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THE
BRITISH AMERICAN JOURNAL
 OF
MEDICAL & PHYSICAL SCIENCE.

EDITED BY

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ART. VI.—CLINICAL REMARKS ON TWO CASES OF TUMOUR OF THE UTERUS COMPLICATING PARTURITION.

By JAMES BOVRELL, M.D., King's College, Toronto,
Junior Physician to the Lying-in Charity.

(Continued from Page 5.)

Those of the second are situated in the substance of the uterus; they always grow towards that surface of its parieties to which they are nearest, but if they happen to be lodged in the centre, it is remarked that they remain much longer stationary than when situated near either surface. They are much more frequently found near the body than the neck of the uterus.

The third class are developed between the internal surface of the proper tissue of the uterus and its living mucous membrane, which then becomes more distinct than in the natural state, by being detached from the subjacent parts—as they increase in size they continue to push this membrane before them, invest themselves in it, and project into the interior of the cavity of the uterus, and sometimes into the vagina. At last they often cease to be in contact with the walls of the uterus, being attached to them only by the investing mucous membrane, which is lengthened out to form a kind of stalk or pedicle. From these he distinguishes true polypi which arise from a morbid condition of the mucous coat of the cavity. Dr. Lever also observes, that “these tumours are generally formed in the cellular membrane, under the peritoneal coat, or between the layers of the proper tissue of the uterus; occasionally, but more rarely, they are generated beneath the mucous lining, and a tumour so formed is generally accompanied by hæmorrhage of a profuse character.” He also notices that in some cases these tumours are projected through the os uteri, and so constitute a variety of uterine polypi.

Having then, perhaps, for too long a time dwelt on the pathology of these growths, I shall now proceed to shew that, besides the dangers subsequent to parturition, arising from inflammation of the uterus, that there also appears to be a decided tendency to hæmorrhage induced, of itself highly dangerous, and affording another reason for the induction of premature labour. Madame Boivin states that the uterus, in the cases under consideration, on some occasions has its parieties thinned, at least on that side opposite the attachment of the tumour. In Dr. Ashwell's fifth case of tumour, it is noticed that *the uterus was found contracted to the size of a foetal head, and that there was no discernible lesion in it. The left parietes had suffered pressure from their proximity to the tumour.* Madame Boivin is the only author that I am aware of who has especially noticed the occurrence of flooding in connexion with tumours. She says—“In cases in which a fibrous tumour co-exists with pregnancy,

the danger is not entirely past upon delivery. In a case which occurred at the Maternité, a fibrous body of large volume, occupying the posterior paries of the uterus prevented this organ from duly contracting after delivery, and the patient died of hæmorrhage.” There is also another case of delivery, under Prof. D'Outrepoint, in which the patient died also of hæmorrhage; in another case by Dehain, the patient died of hæmorrhage unde- livered, just at the moment the practitioner was going to turn, (the shoulder presenting,) and it is supposed that the tumour was the cause of the unfavourable position of the fœtus. We find in several of Dr. Lever's cases that hæmorrhage was a frequent consequence.

Case 13.—The woman had been under his care for some months, with hard tumour accompanied by menorrhagia. She married, and within three months became pregnant; at the fifth month she miscarried, and there was considerable loss of blood. She again conceived, and at the sixth month again miscarried, when the discharge of blood was again inordinate. In case 14, the pressure of the tumour caused deformity in the child, and in this case there was hæmorrhage. In Dr. Ashwell's paper, in vol. 1st of Guy's Reports “on cases of pregnancy complicated with tumours,” case 1st, reported by my fellow student, Mr. Jos. Ridge—At or about the sixth month of pregnancy labour came on with hæmorrhage from the vagina; in an hour a male child was born. In two hours more a second fœtus was expelled, the face lying to the pubis. Dr. Ashwell, in consequence of the delay, introduced his hand and brought away the placenta; expressing his fears for the safety, not because she had lost some blood, but from the collapse into which she was fast sinking. The secale cornutum had been administered, but had failed to induce contraction. In a few hours she died, brandy and ammonia having been largely given without any benefit.

In his second case the hæmorrhage arose from implan- tation of the placenta over the os uteri. In Dr. Ingleby's Illustrations in Midwifery, published in vol. VI. of the Dublin Journal, under article “obliquity of the uterus,” I find the following case:—“About a fortnight prior to delivery, the patient directed my attention to a hard tumour situated on the left side close to the ilium, where it constantly remained. It was slightly moveable, and not unlike a moderately sized foetal head.” There was for some time a doubt as to pregnancy; however, “early in the morning on the 30th January, regular contraction like labour pains came on; after some hours of pain, the foetal head was felt through the membranes, and also a portion of placenta. She was at the seventh month, and had had drainings and hæmorrhage, for which the plug had been used, together with ergot, early in January; the hæmorrhage returning, the membranes were ruptured.

After many strong pains the head slipped down and was expelled; hæmorrhage rendered it necessary to remove the placenta. The flooding continuing, the vagina was plugged; the uterus appeared contracted. These, with the application of heat to the cardia, the low position of the head, and a dose of opium with brandy and ammonia, were promptly given; but notwithstanding all the means that were devised, the pulse at the wrist did not return, the respiration became hurried, insensibility and slight convulsions took place, which shortly ended in death." From the histories of these cases it would appear that the presence of these tumours tend of themselves to produce complications, by causing the malposition of the fœtus or its deformity. 2ndly, That the placenta would seem to be not unfrequently planted over the os uteri. 3rd, That the pressure of the tumour on the uterus causes irregular contractions; and 4th, That hæmorrhage appears to be a frequent accompaniment. As far as I have been able to learn, the occurrence of rupture of the uterus as a consequence of thinning of its walls from pressure of a tumour is of very rare occurrence, and the only case that I have yet been able to find, at all bearing on the question, is that reported by Dr. Beatty, in the 12th vol. of the Dublin Journal. In this case the laceration was found at the neck of the uterus, immediately in the neighbourhood of the promontory of the sacrum, which was unusually prominent and sharp, and on passing the hand through the rent a large quantity of blood was found in the abdomen, among the intestines. In this case, observes Dr. Beatty, "death was the consequence of hæmorrhage into the cavity of peritoneum." He concludes—"The unusual prominence and sharpness of the promontory of the sacrum furnish an example of the readiness with which rupture took place in the case before us. It is easy to conceive how the neck of the uterus must have been compressed against this sharp ridge, whereby an amount of inflammation, capable of altering its texture, would have been excited, which would render the *part thus diseased* unable to bear the distention attendant upon a subsequent labour. It is to be remarked, he also adds, that *two symptoms* mentioned in books, and often present in ruptured uterus, did not accompany this case, viz., a sudden pain and sensation of something giving way within the patient, and a receding of the presenting parts." And Mr. Power, in a paper in the Dublin Journal, on "Detachment of the os uteri," remarks, "That rupture may occur in any order of presentation caused either by violent uterine action in difficult labours, or in cases of pelvic malformation, or from abnormal softening or thinning of the parieties of the womb, predisposing them to laceration; or it may be produced by the hands of unskillful operators." Madame Boivin mentions the case of a labour complicated by fibrous tumour attached to the cervix, in which *rupture of the uterus* and death were occasioned, as recorded briefly by Fabricius Hildanus. Dr. Murphy has published a paper illustrative of cases of rupture where the uterus was atrophied, thinned or softened in texture, but I regret that I have not been able to refer to the article. Duparque quotes a case (as related by Dr. Churchill) of thinning of the uterine walls, softening scirrhus and gangrene. Dr.

Browne in his contributions to the pathology of the uterus gives a case of ruptured uterus, in which "the distance between the pubis and sacral promontory was less than usual, so that the passage of the hand was prevented." She had been fully 36 hours in labour, when she complained of soreness near the pubis, with vomiting and slight hæmorrhage." Dr. Churchill says—"some of the tissues of the uterus may give way previous to or during labour, perhaps from previous disease, or some peculiarity of structure." &c. The edges of the rent exhibit marks of disease, the tissue is thinned, softened and pulpy, breaking down *easily under the finger*. Dr. Collins observes, that in these cases the pains are frequently weak. In the case of Mrs. Proudlow, now more immediately the object of our remarks, neither my excellent friend Dr. Hodder, nor myself, anticipated, from the condition of the patient in the first part of her labour, any serious results; there was no sudden accession of pain, and although the pains were very short and tedious, yet from the great capacity of the pelvis, advance of the head was very perceptible. In consequence of the pressure of the tumour on the body of the child, the necessary or usual turn of the shoulders into the antero-posterior diameter was not effected, and as there had been no pain since the birth of the head of the child for at least forty minutes, I passed my finger into the axilla nearest the perinæum, and dropped the shoulder, when the uterus seemed to contract, and the fœtus and placenta came together, followed by frightful hæmorrhage.

