the urine from passing into the urethra.

Drs. McPhedran and Peters considered that regurgitation from the bladder into the ureter was impossible, Dr. Peters advancing as an argument against such a possibility, the obliquity of the ureter in its course through the wall of the bladder; it being about three-quarters of an inch in length from its entrance at the serous coat to its orifice in the mucous. When the bladder was dilated by the urine retained on account of the enlarged prostate, the pressure of the retained urine would mechanically tend to press together the walls of the ureters as they ran obliquely through the bladder wall, and thus occluding them, prevent regurgitation. The same condition was seen in the closing of the orifice of the common bile duct by dilatation of the duodenum. Experimentally it had been proven impossible for water to regurgitate from the bladder. He thought that the dilatation of the kidney had occurred owing to the kidney continuing to secrete against the pressure due to occlusion of the ureteral orifices.

Dr. Cameron said that Dr. Peters' arguments were quite true, provided the bladder walls have not been changed and become thinned, for in hypertrophy with dilatation the obliquity of the ureter in its course through the bladder wall is lost.

#### SYPHILITIC ARTERITIS.

Dr. J. E. Graham: The patient, a woman about 35 years of age, was sent from the Toronto Jail to the Toronto General Hospital. She was then in a semi-comatose condition; there was no paralysis of the limbs. At first there

was doubt as to whether the condition was one of typhoid fever or disease of the brain. There was dilatation of the right pupil, ptosis of the right eyelid, congestion of the right conjunctiva. Syphilitic cicatrices were found on the body.

Post-mortem examination showed endarteritis of the basilar and also of the middle cerebral arteries, as well as in the smaller subdivisions of these vessels. The vessels could easily be seen to be thickened, beaded in some localities, and in places even completely occluded. The meninges of the brain were thickened; two minute hæmorrhages were found, one into the pons, and the other into the medulla. No thrombus found. Ventricles dilated.

Dr. Oldright had seen her at the jail, and thought her to be suffering from syphilitic disease of the brain. She had had some diarrhœa, but that was traceable to Epsom salts. Temperature 102.2. She did not look like a typhoid patient. She was said to have had a good deal of headache. Dr. Richardson had seen her at the jail off and on for years, and knew that she had syphilis.

Dr. Cameron asked if alcoholism as well as syphilis might not have caused this arteritis?

Dr. Primrose said that before calling the arteritis syphilitic, the syphilitic history must be well established. In syphilis the thickening occurs first in the coats of the arteries without there being any thrombus. He referred to a case under his care in the Temperance Hospital, London; this case is now narrated in *Erichsen's Surgery*, Vol. II . 115, 8th ed.

Dr. McPhedran asked whether the other and larger arteries showed atheroma. The beading of the arteries he thought almost characteristic. Are these beadings gummatous in nature?

Dr. Cameron asked why one-sided beading was present in syphilis rather than in atheroma? The beadings are not gummatous, because they do not break down, but are organized.

Dr. A. B. MacCallum thought on closer examination that the artery seen under the microscope to contain an organized thrombus, was really occluded by thickening of the walls of the artery.

Dr. Primrose said that he had thought that syphilitic arteritis was confined to the small vessels. In it there were no calcareous plates, and the arteries became occluded by hyper-

trophy of the intima. Atheroma, on the other hand, attacks the large vessels, and in it calcareous plates occur.

Dr. Graham, while confessing that the case was incomplete, still held that there was sufficient evidence of syphilis, in the cicatrices and the one-sided beading of the arteries. Syphilis might, he thought, attack the larger vessels, carotid, vertebral, even the aorta. Syphilitic arteritis would not be symmetrical.

The discussion on syphilitic arteritis was adjourned until next meeting.

Dr. Wm. Oldright presented a specimen of aneurism involving the transverse and descending parts of the arch of the aorta. The aneurism posteriorly had eroded the fourth and fifth dorsal vertebrae, destroying their bodies, and anteriorly had reduced the second and third ribs to mere shells. The aneurism had opened into the left lung, burrowing out a large cavity. This cavity apparently had existed for some length of time. The immediate cause of death was rupture of the wall of this cavity in the lung, and hæmorrhage into the pleural cavity.

The patient from whom this specimen was obtained was a merchant, age 50. He consulted Dr. Oldright for indigestion. Six months later he came complaining that the pain had returned, and was higher up, and that he was slightly swollen. Examination disclosed a well-developed aneurism pulsating at the second rib on the left side. No bruit, nor palpitation, or discomfort. A month later there was no bruit, but the pain in upper part of right chest was intense. No change in symptoms for remaining three months of patient's life. Five days before death there was hæmoptysis.

#### CHYLOUS PLEURISY.

Dr. Cameron :

Mrs. A. B., æt 22. About five months previous to pregnancy had severe pain in left inguinal region, with considerable circumscribed swelling, which gradually passed away with a discharge from the vagina. This discharge continued during gestation, ceasing about two months after confinement. About seventh month of gestation she began to suffer from pains in the left side

examination showed this to be due to fluid in the pleural cavity. By aspiration fluid was removed similar in character to the specimen

shown. During the past nine months, at intervals of from one to six weeks, the fluid has been removed, the quantity ranging from one and a half to six pints (wine measure). The fluid has at times coagulated in about three minutes after removal; at other times it has remained fluid at the end of two or three weeks.

Condition of patient when seen by Dr. Cameron: She was pale and anæmic, yet fairly well, in spite of having passed through a severe labor. She complained of epigastric pain and pulsation. Examination showed this to be due to the aorta. There was a hard, irregular, and ill-defined mass in front of the aorta, either the retro-peritoneal glands or the head of the pancreas. This mass was said to have been there from the first. Uterus was anteflexed; ovaries slightly enlarged. No signs of an old pelvic abscess. Heart displaced to the right, and pleura full of fluid; nothing found at the root of the lung.

Dr. Miller, of Cornell University, has twice analyzed the fluid. The first sample he reported to be milk; the second was not milk.

Dr. Clark, of Thorold, thought this case resembled one reported by the younger Flint, of obstruction of the thoracic duct by the pressure of the pregnant uterus.

Dr. Cameron thought that the presence of the chyle within the pleural cavity was due to disease of the root of the lung (enlarged bronchial glands), causing obstruction of the lymph channels, consequent dilatation, stasis, and rupture of the lymph vessels. The physical signs did not bear this out; still, the general appearance of the woman, who is of the dark, coarse, strumous type, permits one to believe this the case. In the last number of the *American Journal of the Medical Sciences*, Busey has collated 64 cases of chylous effusion, 10 of which are of chylo-thorax. Of these the effusion from the duct in five; three were due to violence. Dr. Cameron then exhibited two small samples of the fluid; they were both of a thick, white, milky appearance. One had coagulated, the other had not.

Dr. McPhedran asked what caused the vaginal discharge. Was it also chyle, and due to the pressure of the uterus?

Dr. Graham had seen the case presented by Dr. Whitla, at the Belfast meeting of the British

Medical Association. The fluid was the same in appearance as this.

Drs. A. B. MacCallum and Acheson, who had examined the fluid microscopically, agreed that it contained fat globules and bacteria, but no pus corpuscles.

Dr. Cameron thought that the vaginal discharge was probably chylous, due to a chylous ascites making its way into the retro-peritoneal tissue.

Discussion adjourned until next meeting.

A special meeting of the Society was held on the evening of Friday, December 20th. There were present as the guests of the Society, Professors Welch and Osler, of Johns Hopkins University, Minot, of Harvard University, and Vaughan, of the University of Michigan.

#### DISEASES OF CORONARY ARTERIES AND ALTERATIONS IN THE MUSCULAR WALLS OF THE HEART.

Professor Welch said that since the discovery of Auscultation by Lænnec, our knowledge of valvular disease of the heart had greatly increased. Little attention, however, had been paid to the diseases of the coronary arteries and of the muscular walls of the heart, because as the symptoms were not characteristic, there could be but little precision in diagnosis. Nevertheless these diseases are of great importance to the physician as they are very common causes of sudden death. The cases of sudden death which we so often see described in the public newspapers in which death is said to have occurred "in a moment," and to have been due to apoplexy, or to heart disease, are very often really due to disease of the coronary arteries. The general practitioner should have a special interest in these diseases, for death occurs from them more often in the middle aged or elderly and well-to-do than in the poor.

The coronary, like other arteries, may be affected by arteritis obliterans, arteritis deformans, thrombi, or emboli. Very commonly a thrombus was found just where the anterior coronary artery gives off its main branch.