My reasons for interfering at the time I did, was in consequence of an observation of Mrs. Buchanan, Matron—that the patient's forehead and face was breaking out in a cold sweat. On examining the pulse, it was found to have become small and quick; there being, however, no external hæmorrhage; and the patient, who was repeatedly asked how she felt, making no complaint either of faintness or suffering, we did not wish, previously to Mrs. Buchanan's remark, to interrupt the natural efforts, lest we should, by meddling midwifery, cause mischief. It may be urged by some, that delivery in this case ought to have been effected at an earlier period, and that we should not have suffered the head of the child to have remained so long encircled by the vulva. In answer I would ask you to recollect the position of the child; instead of the largest measurement of the fœtus occupying the longest of the pelvic outlet, we had the reverse, rendering a delay in extraction unavoidable; that the weight of a large tumour pressing on the body of the child hindered free evolution; recollect the fact, also, that our patient laboured under a disease highly susceptible of inflammatory action, and one too likely to interfere with the due contraction of the uterus. From these considerations we were induced to leave the delivery, as long time as possible, to natural efforts, which in so short a space of time had done so much, for our patient had not been in labour more than three hours altogether, and there were no indications of danger anterior to the time at which we brought down the arm. Knowing also that the fœtus was dead, and that there *had been no return of the uterine contractions* since the birth of the head, we considered it a safer practice not to

drag away rudely the child, lest, by the non-contraction, hæmorrhage should follow. So far from feeling any regret at not having delivered earlier, I rather wish that the infant had been left longer in the passages, for so long as it remained there, it effectually plugged the uterus and vagina, and thus restrained the hæmorrhage. The body of the fœtus, by exercising pressure on the large sinus passing down into the ruptured neck, prevented flooding so long as it remained.

From all the considerations we have been enabled to give to the case, I arrive at the conclusion that death was caused immediately by rupture of a large venous sinus, laid open by the breaking up of the softened and thinned structure of the neck of the uterus, and that the hæmorrhage was restrained by the pressure of the fœtus, the alarming and fatal outpouring of blood being instantaneous with removal of the child. That the non-contraction of the uterus was caused by the pressure of a large tumour, which must have interfered materially with the uterine action.

That the tumour, by pressure on the walls of the uterus, caused such thinning and softening of structure, that the passage of the child's head was sufficient to tear and break up the part.

In concluding these already lengthy remarks, I hope that we neglected nothing by which the woman's life may have been saved; cases like this are distressing enough, for it is a fearful sight to stand by and witness the bleeding death of a fellow creature.

I feel impelled, not by a sense of duty alone, but from an earnest feeling of regard, to give utterance to that gratitude and thankfulness due to my friend and colleague, Dr. Hodder, for the ready, prompt and efficient assistance which a naturally strong intellect and well disciplined mind invariably give in moments of danger.

Since the foregoing observations were made, we have had another opportunity of witnessing the injurious effects which tumours exercise in parturient women, and certainly experience would seem to warrant the adoption of Dr. Churchill's advice to induce premature labour even in those cases where their size is small. Prof. Herrick has also had a case in which he detected the tumour before delivery; the woman, however, passed from his care, and he has heard of the fatal termination of the case by flooding. The following case, reported by Mr. McClean, is, I think, interesting, inasmuch as it shews that the uterus may become seriously implicated.

CASE 2.—*Small hard tumour of anterior portion of uterus, near the fundus—Irregular contraction of uterus—Placenta retained by hour-glass contraction—Metritis—Death on eighth day after delivery.*—Reported by Mr. McClean.—Mrs. Bell, æt. 22 years, the mother of one child, dark hair and eyes, melancholic temperament, admitted into the Lying-in Charity as a patient, on Friday, 23d of February. On the following morning she was taken in labour, and at 9 o'clock, A.M., she was visited by Dr. Bovell, who found the os uteri occupying a position very high in the pelvis, having thin unyielding edges, and just large enough to admit the end of the index finger of left hand; 10 grs. of Pulv. Doveri were given at 10 o'clock; the labour,

which had been going on steadily, dilated the os to about the size of a quarter dollar; but it was also noticed that the uterus was contracting irregularly, the fundus acting while the body and neck were flaccid, so that the ring of the os is felt in the centre of flabby non-contracted tissue during the presence of pains; she had Tr. Opii. M. xl. At 5 o'clock, P. M., the state of parts was considerably changed, the os having more freely dilated, and the head of the fœtus fully engaging the cavity of the pelvis with the descended uterus. The bladder not having been very lately emptied, and the desire to pass water existing, but the pressure of the head of the child against the urethra preventing it, the catheter was introduced, and drew off less than half a pint of clear healthy urine, which flowed in a full stream through the instrument. The vagina was perfectly moist, not too hot, and dilatable. At 6 o'clock, P.M., everything promising a safe termination of the case, and Dr. Bovell being very unwell, the patient was left in charge of a pupil, Mr. McClean, with the request to send for the Doctor should the least indication of anything wrong present itself. At 11 o'clock, P. M., the pains were weaker, and the head was distending the perineum. At 12 o'clock, alarming symptoms of prostration having set in, Dr. Bovell was sent for, and arriving at about a quarter to one o'clock, accompanied by Dr. Herrick, found that the patient had been just delivered by the short forceps. The matron states that the head of the child partially protruded at each pain, and that momentarily expecting the birth of the infant, it was not thought necessary to send for the medical attendant earlier. The patient was cheerful, though evidently nervous and weak. The placenta not having come away, Prof. Herrick made an examination, and found the uterus in a state of hour-glass contraction; 40 minims of Tinc. Opii. were administered. After a lapse of nearly two hours (cautious attempts being made to dilate the stricture) the uterus suddenly relaxed, and the placenta was removed, no hæmorrhage following, as it contracted firmly almost immediately again.

Sunday, 25th; 10 o'clock, A. M.—The patient has not yet recovered from "the nervous shock;" pulse small, 50; tongue clammy; has slept a little since 4 o'clock, her rest being disturbed by the cries of another woman in labour; eyes languid, pupils dilated; temperature of body very good; feels uneasy in the uterine tumour, particularly if pressure is made; has passed water freely. She was ordered

Pulv. Opii, gr. ½
Pulv. Doveri, gr. v statum.

And warm turpentine fomentations over abdomen.

At evening visit the tenderness of the abdomen had decidedly increased, the bowels moved once, and urine passed freely; the pulse was 120, and small; not much thirst.

℞ Pulv. Opii gr. j.
Hydr. Submur., gr. ij. ft. P.
One every second hour.

26th; 9 o'clock, A. M.—Has had a restless night; abdomen tympanitic, and painful on pressure, espe-

cially over the pubic region. An enema administered last night was returned, bringing with it some loose feculent matter, and attended by the expulsion of flatus; tongue moist; has passed urine freely; temperature of body good; and there has been no coldness of the extremities. Pulse 120, small.

Cont. Pulv., as before,
adding Acet. Plumbi, gr. ij.

and to have Spirit Terebinth M. x x in a little Mist.
Acaciæ; between each dose of the Powders.

27th. Patient visited by Prof. Herrick; has had a little sleep; bowels moved four times; passes air from bowels. Is very low; intellect clear. Tympanitis still great, but the abdomen is softer than heretofore, and the respiration is freer and more tranquil; she can turn herself in bed without pain. Pulse 110. Tongue coated with a whitish fur; gums slightly affected.

℞ Tinct. Assafœtid, M. xvij.
— Opii, M. vij.
Mist. Acaciæ, ℥ss.

ft. Hst. every 2nd hour.

Omit the turpentine lomentations, in consequence of the abdomen being much blistered by its use. To have beef tea and wine.

28th. Continues much in the same state, and with the exception of a softer feel of the abdomen, does not seem to mend: she takes her port wine in arrowroot, with some relish. Bowels rather irritable; omit Hydr. submur.; continue the assafœtid. To go on with wine and beef tea.

March 1st.—Is very low; pulse 100 small; abdomen still much distended with air, bowels irritable, tongue loaded with a thick white fur; has passed water freely; discharge from vagina of a reddish brown colour, of not very offensive smell; is bathed in a profuse but warm perspiration; no pain or pressure anywhere; respiration hurried.

Continue wine and assafœtid.

March 2nd.—Had some sleep last night, but was delirious at intervals. The tympanitic state of the abdomen has lessened very much; countenance sunk, but the expression of the eye is brighter, decubitus on right side breathing more tranquil than yesterday; bowels have been moved twice through the night; has passed water. Pulse steady, small, and at 80 beats; intellect clear, answering questions correctly, although the voice is only a whisper. No pain on pressure of the belly; has taken $\frac{3}{4}$ of a pint of wine in the night; temperature of body good; discharge from vagina of a heavier smell. Is exceedingly low. Dr. Scott suggested—

℞ Mist. Camph. ℥vj.
Carb. Ammon. ʒj.
Ol. Cinnam. In vj. ft. Mist.

A tablespoonful every second hour.

March 3rd. Has had some quiet sleep through the night; was obliged to have recourse to the assafœtida draughts again, and to enema assafœtid, as the tympanitis had returned, causing much distress; asks to be turned on her left side, and to have a cup of tea and fresh egg; has taken wine freely; bowels not

irritable; heat of skin not high; tongue coated but moist. Dr. Hodder also visits the patient. A further detailed report is useless. The poor woman gradually became weaker, and sunk on the eighth day after her confinement.