The question arises, why is death so sudden? Clinically there are two classes of cases; those in which there may have been attacks of angina pectoris, or the signs of cardiac insufficiency, without any valvular lesion, hypertrophy or dilatation; and those in which there had never

been any complaint, people apparently in good health; in both classes however death was sudden. Post mortem examination shows that the lesion in the artery is a permanent one, yet the symptoms are sudden and paroxysmal in their onset. We cannot explain why this is. It may possibly be that the heart does not suffer until certain areas lose their nutrition. Experiment has shown that in the dog's heart there is a spot which, if punctured, causes immediate cessation of the heart's action. It may be that in the heart of man there are such spots from which nutrition being shut off, death immediately ensues. Experiment has also shown that if a limited portion of the coronary supply is cut off, the heart still goes on, but if more and more is cut off, the heart stops.

With disease of the coronary arteries the muscle walls, the pericardium, endocardium and valves may be found intact, but in most cases there are associated muscular lesions, namely, fibrous myocarditis, fatty degeneration, white infarction.

In fibrous myocarditis, which is also known as cirrhosis of the heart, and as chronic interstitial myocarditis, there are found in the muscular walls grey translucent or white patches of irregular shape and size, in which the muscle has been replaced by connective tissue. These patches situate in any part of the wall may be complicated with pericarditis or with endocarditis. These patches were commonly thought to be like fibroid patches in other parts of the body, the results of interstitial inflammation. As Hilton Fagge has pointed out, this cannot be, for we do not find in them any sign of inflammation, any granulation tissue, any small cell formation. These patches are nearly always associated with disease of the coronary arteries, so that they may be considered the result, not of genuine inflammation, but of the death of localized patches.

Thickening of the walls of the coronary artery causes the nutrition of the muscle to be cut off, and degeneration occurs; the muscle fibre drops out and is replaced by connective tissue. The fibrous tissue is of slow growth and never preceded by true granulation tissue. We see the same process in the liver and the kidney, where, as a result of malnutrition, the most highly differentiated parts of the organ degenerate. These so-called fibroid patches are probably due

to coagulation necrosis of the muscle fibre, as in fibroids of the uterus.

An interesting point is the enormous increase in size, three or four fold, of the nuclei of the adjacent and normal muscle cells. Whilst we affirm that these patches are not the result of pre-existing inflammation, we do not deny that there may be patches of that origin. For you may see in this specimen of the heart of a hog, which died of hog cholera, genuine fibroid patches, along the edges of which genuine granulation tissue is found, and in which there is no disease of the coronary arteries. We cannot, therefore, entirely discard the old view.

Disease of the coronary arteries may produce genuine white infarctions in the heart walls, resembling those found in the kidney and the spleen.

[A specimen was exhibited in which a thrombus had formed in the apex of the left ventricle, a portion breaking off obstructed the anterior coronary artery completely, thus causing anaemia of the wall, coagulation, necrosis, and a white infarction.]

A young man of thirty-five, suffering from transverse myelitis, with paraplegia, paralysis of the bladder and rectum, bedsores developed just before death, fever, irregular pulse, dyspnoea, etc. Post mortem examination showed the muscle walls to be unusually flabby and yellow. The microscope shows the entire heart wall to be diffusely infiltrated with white blood corpuscles. This is a pathological curiosity, a genuine diffuse interstitial myocarditis. Micrococci were found in the sections, but there were no foci of pus in the walls, so that it was not a regular septic suppurative inflammation.

Circumscribed myocarditis is not so rare. In various acute infectious diseases, diphtheria, pneumonia, typhoid, and typhus, there are found in the heart small areas of small celled infiltration. In many of these cases the muscle fibres do not show any degeneration, but often careful search discovers small areas. This circumscribed myocarditis may be the real cause of the heart failure in these diseases.

Fatty degeneration of the heart muscle often occurs in connection with disease of the coronary arteries. This condition is also found in the acute infectious diseases, due to high temperature or other causes. If an animal be put into a box



which is well ventilated, and the air of which is kept at a high temperature, fatty degeneration does not occur, but if the box be ill ventilated, the degeneration is almost constant. Fatty degeneration alone is of but little importance, but if associated with disease of the coronary arteries, the case is altered. Rabbits' hearts had been made fatty by artificial means, but no alteration in function could be made out. It may be, however, that the heart gives way all at once.

The fat is chiefly deposited at the point of junction of the vertical lines with the anisotropic lines.