Post Mortem six hours after death.—The abdominal cavity being opened, the peritoneum was found in a healthy state, even that portion reflected over the uterus; the intestines were filled with air, contained but very little secretion of mucus or fecal matter, but exhibited no marks of organic change; the uterus was contracted, and bore no external traces of disease, except on its right corner, where a fibrous tumour about the size of a small walnut, and becoming pedunculated, existed. On removing the vulva, vagina, bladder, uterus and rectum, we were enabled to examine the whole of the pelvic viscera minutely; on separating the vulva and slitting up the vagina and uterus, the whole passage presented one continuous sheet of sphacelus, extending through the mucus membrane, and in some places into the muscular structure; running immediately at the base of the tumour, and indeed supplying it with blood, we found a vein about the size of a goose quill containing a dark green coagulum—the tumour itself near its base was inflamed—the bladder was perfectly healthy, as was also the rectum.

REMARKS.—This case affords another instance of the injury resulting from the existence of tumours of the uterus, and exemplifying Dr. Churchill's opinion, that even in small tumours premature labour ought to be induced.

There can, I think, be little doubt but that the whole source of mischief arose from inflammatory action commencing in the tumour, and extending rapidly to the uterus and vagina.

It should have been stated that small quantities of tepid water were frequently and carefully injected into the vagina, with a view of removing the irritating discharge, which was, however, never in great quantity, nor very offensive. I am afraid that I have already trespassed too long on your valuable pages; I shall therefore conclude, trusting that you will receive this communication as an earnest of my sincere desire to contribute my mite of support to our only Canadian Medical Journal.

ART. VII.—FURTHER OBSERVATIONS ON THE TREATMENT OF CHRONIC INFLAMMATION OF THE BLADDER, BY INJECTIONS OF NITRATE OF SILVER, WITH CASES.

By ROBERT L. MACDONNELL, M. D.

Licentiate of the King and Queen's College of Physicians, and of the Royal College of Surgeons, Ireland; Physician to the Montreal General Hospital, Lecturer on the Institutes of Medicine, University of McGill College.

In a paper, published in the Third Volume of this Journal, I drew the attention of surgeons, to the great utility of *Injections of nitrate of silver into the bladder, in chronic inflammation of that organ*; and, in support of my views, I adduced some remarkable instances of their successful employment, which had occurred both in my private and hospital practice. It is

with the hope of placing this method of treating a disease, hitherto considered incurable, which one of the most eminent surgeons in the world—Sir Benjamin Brodie—considers the “opprobrium of Surgery,” and says, “there is no disease for which an improved method of treatment is more wanted,” in that position in surgery, which, I feel convinced, it deserves to occupy, that I have laid the following cases before the profession.

Since my first paper was published, I have cured a great number of persons affected with this disease, but I have selected the following cases from amongst them, because, in them, the cure was *solely effected by the injections*, whereas, in some of the others, general treatment was likewise employed; and in some, the affection of the bladder, was complicated with organic change of the prostrate gland, with strictures of the urethra, and, in one instance, with urinary fistulæ and strictures—complications requiring special treatment, and which, some might suppose, assisted in relieving the affection of the bladder; although, I am quite satisfied, the cures of the vesical inflammation, were due to the injections alone. I have also omitted some mild cases of the disease, because, as stated in my former paper, they might have been cured by remedies, generally known to surgeons, and, therefore, are not so valuable, as evidence in favor of the method by injections. But, my principal reason for selecting the following examples is, that we have in them, unquestionable testimony of the utility of the practice I advocate—for in all, general treatment and the usual remedies *had been carefully and perseveringly employed, without success; and in one, the age of the patient, and the duration of the disease, were most unfavourable for testing the merits of the treatment, yet in all, the cure was complete and permanent.*

CASE I.—Mr. —, aged 33, had several attacks of gonorrhœa which had been cured in the usual manner, and had caused him very little anxiety, except the last one, which was contracted in April, 1848, and was soon followed by symptoms indicating inflammation of the bladder. For the latter affection he had been under the care of a surgeon of this city, from May till September 27th, when he consulted me. He then complained of being obliged to make water almost every ten or fifteen minutes during the day, and between twenty and thirty times during the night, accompanied by pain and heat about the region of the bladder, scalding along the urethra, particularly as the last drops were passing. The urine was usually expelled in a jet, and, when allowed to remain at rest, it threw down a copious deposit of pus and blood, and some flakes of lymph; no discharge from the urethra. He had lost flesh and strength, and had become dispirited and extremely irritable, and his countenance was haggard and anxious. Tongue clean,—appetite good,—bowels regular,—pulse 80, small and weak,—no headache. The sleep being so frequently disturbed by the necessity of emptying the bladder, he rises in the morning languid and exhausted. In order to ascertain the condition of the urethra, a No. 11 (Weiss) bougie was passed, and met with no obstruction, nor was any pain complained of, except as it was passing over the neck

of the bladder. The deposit thrown down by the urine was examined under the microscope, and found to be composed of pus and blood globules, epithelial scales, and some crystals of triple phosphate. He was ordered Dover's powder at night.

Sept. 28, 6 o'clock, P.M.—He states that since yesterday he passed water about fifty times. At six o'clock, P.M., I injected the bladder with a solution of nitrate of silver, containing two grains to the ounce, which caused very little pain. Ordered him to take Dover's powder at night, a warm bath immediately, and to drink plentifully of weak tea.

Sept. 29, 1 o'clock, P.M.—Pain ceased immediately on his entering the bath. He has passed water only four times since six o'clock yesterday, and the evacuation of the bladder is not accompanied by pain or scalding, and the pain above the pubis and in the perinæum has completely disappeared. In all other respects he feels much better, and the countenance has lost the haggard appearance it had latterly assumed. The urine is now clear and devoid of sediment. Barley-water for drink, and warm bath at bed time. Six o'clock, P.M.—Passed water only once since last report, and even then he did so from a feeling that it was not right to allow the bladder to remain distended, and not from a desire to empty it.

Sept. 30.—Passed water only once between ten o'clock last night and eight this morning.

Oct. 1.—Within the last twenty-four hours has made water only three times.

Oct. 2.—Injected the bladder again to-day with a solution of the same strength, which gave scarcely any uneasiness.

Oct. 6.—No return of the malady. He can now keep his water for six or seven hours, and it is quite clear and free from any pus or blood globules when examined under the microscope.

I have seen this gentleman very lately, and he assures me he has not had the least return of his complaint, although he has imprudently exposed himself to wet, and severe cold on many occasions since I ceased to attend him.

The following case has been transmitted to me by Dr. Shewbridge Connor, Physician to the Fever Hospital, Carlow, one of the most eminent practitioners of Ireland, whose testimony must be considered as highly valuable:—

“CASE II.—I attended Mr. —, a respectable farmer some miles from this, whilst he was laboring under fever, complicated with bronchitis. When convalescent, he informed me that “for years he was obliged to empty his bladder oftener than any one else.” He could not drive a mile without stopping several times; he said that occasionally he passed whitish-looking matter. Warm baths, buchu, and the other usual remedies were prescribed by me without much effect, perhaps partly in consequence of his persisting to superintend his farm-work in cold, damp weather.

“In October, late one evening, he sent for me, and begged me to bring something to relieve him, as he was obliged to be up every minute, and was suffering intensely

all the time. Fortunately, I had read some days previously your paper (*Dublin Medical Press*, Oct. 6, 1847) on "Injections of Nitrate of Silver in Chronic Inflammation of the Bladder." No practitioner that I have met, had or has tried it, but aware of the power of the medicine in other inflammations, I had no hesitation in acting on your suggestion, and accordingly injected five grains of nitrate of silver, two drachms of tincture of hyoscyamus, and four ounces of distilled water. The instrument was clumsy and not suitable,—a small brass enema syringe, connected by a piece of bladder with the end of a gum elastic catheter. At the moment I could not get a glass syringe. Taking care that the nitrate of silver should remain only a moment in the syringe, I injected it, and compressed the catheter for about a minute or so to prevent the patient instantly discharging it, which he had a great desire to do. I then withdrew the catheter and left him for the night, having ordered (needlessly, perhaps,) flannels wrung out of hot water, to be applied for some time to the pubic region. Next day, he informed me that he had slept well, and had no occasion to get up for six hours. I pass his door and meet him once a week at least, and he has never mentioned the subject unless when asked about it, though, at times, he feels a return of his complaint, which is so trifling, however, that he does not like *troubling* the Doctor. The long-suffering of the farmer class, when a Doctor is to be consulted, is most remarkable in this part of the world.

"Mr. — now travels far by railway—not a very pleasant conveyance for a man with irritable bladder."

SHEWBRIDGE CONNOR, M.D.,
Co. Fever Hospital, Carlow.

CASE III.—Mr. —, aged 64, of stout plethoric habit, contracted gonorrhœa about thirty years ago, and since then has suffered from the following symptoms:—Pain along the course of the urethra, after sexual intercourse, and after passing water,—great pain over the region of the bladder and in the perinæum,—urine passed every half hour and sometimes much oftener. The urine was always fetid, turbid, and threw down a copious deposit of pus, blood, flakes of lymph, and mucus. At various times, his sufferings have been so great as to keep him confined to bed for months, and he has frequently been attacked with spasmodic stricture, causing retention of urine. According to his own statement, he has consulted medical men in almost every city in North America; for, being the proprietor of a public exhibition, he has visited the principal cities frequently during the last nine or ten years. He has also passed through the hands of numerous quacks and charlatans. He appears to have derived most benefit from the services of a surgeon in Richmond, N. Y., who advised him to use capsules of balsam of copaiba, which he thinks have kept the disease in abeyance, more than any other treatment. In 1846, he applied to a surgeon in this city who gave him buchu and other remedies without any benefit. Between 1846 and 1848 he consulted some eminent practitioners in Philadelphia, but deriving no relief from their remedies, he began, as he says, "to doctor himself with medicine similar to what he got in Richmond, which gave him temporary relief."

Sept. 12, 1848.—He consulted me, and in addition to

the foregoing symptoms, he complained of pain when he sat down suddenly, but had none on going to stool. The pain on pressure over the bladder was very great, but he had no pain shooting along the course of the ureters or to the kidneys; never passed any calculi. A No. 9 (Weiss) bougie was introduced into the bladder without any difficulty, except near the neck of the bladder, where the passage of it caused some pain. No. 10 and No. 11 passed with equal ease. The urine voided during the visit was examined, and found to contain a large deposit of pus and blood globules, flakes of epithelium and crystals of triple phosphate; and, on being tested, the supernatant fluid was found to be highly albuminous. It was also much more fetid than I have generally found the recently evacuated urine to be—even in similar cases. He was ordered to take that night, a draught composed of spirits of camphor, sweet spirits of nitre, and tincture of hyoscyamus, and the next morning the bladder was injected with a solution of nitrate of silver, two grains to the ounce; and he was advised to take a warm bath and to drink plentifully of barley-water.

Sept. 14.—For a few hours after the injection, he was obliged to empty the bladder every half hour—but towards morning, he could retain his urine for two hours and a half at a time. The smarting pain in the region of the bladder is much relieved; no pain over the pubis or in the perinæum. Continue medicines.

Sept. 15.—Last night, the weather becoming suddenly very cold, he made water more frequently than he had done during the day, but it was quite free from odour, and presented a healthy appearance. Continue medicines.

Sept. 20.—Injected the bladder again to-day, with a solution of four grains to the ounce.

Sept. 25.—Injected bladder again, with a solution of the same strength as the last.

Sept. 30.—Injected solution, five grains to the ounce.

Oct. 3.—Repeated the injection. He can now retain his water for six hours at a time, and it is quite free from offensive odour, and clear.

Oct. 6.—Injected again.

Oct. 9.—Injected a solution of the same strength. He can now retain his urine for seven or eight hours at a time, and, in short, feels no inconvenience from his old complaint.

This gentleman, who had passed several years in a warm climate, spent all last winter in Montreal, which was one of the most severe and coldest that has been for several years, yet he went out almost every day, and did not experience the least relapse, nor does he now, May 20, suffer from the least symptom of the excruciating and exhausting disease he labored under, for so many years, and which he had believed to be perfectly incurable.

CASE IV.—Dr. —, aged 30, in the active practice of his profession, in the Eastern Townships, consulted me for a severe attack of chronic cystitis, which he had ineffectually attempted to cure by the usual remedies, and for which he had been under the treatment of a physician of this city, for nearly three months, without deriving much benefit. He stated,

that having been exposed to severe cold and wet, during a long drive in the autumn, he remarked, on reaching home, that he had some pain in making water, and heat and scalding along the urethra. Of this he took little notice at the time, but the same symptoms continued unrelieved by the remedies he employed, and were soon attended by an urgent desire to empty the bladder almost every hour; the urine was passed in jets, and of a turbid whitish color, throwing down a copious deposit of pus and blood when it had lain in repose for a short time, and he was affected with severe pain over the region of the bladder and in the perinæum, at times, which amounted to agony when riding on horseback, in the performance of his professional duties. He had latterly begun to lose flesh, and irritability of the mucous membrane of the intestinal canal, marked by frequently returning attacks of diarrhœa, added much to his sufferings. When he consulted me, he was much emaciated, the countenance wore a haggard and anxious expression; the pulse was small and quick; skin harsh and dry; tongue dry, red, and chapped; appetite bad; vomiting frequent, scarcely any food remaining on the stomach, except oatmeal porridge; bowels sometimes confined, but more frequently loose; sleep greatly disturbed by the necessity of frequently emptying the bladder; and his spirits, which before were good, were low and desponding. He was obliged to pass water almost every half hour, and when examined under the microscope, the deposit presented precisely the same appearances that were discovered in the foregoing cases.

I ordered him a combination of mercury with chalk, rhubarb, extract of henbane, and acetate of morphia, all in small doses, to allay the intestinal irritation, and four ounces of distilled water, holding in solution eight grains of nitrate of silver, were injected into the bladder—and he was advised to take a warm bath immediately after the operation. The next day he felt much better, and the improvement continuing, he was not obliged to have the injection repeated. I again saw him last January, nine months after the operation, when he appeared much improved, had gained flesh and strength, and had not the least return of his former malady. I had written to him a few days before his arrival in town, and in reply, I received the following note—

January 10, 1849.

MY DEAR DOCTOR,—Your note was received, but not so soon as it should have been, owing to some neglect of the Post Office. I am happy to comply with your request, to furnish replies to your queries, as to my own case of cystitis. The disease has not returned, nor has it troubled me in the least, since I recovered from the first attack. I did not feel any inconvenience from the injection of the nitrate of silver into the bladder. I am happy to say, I never witnessed a more perfect cure than in my own case.

I remain, my Dear Doctor,
Yours, &c.

R. L. McDonnell, M.D.

As the foregoing cases may meet the eye of some practitioner who has not seen my former paper on this subject, I shall make no apology for introducing here the directions laid down in it for injecting the bladder:—“The patient being placed either in the erect posi-

tion or on a sofa, a gum elastic catheter, about the size of No. 9 or 10 (Weiss), is introduced, and water at the temperature of 98° Fahr., is injected through this into the bladder, by means of a caoutchouc bag, or what I prefer, a syringe, with a “three-way valve,” by which the fluid can be drawn back from the cavity if necessary. After the bladder has been completely cleansed of any fetid urine and mucus which may be contained in it, the solution of the caustic, being heated to the same degree, is to be introduced in a similar manner, and allowed to remain there for about one minute, care being taken, by compressing the urethra, to prevent its being forcibly ejected by the violent straining that is certain to be induced. The quantity of water or solution should never exceed four ounces, for though the bladder in its healthy state is capable of containing nearly a pint and a half of urine, without being over distended, yet as the quantity it is capable of retaining in severe chronic inflammation seldom exceeds a few tablespoonsful, the bladder accommodates itself to its diminished contents, and gradually becomes smaller, and consequently a large injection would act injuriously in two ways—by over-distending the organ, or by passing up into the ureters. In fact, we find it unnecessary to use a larger quantity of the solution than I have mentioned, for it requires some address to introduce even that amount without resorting to force. The patient is then ordered a warm bath, and should the urine become bloody or mixed with shreddy concretions, he should use frequent fomentations and anodynes. But these symptoms seldom last for more than a few hours, and our patient should always be informed that such consequences are likely to be the immediate effects of the operation.”

The strength of the injection has seldom to be increased beyond five grains to the ounce, although in one instance, that of an old gentleman, aged seventy-two, I had to increase the strength *gradually* to ten grains to the ounce before a satisfactory effect was produced. It is, however, always better to commence with a weak solution, which may be made stronger, according to the circumstances of each case, and the judgment of the practitioner. Some of my patients have hesitated about undergoing treatment by injections, in consequence of their advanced age, but though the disease is not in such cases so easily cured, as in the young subject, it is still in the great majority of instances remediable by the same means, as was proved by the great relief obtained by a patient aged *seventy-six*, who was under my care in the Montreal General Hospital, within the last month, into whose bladder I injected, on two occasions, a solution of nitrate of silver, two grains to the ounce. He left the Hospital of his own accord, May 23, quite free from his former complaint.

The Surgeon should, in fact, show his patient that all general treatment and local remedies having failed, he has only two alternatives to choose between—a life of misery and suffering, a burthen to himself, and incapable for the enjoyment of society, or the performance of business—and submission to a plan of treatment, which has been eminently successful in cases equally protracted

and aggravated as his own, and in patients equally old and infirm, and who like him had spent time and money, and exhausted their patience, in unessuctual efforts to get rid of a disease so formidable, so excrementing, and so disgusting to themselves and others, as Chronic Inflammation of the Bladder.

Montreal, May, 1849.

ART. VIII.—GLONOINE.

By T. S. HUNT, Esq.

It is now more than two years since M. Lobrero first announced the discovery of this body by the action of nitro-sulphuric acid upon glycyrrine.* When a mixture of two volumes of sulphuric acid, sp. gr. 1.83, and one of nitric acid, sp. g. 1.43, is surrounded by a freezing mixture, and syrupy glycyrrine is slowly added, with constant agitation, to prevent an elevation of temperature, it dissolves without any escape of gas. From this solution, water precipitates the new compound in the form of a heavy yellow oil, which may be washed without loss, as it is quite insoluble in water. By solution in alcohol and precipitation by water, it is obtained quite pure, with the exception of a little moisture, which may be removed by exposing it *in ovens*, over sulphuric acid. It is inodorous, but sweet, pungent, and aromatic to the taste. The smallest portion placed upon the tongue was found to produce a violent headache, and the discoverer recommends the greatest care in its preparation. He did not submit it to analysis, but from the mode of its formation, it is probably a nitric species of glycyrrine.