The best results were to be had by making frozen sections of the fresh heart wall, treating them with osmic acid and mounting them in acidulated glycerine.

Professor Osler related the history of a case of obliterating arteritis of the anterior coronary artery. The patient, a physician, was under his observation for six weeks. He was a large, well-built man, with no history of syphilis. One day when getting into his carriage he was suddenly attacked with slight cardiac distress, but was able to do his work. From that time there was cardiac uneasiness, which in three weeks had increased so as to force him to take to his bed, with extreme dyspnoea, small, weak, irregular and rapid pulse, and slight cyanosis of the finger tips. Death occurred two weeks later.

The autopsy showed complete obliteration of the anterior coronary artery. Fibroid degeneration of the apex of the left ventricle, slight dilatation at that point.

A similar case was that of an idiot aged thirty-six, a powerfully built man, docile and quiet, who, although he had never displayed any heart or lung symptoms, suddenly dropped dead. Autopsy showed complete obliteration of the posterior coronary. Only one branch of the anterior artery, that passing down the interventricular groove, was pervious.

The classical description given in the text books of fatty degeneration of the heart was really that of myocarditis.

#### SYPHILITIC ARTERITIS.

Dr. Graham briefly narrated the history of the case, and the histological appearances of the specimen presented at the November meeting of the Society. The point reserved for discus-

sion was whether it was possible to distinguish histologically the syphilitic from the other varieties of arteritis.

Prof. Osler said that even Heubner himself had receded from the view that syphilitic arteritis had distinctive histological appearances. One cannot with the microscope distinguish syphilitic arteritis from the obliterating arteritis in old people, or that found within the cavities of phthisis. He had never seen obliterating arteritis of the cerebral vessels, with beading, that was not syphilitic. He then exhibited a specimen of genuine syphilitic arteritis associated with a large gummatous growth in the cord.

#### PATHOGENIC GERMS IN DRINKING WATER.

Prof. Vaughan said that as the State University of Michigan was required to examine all samples of suspected food and drink sent by the local health officers, he had from time to time to analyze many samples of drinking water. At first he had been in the habit of reporting, say, that the water was bad chemically, but that it did not contain any pathogenic germs. The effect was bad, for the people continued to use the water, arguing that if there were no pathogenic germs in it the water was fit to use. Of late he had adopted the plan of reporting that the water was chemically bad, and that an injection of so many drops of a culture of the germs contained in the water killed a rabbit. The effect was much more satisfactory.

Usually both a chemical and a bacteriological examination was made of the sample of water. Plate cultures were made, and a report sent of the number of bacteria in a given quantity and of the varieties.

The procedure adopted was to take a cubic centimetre of sterilized beef tea, add to it one drop of the water. Place it in an incubator, where it was kept for 24 hours at the temperature of the body. The whole was then injected into the peritoneal cavity of a rabbit, or if a rat 10 to 20 drops were used. In most cases the animals die within 24 hours. A rat will bear 25 drops of a sterilized solution, while 10 drops of a non-sterilized will kill them. Autopsies are made upon all animals thus killed, and cultures are made from the spleen, liver, and kidneys.

The germs vary in the rapidity with which they kill; one kills in 24 hours, another not for twenty days, producing emaciation, fever, paralysis and

death. This latter germ seems after a while to die, for cultures made from liver, kidney, and other organs, remains sterile.

Some of these germs, though killing rabbits, do not affect man. There is a qualitative as well as a quantitative element in the action of these germs. For instance he had received two samples of water from Grand Rapids, labelled No. 1 and No. 2. No. 1 contained 30,000 germs in a drop; No. 2 contained 120. No. 2 killed rabbits; No. 1 did not. No. 1 was better chemically than No. 2.

The pathological changes produced vary. The germs which killed the rabbits in 20 days produced ulceration of the ascending colon, and of the lower part of the small intestine. Lower 2 or 3 inches of lower part of small intestine were denuded of epithelium.

A case of continued fever was cited in which one after another of the family were taken down until at last five were ill. The only cause which could be found was the use of cistern water for washing the face and teeth, one of the family had used this same water in a nasal douche. The whole family used the city water for drinking purposes. No one was sick in the surrounding families. The cistern water was vile chemically, and contained a great number of germs, and invariably killed the animals. He was not sure that the fever was typhoid; all the cases ran 42 days. Temperature ran high at first, some delirium; no abdominal eruption.