The physiological action of this substance is most extraordinary. The observations of M. Lobrero having attracted the attention of Dr. Hering, of Philadelphia, he, with some other medical gentlemen of that city, have made a series of experiments with it upon man and the lower animals.† As the discoverer had not named the new body, Dr. Hering, regarding it as a compound of oxyd of glycol with nitrous acid, proposed for it the name of *glonoine*, from the symbols of these substances, with the termination *ine*; this is objectionable, as tending, from a similarity of termination, to confound it with the alkaloids, but may serve until further investigation shall have determined its composition and its real nature.

When taken in small doses, its effect is an almost immediate acceleration of the pulse, with giddiness, and a sense of fulness and pressure in the frontal region, followed by a severe headache, which is often confined to the coronal region, sometimes to one side of the head, and is attended with twitchings of the muscles of the face, throbbing of the temporal arteries, sometimes a difficulty in articulation. The pain is greatly aggravated by motion, and, on shaking the head, is almost intolerable. These symptoms subside spontaneously in a short time, and are often

succeeded by a diminished pulse, or feeling of soreness and heaviness about the head.

The most extraordinary feature connected with these observations is, the very minute quantity required to produce the effects described. In the experiments of Dr. Hering, one drop of the glonoine was placed in a bottle, to which 5000 globules of milk-sugar were added, and by agitation the whole were impregnated. The number of these globules required to produce the symptoms above described, is from 5 to 20, 50, and, in some individuals, 200. The majority of persons experience the symptoms in a marked degree, after having taken $20 = \frac{1}{250}$ th of a grain, and many susceptible subjects are painfully affected by $5 = \frac{1}{1000}$ th of a grain. The lower animals are less sensible to its action; ten drops were required to destroy a frog; four drops given to a cat produced convulsions, but the animal recovered; another cat was killed by three drops. The strongest dose taken by a man has been $\frac{1}{10}$ th of a drop. Common coffee is found to be an antidote to the unpleasant effects of an overdose.

A substance of such unexampled potency in its action upon the human system, will probably be found useful in the treatment of disease, and Dr. Hering, with several others, is at present occupied in proving it by a careful examination of the various symptoms produced by it, under different circumstances, and in different doses.

Montreal, May, 1849.

ART. IX.—TRANSATLANTIC CORRESPONDENCE.

By WM. WRIGHT, M.D.,

Licentiate of the Royal College of Surgeons, Edinburgh.

(Continued from Page 322, Vol. 4.)

Some of the following cases, which necessarily are mere sketches, present interesting features from their nature; while others are rendered interesting by their treatment:

Fracture of Patella—Treatment—Erysipelas of Face and Scalp—Treatment—Acute Synovitis.—A middle-aged man was admitted for a transverse fracture of the left patella; the broken parts were kept in apposition by keeping the leg extended by a splint of gutta percha along the ham, the heel elevated, and a retentive shield of gutta percha over the knee, with an aperture in it sufficiently large to receive the sound patella. This was moulded to the joint when soft, and the part of the broken patella apposed were extended through the opening; it soon hardened, and when retained *in situ* by a few turns of a roller, with which the leg was encircled, admirably answered the desired end—contact of the broken surfaces. Very soon after, erysipelas attacked his face and scalp, which was treated locally by removing the hair and enveloping the parts with carded cotton—a procedure highly esteemed by Dr. Flemming, and always practised by him; one of its advantages being the avoidance of the meningeal metastasis that sometimes follows repellent applications. On the gradual declension of this affection, the leg, knee, previously painless and comfortable, suddenly

*Chem. Gazette, May, 1847, from Compt. Rend, Feb. 17, 1847.

†See the *American Journal of Homeopathy*, for May, 1849 from which, in part, the following details are taken.

became hot, painful, and soon after swollen. The system hitherto convalescent was now feverish, and all the marks of acute synovitis were present. The fracture apparatus had to be removed, and the parts of the bone apposed for a fortnight, again separated widely from each other. Leeches and fomentations were applied—calomel and opium administered, but the swelling increased, the regularity of its characteristic spheroidal form being interrupted by a large protrusion where the knee pan should have been. When I last saw the man, his intellect was cloudy, his strength failing, his fever irritative, and pus, it was feared, filled the joint.

Carbuncle of great size—Efficacy of ordinary Treatment.—An elderly man had over his right scapula a tumour the size of a saucer; it was excruciatingly painful, and the color of port wine. Some scratches had been made in it by a Surgeon, through which serous pus exuded. He had several small boils over his body, and the general symptoms were those of irritation; a crucial incision was made completely through it, giving outlet to much pus, with some blood; ordered a quart of porter daily, and a yeast poultice to the part. A great amount of discharge with debris of cellular substance subsequently followed, and the patient was steadily improving in part and system when last seen.

Disease of the Clavicle—Fracture of the Humerus not traceable by the patient to any cause: To what is it due?—Treatment.—Aged 22—has an ulcer the size of a shilling over the left clavicle's centre, which is evidently enlarged; several osseous particles have separated and been removed; before its appearance he had been struck on this spot on his right arm. Near the insertion of the deltoid is a tumour comparatively soft, not bulky, and connected with the humerus; the parts above and below it move independently of each other. When the shoulder is fixed and the elbow rotated, crepitus can be both felt and heard; he can move the limb backward or forward, but not horizontally. There is no perceptible shortening. He affirms that it came on of its own accord, and that the part never received any violence; his attention was first directed to it three or four months ago, by feeling it weak, and by an incapability of working effectually or powerfully with it. Soon after, while endeavoring to raise a weight, he had to desist; and ever since can only perform the to and fro movement above mentioned. Three years ago he had chancres. He never was salivated or took mercury. He bears none of the common evidences of present or past consecutive syphilis. His diathesis is strumous. At a consultation of the medical attendants he was introduced as a curiosity. The tumour was considered a reparative mass, and the fracture a result of softening and caries of the humerus, not unlikely of a struma-syphilitic nature. Treatment to be the maintenance of perfect apposition and immobility, by gutta percha bandages and splints. Full diet, porter, cod liver oil, tonics, iodine, was proposed and opposed. Mercury was proposed and opposed. Iodid mercury was suggested by one, and Donovan's solution by another.

Molluscum—Analogy of one Tumour to a Neuroma—

Treatment.—An adult female has on the centre of the front of her left forearm, rather more outwardly than inwardly, a tumour the size of half a walnut, of moderate firmness, unfluctuating, without discoloration of the skin and very painful upon the slightest pressure. The pain is of a pricking character, not intermittent, and extends up and down the radial nerve; occasionally she feels the thumb benumbed. In several other parts, as the arm and shoulder of the same side, the back of the neck, legs, &c., are cutaneous tumours of the same appearance, not painful or tender, and from the size of a sliced pea to that of a marble. She never had syphilis and is not a loose character. General health not impaired. No marks of secondary, unless this be one? She was ordered to undergo a mild mercurial course, and the bichlorid was selected as the agent; this if necessary is to be succeeded by other alteratives. The large tumour to be leeches and blistered if pain continues or augments; this and its other symptoms led some to suspect it was a neuroma, but the majority referred them to the nerve being pressed upon or implicated in its structure, and that it was only one of the class; the members of which were sufficiently evident in other parts. None denied that the disease might be, and most considered that it was molluscum.

Injuries by Machinery—Operations—Result.—A young girl, aged 12, on the morning of the 20th January, was admitted for an injury of her left forearm and hand, the work of machinery. On examination, it was observed that the integuments had been torn off the middle third of the front of the forearm; the muscles and tendons were exposed, the former were lacerated, the arteries unwounded, a ragged wound existed on the back of the thumb, and exposed the metacarpo-phalangeal articulation, the head of the metacarpal bone was crushed and fractured, a compound and comminuted fracture of the last phalanx of the middle finger, and comparatively no hæmorrhage. Treatment when insensible from chloroform. Dr. Flemming, with a scalpel, exposed more thoroughly the metacarpo-phalangeal articulation, with Liston's cutting pliar removed the anterior part of the metacarpal bone behind the fracture, and with stitches kept the soft parts in contact. He amputated the last phalanx of the middle finger, wrapped up these wounds and that of the forearm in lint wetted in tepid water; covered this with oiled silk, applied a wadded splint to the front of the hand and forearm, and kept it there by a light roller. On the 22nd, these were removed, and exposed the surface of the wounds of the forearm and thumb gangrenous.

Fracture of the Inferior Maxillary in two places—Failure of the ordinary retentive means—An adequate apparatus contrived.—One fracture ran from the ankle upwards and forwards, the other from behind the symphysis menti upwards, both extended through the whole breadth and thickness of the ramus. The four tailed bandage was applied; the teeth were tied; cork grooved for the upper and lower teeth; supports moulded to the jaw—but none remedied the displacement downwards and inwards of the detached fragment by the muscles attached to it. A gutta percha case for the upper, and

another for the lower teeth, were made, the two being connected at their ends, and separated elsewhere by an interval; this was applied and the jaw bandaged, but still muscular action was not averted, and the teeth of the severed portion were dragged out of the case. In this dilemma, a piece of gutta percha was attached to the external wall of the case for the inferior teeth on the broken side, and continued over the lower lip downward, round the lower border of the lower jaw, its extremity was curved so as to render it more steadfast and retentive: the separated part of the bone was manually retained in its proper position till the gutta percha hardened, when it sufficed for this purpose without aid. A four tailed bandage of gutta percha, with a slit for the chin, was then applied, and the result is now, that the fragment is where it ought to be: there is perfect apposition, no displacement, and every prospect of appropriate union, instead of a useless jaw, as was once dreaded.

The treatment of the case is simple and efficacious, rarely differing in any particular from that ordinarily prescribed and practised. As to the means—the old and established are not deserted; the recent and most lauded are tried—and the tried, if possessed of peculiar powers or superior advantages, are used when indicated. Hence, cod liver oil is invariably administered in affections depending upon or occurring in scrofulous or cachectic systems, and gutta percha is always employed when a firm immobile case is required, as in fractures, certain articular diseases, &c. The following is the mode of applying gutta percha to fractures:—The broken limb extended to its proper length, maintained in a suitable position, having its severed bone co-apted and muscular action resisted, is covered with a cotton bandage: the gutta percha, cut and torn to the required extent, is immersed in water, the temperature of which may vary from 150° to 212°, whereby it speedily becomes plastic and pliable; then it is spread on a broad cotton roller, part of which folds over one of its ends, the two are rolled up together; next the free end of the gutta percha is laid upon the extremity, and the continuation of it is spirally twisted over the remainder of the limb. As it is applied, the cotton covering is removed, since it is only used to facilitate and render more precise the former application. The gutta percha rapidly hardens and forms an iron like case which is not cumbersome,—while soft, it is extensible, and, as it consolidates, does not materially contract. It is so impermeable, that it usually has to be minutely punctured in different places to admit of the transpiration of the perspiration. Once used, it will not answer a second time, but is returned to the sellers of it, who then charge only one-third price. In chronic articular affections, a sheath of it for the joint, by maintaining rest, position, and constantly equable pressure, is invaluable—*ad libitum*, it may be removed, examinations instituted, remedies applied, and itself replaced. As the joint's bulk diminishes, so its capacity may be diminished. In a case of dropsy of the knee joint, an ioduretted solution of iodine was daily brushed over the skin, and a rigid case of gutta percha kept over it; decided absorption had taken and was taking place rapidly. (This was the only patient in the

Infirmary on whom iodine was painted.) Dr. Flemming, in a clinique, warmly advocated this use of gutta percha; he considered that no other apparatus could as cheaply, readily, and efficaciously fulfil the ends that it did; Scott's dressings were only serviceable by acting upon the same principle—but they did so less powerfully, beneficially, and economically.

Under the dome of the building is the *Operating Theatre*; it is circular, very spacious, very lofty, its superior concavity formed of glass, to which its sides gradually arch, and through which abundance of light is transmitted. The seats are all round, in tiers, which, as they extend above, recede from each other; that within the area is reserved for the medical attendants, visitors, clerks, and dressers. Chloroform is invariably used in both minor and major operations; it is sprinkled on folded lint, which is covered by oiled silk and held over the mouth and nostrils, till loss of sensation and consciousness are produced.

Tahacotian on a girl about 17, whose *left cheek* had been *destroyed* in early life by *cancerum oris*. A semilunar incision, the convexity of which looked upwards and inwards, was made through the skin and cellular tissue of the front of the left arm, the knife carried beneath this for a short distance, and the flap reflected. The upper margin of the facial gap was pared, the two raw borders were made to match, and retained in apposition, by interrupted sutures. The arm was immovably bound close to the head, by cotton and gutta percha bandages. Four days afterwards, she was again brought into the theatre, the bandages removed—union was only observed at two minute and distant points. With the faintest hopes of success, another semilunar incision was made in the arm, commencing at the upper and terminating at the lower extremity of the original one, the concavities of the two *vis-à-vis*; the included integuments was dissected out and fitted to the rest of the circumference of the facial gap, previously prepared by incision. The edges were connected by numerous twisted sutures. Did not again see the case. Operator, Dr. William Lyon. Chloroform was not given in this case. An extern patient presented a hydrocele the size of a large pea,—and it was thus summarily disposed of:—A V. S. lancet was plunged into it, out spouted the fluid, firm manual compression removed the remainder, a piece of plaister was placed over the incision, and the man sent about his business. Neither saw nor heard of him after.

Clinical Lectures.—The Medical and Surgical are delivered in a room on the ground flat, well adapted for their purposes. Students attend both classes the same session. The following are some of the most novel and practical heads of a surgical clinique delivered by Dr. Lyon, on 12th January:—

Hospital Epidemics—Treatment—Non-contagiousness of Hospital Gangrene.—Gangrene, erysipelas, phlebitis, and fever, are frequently met with epidemically in hospital wards, and are then designated by prefixing the word hospital to their proper appellations. Our knowledge why, and from what they arise, is imperfect. Do they arise from unlike causes? We cannot positively decide—but we see that the whole are frequently

met with at the same time, and in the same ward; it has been so latterly in my portion of the Infirmary. Do they depend upon the same cause acting upon different persons? or, Do they depend upon different persons receiving unequal and different doses of the same poison? These are questions we cannot solve. Their remote causes are usually said to be such ordinary ones as confined, crowded, ill-ventilated, and ill-cleaned wards; many patients in the same ward, with suppuring surfaces, &c. These sometimes satisfactorily account for their production, but at others they fail in doing so. Dr. Flemming has as many ulcer cases as I have, and his wards are as crowded as mine, yet why are his patients not infected? This also I cannot answer. No one is attacked unless he has some breach of surface, hence, most of our late operations have been molested, and the intended ones prevented. I never found any treatment, local or constitutional, *per se*, sufficiently trustworthy or successful, and this might have been anticipated, for the disease is constitutional—how, therefore, can local means be sufficient? The originator exists in the wards, and as long as the patient is in the ward, he is in communion with it; as long as the cause is operative, so will the disease be existent; as time advances, so will the disease. How, therefore, can constitutional means alone be of service? Hence, my procedure is to turn the patients out of the hospital, as soon as they are affected, and in four or six days after, I invariably find, I know of no exception, that if they receive but ordinary attendance and attention afterwards, they are far on the road of recovery, and quickly are freed of the hospital affections. There is no other alternative, and no other remedy will do. You cannot cleanse the wards without removing the patient, and if you remove the patient, it cannot be into other wards, for the disease is infectious. Hospital gangrene is not contagious, and the following, daring, though conclusive, experiment supports this assertion. I took a piece of lint, thoroughly saturated it in the debris and discharge of a sore attacked with hospital gangrene, laid it on a healthy ulcer in a distant healthy ward, and retained it there for a day. Yet the sore was not tainted, its action continued healthy, and no systemic disturbance marked the presence of the noxious agent.

Destruction of a large extent of skin—Amputation necessary.—He exhibited the hand, wrist, and lower part of the forearm, of a young woman that he had amputated, which was totally denuded of integuments, with the exception of some small shreds which hung from the fingers' ends, the muscles of the thumb were lacerated, and the injuries resulted from machinery. In such cases amputation must be performed, for the patient may die from the shock, or be subsequently worn out by irritative fever, in consequence of the extensive suppuration that will follow. The parts will no longer be of service, they will be stiff, contracted and deformed, they would always be the seats of ulceration, and never would be completely recovered by skin—for skin cannot be produced by any dissimilar tissue, but only by extension from, and contraction of, the nearest living healthy skin. Hence its reparative supply must be limited. The cases of fractured femur and inferior

maxillary, previously given, formed the other subjects of this lecture.

Inspections.—They are performed in the clinical lecture room—the case is read, commented upon; the lesions exhibited, explained; the diagnosis announced that was made during life, its accuracy or fallacy tested. The students sit in the seats and maintain the same decorum as at a lecture.

The Eye Infirmary.—Situated in College Street, fee for six months' attendance, £2 2s: about 900 cases are treated annually. Principal medical officers are, Drs. M'Kenzie and Anderson.

The Lying-in Hospital.—May be attended for six months, after the payment of 10s 6d.