In another instance seven people in neighboring families had continued fever from using the water of a well common to all. The water was very bad chemically. The test for phenol was given by it, showing that it had been contaminated by faecal matter.

Cultures of the various germs spoken of were exhibited.

#### PSEUDO-PATHOLOGICAL CHANGES IN THE PREGNANT UTERUS.

Prof. Minot described the peculiar large triangular cells which have by some been described as characteristic of moles, but which are a normal appearance in the walls of the uterus. As pregnancy begins the uterine glands are elongated and widened; their lining epithelium is thickened and enlarged. Fissures appear, separating the cells. The cells continue to enlarge, separate from each other and from the

uterine wall, and thus are produced the large triangular cells seen in moles. The history of these cells has not been elucidated. They disappear after the 5th or 6th month of pregnancy.

Other changes in the uterine wall and in the fetal portion of the placenta were described, changes which were normal, but which many observers have described as pathological. A knowledge of embryology must precede any attempt to describe uterine pathological changes.

#### CHYLO-THORAX.

The adjourned discussion was opened by Dr. I. H. Cameron, who briefly related the history of the case.

Prof. Welch said that these cases may be divided into two classes: oily hydrops pleurae and chylo-thorax. From the history given he thought that the case was one of chylo-thorax.

There are some eminent authorities who urge that these cannot be cases of chylous effusion, for grape sugar is absent in these chylous effusions, while in chyle it should be present. They also urge that there has never been found any rupture of the vessels.

In spite of these authorities, eminent as they are, it may be accepted that there do occur genuine cases of chylo-thorax. In Whitla's case, Redfern, of Belfast, a most careful anatomist, found rupture of the thoracic duct. Strauss demonstrated in his case, by giving butter, that there was a rupture. The effusion is most often due to obstruction by damming back at the radicles, not of the thoracic duct. It may be due to actual ulceration into the lymphatic vessels, by tubercle, cancer, etc., or there may be lesion of the mediastinal glands.

## Hospital Reports.

### CASE OF PUNCTURED FRACTURE OF THE SKULL—APHASIA—TREPINED—RECOVERY.

(Under the care of I. H. Cameron, M.B., in Toronto General Hospital.)

A. P., aged 11 years, was crossing the Don bridge on the morning of November 25th. He met a companion with whom he had previously had a quarrel, and he at once attacked him. The boy retaliated by striking the patient over the head with a rake, thus inflicting a severe

wound over the left parietal region. The boy wore a hard felt hat at the time, which afforded little protection from the blow. The hat afterwards showed a small hole which had been completely punched out by one of the prongs of the rake.

The case was seen by Dr. Cameron in consultation, on the evening of November 27th. Previous to this Dr. Cleland had treated the wound, syringing it with carbolic acid solution and applying a gauze dressing. Dr. Cameron found a wound about the size of a sixpence near the left parietal prominence, thick pus was oozing from it. There was little swelling or bogginess around the wound, and the discharge from it was not great. There was no motor palsy, the eyes were parallel, the pupils equal; the tongue was protruded straight and readily. He could reply "yes" and "no" appropriately to questions asked; when asked to say anything else he would simply say, ah-ah-ah—yes, and would go through this formula again and again when asked to repeat any word. He could count fingers from one to five. When asked how many fingers on both hands extended before him, he insisted that there were eleven; when asked how many five plus five made, he replied nine, but subsequently said ten. This is curious when considered along with the fact that since his recovery he can count and make such simple additions accurately. Temperature, 100.2°. Pulse, 60. On the day previous the temperature had been slightly over 100°. There had been no vomiting. He attempted to vomit once on the day of the accident, but never since. The symptoms of aphasia did not appear until the second day after the accident.

On the evening of November 29th he was admitted to the hospital.

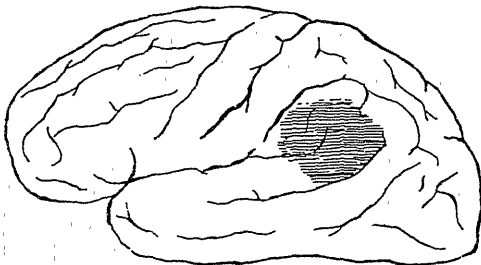
The condition of the patient remained unchanged, except that he apparently became more drowsy, and lay perfectly quiet unless disturbed by someone addressing him. At eight o'clock on the morning of November 30 the temperature was 96°. The operation was performed at 9.30 a.m. An incision was made, beginning one inch behind the scalp wound and carried downwards, forwards and upwards, in the form of a semi-circle, ending one inch in front of the wound, the centre of the incision being three-quarters of an inch below the wound.