Cholera.—First appeared in 1848, about the middle of November; of those affected by it in the early part of the epidemic, 2 out of 3 died; in the latter part of December $\frac{1}{2}$ recovered; and now, the middle of January, 1849, the mortality is far less; recent cases fewer, and many of the so called are diarrhæas and dysenteries. It has been in all parts of the town, and is said to have marched straight through it, not more abundant in one than in the other, equally as fatal to the rich as to the poor. An hospital in Clyde Street, and three wards in the Fever Infirmary, were allotted to its victims shortly after its appearance. About 700 have been admitted into the former, 30 to 40 in the day; the greatest number in at one time has been 136; at present, 19th January, there are but 70, none of which are specimens of the disease in its worst form. A visitation system has been established, and is supposed by some to have abated or staid its progress. Dr. Sutherland, of London, one of the commission sent here by the London Board of Health, stated that it proves cholera to be curable and capable of being limited; it consists in dividing the city and its environs into districts, in appointing a surgeon to each, in giving him a sufficient number of assistants, whose duty is to visit all suspicious houses, to discover the state of health of their inmates, to treat every case of diarrhœa or pseudo cholera they meet with, and to report every pauper cholera case to the surgeon, who must see it, prescribe for it, and, if possible, send it to hospital. This must be done daily. Reports are handed in nightly by the surgeon to the Board of Health. The visitors are usually medical students, and their wages are said to be from one to three guineas per week—hence the comparatively ill attended classes. In nearly all it was preceded by diarrhœa, varying in duration from a few hours to several days; this was considered by some as its stage of incubation. Vomiting most frequently was the first genuine symptom that appeared, and in a few was unprecedented by any alvine looseness. The cases in the early part of the epidemic were very malignant, soon merging into the stage of collapse, the surface, especially of the extremities, rapidly becoming cold, shrivelled and blue, the evacuations frequent and copious, the pulse sunken and imperceptible. On the disappearance of feculent matter from the stools, the true symptoms of cholera in general supervened, and were those of preceding epidemics, not the least prominent of which were the characteristic voice, dark ocular areolæ, livid color of face and neck, shrunk features, ghastly expression of

face, stools resembling rice water in last stage, often containing much bile, and in several cases blood. Frequently, no evacuation occurred for some time before death. The matters vomited were whatever had been swallowed, sometimes mingled with morbid secretions from the stomach, often identical with the intestinal egesta. In only one case, admitted into the Clyde Street Hospital, was there hæmatemesis. Suppression of urine nearly always occurred before death, its copious ejection was always a most favorable prognostic. Thirst was insatiable, and the coldest liquids usually sought to quench it. Spasms were neither very violent nor constant symptoms. The danger was generally estimated by the amount of debility of the circulating apparatus which seemed to depend upon the discharges, as it commenced and increased with them. The deficiency of animal heat, during collapse, was very great, but no rigors were ever witnessed. The patients died collapsed, or during an imperfect reaction of the system; if, in the first state, his intellect remained perfect, if, in the last, it was usurped by delirium or coma. One case, during convalescence, had erysipelas of the face—which was common in their fever of 1847. To the above ordinary origin, course and characters, are some peculiar exceptions. Thus Dr. Flemming has known patients to die from cholera who had only its gastric symptoms. The house surgeon of the Clyde Street Hospital, instanced cases who went to bed in the state that they habitually considered good health, without marks of ailing, awoke at two or three a.m., had a single copious stool, directly after becoming collapsed, and died in a short time—such were never benefitted by any treatment. A robust man, previously quite well, fell down without apparent cause, collapse ensued, and in two hours afterwards he died, without having had one evacuation. His intestines were found, on dissection, full of the rice-water stools, and in the lower part of the rectum a sparing amount of feculent matter. At the autopsies made in the hospital no peculiar appearances were observable in the tunics of the alimentary tube, beyond pallor, and, with the exception of one, pneumonia, there were not local inflammations in any. In some the intestines contained invariable quantity, remains of the evacuations passed during life. In one who had head-symptoms before death, there was a serous effusion between the arachnoid layers. In all, the blood was thick and black or tarry, coagulating without the separation of any or very little serum, it had thus been found within all the cardiac cavities, and the aorta's area. The veins, especially the encephalic, and in some, the whole arterial system, had like contents. Where bile had not been passed, it was generally found thick, and black, filling the gall bladder. Rigidity of the voluntary muscles was very perfect. In one case, 15 minutes after death, the limbs were momentarily contracted; the body remained warm for some time, especially if the death had been sudden. The general declaration concerning the treatment and its success was, that nearly every remedy had been given, and that no one, with the exception of opium, was superior to another. Opium was given in the larger doses, as gr. ij. or iij. of the powder, or ℥j. of the tincture, both by

the mouth and anus,—it was found beneficial in all stages, and most so in the earliest. The above, if rejected, was repeated during an interval of quiescence; its further administration and quantity depended on the effect produced by the first, and the urgency of the symptoms: no good effect was derived from calome!—but in what dose was not mentioned. When the patients were seen sufficiently early and could be bled, benefit always followed. In the Clyde Street Hospital some were bled from the foot, in the stage of collapse, but with detriment; creasote was very successful in allaying vomiting; only used acetate of lead where there was hæmorrhage, but it was inferior to turpentine in small doses; the stimulant invariably given is whisky toddy; the heat of the surface is maintained by wrapping the patient up in two blankets, the innermost of which has been wrung out of very hot water, and by placing alongside of him narrow tin cases containing boiling water; external stimulants were not much employed; tincture of capsicum, at the suggestion of an American, was tried internally and externally, and, in one or two cases, with advantage; diet was farinaceous, and, to the very few who preferred it, warm gruel, as a drink, instead of cold water. This institution is under the charge of Drs. Laurie and Buchanan, who generally visit the cases twice a-day: the other medical duties are performed by four House Physicians: most of the nurses and attendants have taken the disease.

ART. X.—REDUCTION OF DISLOCATION OF THE HUMERUS OF FOUR MONTHS' STANDING.

By S. J. STRATFORD, Esq., Woodstock.

On the 18th March, 1849, Baptist Montreul, aged 27 years, a stout muscular man, presented himself, complaining of an injury of the arm. Upon examination, I found the humerus of the left side dislocated, and the head of the bone in the axilla. The man stated that he lived in the township of Walsingham, and, about four months since, was riding a horse on his return home from work, leading several others, and carrying a jug of whisky in a bag on his arm, his horse fell with him, and rolling, laid upon him, so that he could not get up without assistance. In falling, he came upon his hand, and immediately felt pain in his shoulder, which was greatly swelled, and very painful. On his return home, a medical man was sent for, and, with the assistance of a second, extension was made; and, after several attempts, the bone was declared to have returned into its socket. Bandages were applied, and means to reduce the swelling and inflammation employed. Several days afterwards, the man stated that he was sleeping in a chair, with his arm over the back, when he suddenly started, and experienced great pain in the part, which continued for some time, but had now gradually subsided.

The symptoms which presented themselves, were a hollow below the acromion, the natural roundness of the shoulder was destroyed, the deltoid muscle dragged down, and the shoulder presented a very marked difference from the one on the opposite side. The head of the humerus was distinctly felt in the axilla, the

motion of the shoulder was in a great degree lost, more especially in the direction upwards and outwards, the patient could not lift the arm by muscular effort, and I even could not raise it to his head.

That the humerus was dislocated, was sufficiently obvious—that it had been removed from the glenoid cavity for four months, was equally certain; but the man, who was a lumberman, a hewer of timber, complained that he was totally unable to follow his business while the arm continued in its present condition, and that unless the bone was replaced, he was comparatively ruined. I explained to him the difficulty of reduction of a dislocation at this distant period, and even the dangers that attended the attempt, but he declared he was willing to risk all, rather than remain in his present helpless condition. I therefore resolved to make the attempt; accordingly, with the assistance of several hands, I made extension, and contra-extension, but found he would not submit to the employment of sufficient force. He was, however, advised to return again in a few days, when a second trial was made; he was now fastened to a pillar in a room, by means of two towels, which effectually surrounded the shoulder, and fixed the scapular; extension was then made from another pillar by means of a rope passed through a pulley, and fastened to a towel, secured to the lower extremity of the humerus; he was now bled copiously, losing from three to four lb. of blood, and $\frac{4}{3}$ of the liq. antimon. tart., was gradually administered, which, after considerable time, caused nausea and faintness. During this interval, say from forty to sixty minutes, gradual extension was made, and several attempts to return the bone into its socket—but without success; at last, he became faint, and due extension having been accomplished, with the assistance of Dr. Baird, I at last succeeded in returning the bone into the glenoid cavity. He complained of considerable pain for some time, but that has now subsided; the shoulder pan has its natural appearance and roundness, while he has regained the proper motion of the joint.

The question of the propriety of reduction at this distant period has been doubted by some medical men; and instances are not wanting in which very dangerous consequences, and even death itself, have resulted from the operation; but the utter helplessness of the limb, the total inability of the individual to perform his necessary duties, and, as in this case, a complete incapacity of obtaining a livelihood, are strong and urgent reasons for the attempt. The impediments to the return of the bone, are the contracted and shortened state of the muscles, and the adhesions of the parts in the axilla; which, if very extensive, may lead to the rupture of the axillary artery and vein; the tearing of the tendons, and muscular fibres, and the injury of the nerves, some of which have been recorded as having been separated (by the violent extension) from the spinal marrow—consequences grave enough in themselves, to impress us with extreme caution in the employment of our means of reduction.

Woodstock, April, 1849.

ART. XI.—ON THE OPERATION OF PHYSICAL AGENTS IN THE FUNCTIONS OF ORGANIZED BODIES, WITH SUGGESTIONS AS TO THE NATURE OF CHOLERA.

By DR. G. RUSSELL, Montreal.

(Continued from page 9.)

Although my data are not so numerous as I could wish, on account of the indifference of medical men about recording what their cholera patients had been eating previous to their having been attacked, still the evidence as far as it goes, fully sustains my theory.