The flap thus marked out was dissected up along with the periosteum; the hæmorrhage was checked and the injury to the skull investigated. The dura mater was bare over an area about the size of a three penny bit. The superior margin of the hole in the skull, including a piece of bone about one-half inch square, was depressed; the depressed portion consisted of both tables of the bone. Whilst removing some dirt and debris with the forceps, a few drops of thick pus welled out, it had been confined under some degree of tension; a piece of black cloth one-quarter inch square was extracted from the centre of the wound. On attempting to use the trephine, a portion of the superior margin of the opening in the skull was broken off by the pin of the instrument, and removed; a ragged fragment of bone was removed from beneath the inferior margin by means of dissecting forceps. The dura mater was lacerated, but appeared healthy; the depressed fragment of bone was raised; it was not thought necessary to make a more extensive opening in the skull, as there was an opening of considerable size left, exposing the dura mater, after the depressed portion was elevated, thus free drainage was secured. The parts were thoroughly cleansed with 1-2000 perchloride of mercury. The periosteum was drawn together as far as possible; the edges of the skin flap were united by suture; a drainage tube was inserted through the punctured wound, whose edges had been trimmed. The tube was carried within the dura mater. A Keith's dressing of carbolic and glycerine in absorbent wool was applied after dusting with iodoform; over this a gauze pad and a bandage.

The child's condition since the operation has not presented many points of interest. Occasionally a frontal headache was complained of, and, curiously enough, during these attacks the temperature invariably fell to 97° or even 96°. A dose of calomel followed by a saline purge always relieved the condition. During the third week after the operation he became unable to open his mouth except to a very limited extent, and during his efforts to do so his chin became deflected towards the left; this condition lasted for three or four days and then passed off. The child has otherwise made an uninterrupted recovery, the aphasic symptoms have gradually

passed off, and now he is quite bright and intelligent.

By measurement the centre of the wound was midway between the tip of the mastoid process and the sagittal suture, three and a half inches from each point. It was one and three-quarter inches behind a line drawn vertically through the external auditory meatus, and three inches above a line drawn through the same point. The lines suggested by Dr. Reid afford perhaps the most accurate method of localizing cerebral areas. By this means the superficial wound was judged to be situated over the posterior portion of the inferior parietal lobule, just around the posterior extremity of the horizontal limb of the fissure of Sylvius. The area would in all probability be over the junction of the angular gyrus with the supra marginal convolution, and would involve the posterior extremity of the first temporo-sphenoidal convolution. The accompanying tracing represents the probable areas of the brain upon which pressure was exerted.



Remarks on the case: An interesting point in the case is the peculiar form of aphasia which was developed. Clearly the motor centre for speech was not affected. The boy understood perfectly all that was said to him, and was able to count fingers when asked to do so; there was no defect in articulation at all. The injury was some distance from the motor speech centre (*viz.*, the posterior part of the left lowest frontal convolution and the adjacent part of the ascending frontal convolution), and we would have been surprised had it been involved. The idea of sensory aphasia may be suggested; the region of the hinder part of the parietal lobe is probably, according to Gowers, the seat of the higher visual centre, and transient "mind blindness" may be caused by its disease, *i.e.*, an inability to recognize not only words but objects also. Although the injury was apparently in the position

which would lead us to expect mind blindness, yet the condition was not present; this was evidenced by the fact that the boy was well able to recognize all objects shown him; he could not voluntarily name them, but invariably assented when the proper name was suggested to him, *e.g.*, a knife or a key; further, as already stated, he could count fingers when extended before him. Another form of sensory aphasia is that known as word deafness, due probably to involvement of the first left temporo-sphenoidal convolution. The position of the injury might again suggest this form. There was not complete word deafness, he could answer questions intelligently by "yes" or "no," and was perfectly conscious as to whether an article was named rightly or wrongly by another. Gowers, however, states that in partial word deafness a condition exists in which there is great difficulty in the voluntary revival of words, especially of the more special words, such as nouns, and this sometimes constitutes the sole defect from the beginning. This describes the condition existing in our patient: he could not voluntarily use special words. This has been ascribed to interruption of the conducting path between the auditory and motor centres, and has been referred to cases of disease of the Island of Reil; it has been called "conduction aphasia." It is possible that the prong of the rake penetrated somewhat deeply into the brain substance, and either inflicted direct injury upon the parts through which the conducting fibres run, or by injury to vessels the blood supply to these parts may have been seriously interfered with and their function thus impaired.

## Correspondence.

*Editor of CANADIAN PRACTITIONER.*

SIR,—No doubt very many of your subscribers have had their attention drawn recently to a lecture, by John Marshall, F.R.C.S., of King's College, etc., London, on Cancer, etc., which appeared in the *British Med. Jour.* of Nov. 23, 1889. The principal point of interest in that lecture to me at least, is the suggestion made as to the etiology of cancer—namely, that the new growth is the result of escape of the epithelial

elements from the control of the nerve fibres regulating their life processes.

In connection with this paper, and particularly with the suggestion above, I think the following facts to be worthy of notice.

In the year 1884, Dr. A. B. McCallum, then Fellow in Biology, Toronto University, while working on the problem of nerve terminations in epithelium, was induced to experiment with cancerous growths from human beings, more especially with squamous-celled epitheliomata. As proven by specimens now in his possession, he was then successful in tracing the ultimate nerve fibrils to a termination within separate cells, and even to the nuclei of cells. His work in tracing out the terminations of nerves in the proper cells of the liver was also quite conclusive.

At the meeting of the Ontario Medical Association, in June 1888, Dr. Hugh McCallum, brother of Dr. A. B. McCallum, read a short paper in retrospect of work done, and advances made in physiology for the past year. Amongst other facts he mentioned the discovery of nerve terminations in epithelial cells by his brother, and he said that from this, we might possibly arrive at the causation of cancer, suggesting that the dislocation of nerve terminals from their connection with epithelial cells, might have something to do with the epithelial overgrowth of the carcinomata.

JOHN CAVEN.

### Personal.

THE name of Dr. Price Brown, of Toronto, was inadvertently omitted from our list of the contributors to THE PRACTITIONER for the year 1889, as published in our last issue.

WE are much pleased to know that Dr. T. J. W. Burgess has been appointed medical superintendent of the new Protestant Insane Asylum, of Montreal. Dr. Burgess has been well known as one of the most able and worthy physicians of Ontario. He graduated at the University of Toronto, in 1870, when he was awarded the Starr gold medal, and the University silver medal. After spending three years as surgeon to her Majesty's North American Boundary Commission, he commenced work in an asylum

for insane, as assistant to Dr. Workman, of Toronto. During the last few years he has been in the Hamilton asylum. His many friends will wish him success in his new sphere in Montreal.

## Births, Marriages and Deaths.

### MARRIAGES.

JANSON—ROGERS—At the residence of the bride's father, 107 Avenue Road, Toronto, on the 26th inst., after the Order of the Society of Friends, Dr. Wm. Ianson, of Ottawa, to Sarah R., daughter of Samuel and Achsah Rogers.

SISLEY—MCMILLAN—On Christmas day, at St. James' Square Presbyterian church, by Rev. Dr. Kellogg, O. Sisley, M.D., of Ellesmere (and formerly of Toronto), to Miss Sadie McMillan, of this city.

### DEATHS.

HUNTER.—At Ogden, Utah Territory, Dr. J. B. Hunter, of Detroit, on December 31st, youngest son of the late James Hunter, of Saint George, and brother of Doctor John Hunter, Dovercourt road, Toronto.

## Obituary.

### DR. HORACE P. YEOMANS.

It was a great shock to the many friends of Dr. H. P. Yeomans to hear of his death at his home in Mount Forest, December 22nd, at the age of 49. On the evening of the 19th he was seized with apoplexy, and was never conscious afterwards. He was a graduate in arts and medicine of the University of Queen's College, taking the degree of M.D. in 1863. He was a man of more than ordinary ability, education, and culture, and was highly respected by the profession generally, and greatly loved by those who knew him intimately. He was a member of the Provincial Board of Health since its formation seven years ago.

At Nordhausen, in Prussian Saxony, the municipal authorities, at the suggestion of the district medical officer, require barbers and hairdressers to disinfect their instruments each time they have been used.