In the *London Lancet* for August, 1832, the Editor says that in three-fourths of the cases of Cholera, that he had witnessed, *fruit was clearly ascertained to have been the exciting cause.*

In connection with the peculiar affinity that the disease seems to have for water, several extraordinary cases are recorded of fish having died in great shoals while the disease was raging in some regions: for example, in Prussia, in the year 1831, while the Cholera prevailed there, all the fish died in the ponds, and forty tons of them were taken from the single pond of Dinkerburgh, and buried. And it is a remarkable fact, that in a great number of cases where any notice was taken of what the patients had eaten before the attack, fish of one kind or other was said to have been the exciting cause. Other articles are mentioned, such as fruit, *butter-milk*, potatoes, and in a few cases, pork and veal. Now, every one of these articles might have been pointed out as dangerous, merely from an *apriori* consideration of the theory for which I contend. It is well known how easily pork and veal are injured by thundery weather; and there is reason to believe that the diet in the cases referred to was actually tainted,—indeed it is expressly stated in some instances that such was the fact.

I have made out a list of 92 cases, taken from English papers, these being the only ones in which I found food chargeable with being the exciting cause. The following is a copy:—

Fish:—Herrings, 11 times; sprats, 1; Salmon, 1, 13 times.
 Fruit:—Gooseberries, 9; Currants, 2; Cherries, 1; Lemon, 1; Whinberry Pudding, 1, 14 times.
 Vegetables:—Potatoes, 18; Cabbage, 1, . . 19 do.
 Milk, 2; *Buttermilk*, 18; Curds and Whey, 1, 21 do.
 Animal Food:—Pork, 2; Do., tainted, 3; Veal, 3; Sour do., 2; Lamb, 2; Tainted Fowl, 2, 14 do.
 Beer, 4; Sour do., 7, 11 do.

The reader will remark in this list a strong corroboration of the idea which I have advanced. Why does thunder-weather hinder butter-making? I presume that it is because there is too much electricity in the atmosphere, which keeps the oleaginous particles in such a state of combination with the other elements of the milk, that they cannot be separated. Why, under ordinary circumstances, are the milky contents of a churn transformed into butter and buttermilk? Is it not because the commotion among the particles causes part of the electricity to escape, allowing the oleaginous atoms to

coalesce by their superior capacity for the remaining electric fluid, while the other ingredients, by abstracting oxygen from the atmosphere, became sour, *acid*,—**NEGATIVE** buttermilk.

Every Physiologist is aware of the analogy subsisting between milk and blood. Indeed, their constituents are almost identical. Milk is the only secreted fluid which contains the three classes of nutritive principles, of which the blood is composed—the albuminous, oleaginous, and saccharine; and thus the coagulation of both may be accounted for on the very same principles.

Why does a thunderstorm make animal and vegetable substances sour, and hasten their dissolution, I ask? Is it not because, when the overcharged atmosphere is relieved by the explosion which ensues, the superabundant electricity is not only carried off, but also a part of that which naturally belongs to those substances, which are most ready to give it up. Thus, I conceive that substances may be deprived of electricity in two degrees: 1stly, that which is superadded to them in their natural state; and 2ndly, that which holds their particles in combination, the deprivation of which causes a change in their sensible properties, producing disintegration.

Dr. Gaultier of Manchester, in his work upon Cholera, uses language to the following effect:—"The most ordinary exciting causes of common cholera, are rightly considered to be errors of diet; the same is true of malignant cholera. It can be shown, that in almost eight cases out of ten, something had been taken as food or beverage calculated to derange the digestive organs, and it would appear from the preternatural sensibility of these organs, as the heat of summer becomes more intense, *even the diet habitually taken*, and which generally agreed with the alimentary passages, was *liable then to act as an irritant*. In the majority of instances the offending matter was either the low-priced ale of the beer-shops, *semi-putrescent buttermilk, fatid pork, and fish, or rotten potatoes*. In one instance, a quantity of the latter, which were vomited during the incipient stage of the disease, continued to *emit for many days a phosphorescent light*—a circumstance that appeared most mysterious and alarming to the neighbourhood where it happened."

A due supply of electricity is as essential to the healthy functions of the body, as water is to the operations of a steam-engine; and of course, when this *vital* element is withheld, a derangement proportionate to the demand must be the consequence. Dr. Bell has satisfactorily proved the relationship subsisting between ague, congestive fever, and cholera; and I do not doubt, when the science of medicine comes to be based more upon philosophical principle than it is at present, that all epidemic diseases will be found to depend upon different degrees of this all-pervading agent, prevailing at the time; and of course a knowledge of the laws of which, will constitute the most essential qualification of the physician. This may be called hobbyism; well, be it so. Let those who call it such tell me of any molecular change that can occur in the physical, the vegetable, or the animal world, in which electricity is not *essentially concerned*, and I will resign my hobby, to launch again upon the chaotic ocean of empirical speculation.

"According to the analysis of the Chemist, the atmosphere is composed of seventy-two parts of nitrogen, twenty-seven of oxygen, and one of carbon. From the experiments of Philosophers we find that the fluids, produced by the putrefaction of animal substances, possess the same ingredients as those composing the common atmosphere—but in different proportions—viz., sixty-three of nitrogen and thirty-seven of oxygen."

The above extract is from an old author, and although it might be corrected in one or two particulars, yet it indicates a general truth which is of great practical importance, by showing the tendency of decaying animal substances to render the atmosphere *negative*, and thereby indirectly vitiating the blood.

The alimentary canal in a physiological point of view, can hardly be considered the internal of the body. The mucous membrane, by which it is lined, is only a modified continuation of the skin which covers the external parts. The serous membrane which lines the heart and arteries is the true internal, hence the blood has no direct communication with the external world; hence its condition will not be directly affected by external influences; but it will be affected by such influences, *through the capillary system*. The function of the lungs in oxygenating the blood, according to Dr. Christison, is a purely physical operation. The production of heat in the human body can be considered nothing else. If a stream of electricity is passed through a certain quantity of water, the water will be converted into a certain bulk of the mixed gases which, in this state, represents the elements of the water, together with the electricity required for their formation. If the gases are again combined so as to form water, not a trace of electricity is given off, but their union is accompanied by an intense heat. We have only to enquire where the electricity went to in the first part of the experiment, and where the heat came from in the latter, in order to be convinced that the one is nothing but a modification of the other.

I presume the attentive reader will now be in a position to comprehend the *modus operandi* of Cholera. The earth and the lower strata of the atmosphere being charged with electricity *below par*, the blood must be indirectly affected; so that there will be a more than ordinary tendency to dissolution amongst its elements. Food is taken into the stomach *powerfully negative*. I mean by this, that it contains so little electricity that it will have a powerful attraction for liquids, which naturally contain more; hence it abstracts the electricity contained in the cells of the mucus membrane; capillary action is thus excited, and the arteries of the gastro-intestinal system pour out their serum, in order if possible to neutralize the demand. A communication is thus established between the blood and the external world, *and, according to an universal law, the life of man must do its part, in order to restore the general equilibrium*.

The eccentric character of cholera has hitherto baffled all attempts to investigate its cause. Persons belonging to the same family, though residing in different houses, have been simultaneously attacked.—Prisoners confined in a solitary and condemned cell, have been *executed* by cholera, without having had any communication whatever with persons having the disease. A case of this kind occurred in Prussia, in which the only communication which the prisoner had with the living world was through the medium of his keeper, who gave him his *food* through an iron grating. If my theory is correct, these and many other eccen-

tricties connected with the progress of the disease are satisfactorily accounted for.

Dr. Bell says :—"We must, in endeavouring to ascertain the source of this disease, look to the sympathetic system of nerves—and it is particularly worthy of notice, that wherever the branches of the sympathetic are largely distributed, there the symptoms of the disease are most prominent." Proceeding further, he shows that Cholera cannot be referred to a *topical and exclusive affection of any of the great organs*. He also briefly asserts, that the cause of Cholera is not a *morbid state of the circulating blood, how deeply soever that alteration may be occasioned, as a consequence of the true morbid impression*.

The essential manifestations of Cholera, according to the *London Lancet*, are "*collapsed countenance, blue lips and nails, shrunken fingers, the total failure of the usual secretions, deficient animal heat, suspension of the pulse, and remora, or stagnation in the venous circulation*."

According to Dr. Kennedy : in the first stage "the patient complains of feeling of *anxiety*, or of *uneasiness at the pit of the stomach*; after some time *nausea supervenes*, and the uneasiness changes into a feeling of *heat or pain*. To these symptoms succeed *vomiting and purging*, and prostration of strength. The evacuations at first consist of the common contents of the alimentary canal, afterwards of a fluid like rice water; occasional cramps are felt in the limbs; the pulse is small and rather quick. The skin feels a little cold, and the temperature is gradually decreasing. The countenance is rather shrunken, and the features appear sharper than natural." In another place the same author tells us, that "the evacuations go on, and the bowels are filled after the heart has ceased to act, when the arteries are empty and the capillaries of the circulation are no longer supplied with blood by the usual course."

Dr. O'Shaughnessy proved by a series of rigid experiments, that the blood in the worst cases of Cholera retains its globular or anatomical structure; that the lungs are capable of performing their functions, in so far as the act of respiration is concerned, in the decomposition of atmospheric air; and that the dejections of the cholera patient are strongly alkaline, and contain just those elements of which his blood has been deprived; or, in other words, the addition of the dejections to the blood, in due proportion, would have restored the latter to its normal constitution. The same results were obtained by other chemists in different parts of Europe.

Now, if it be admitted that the physical laws of nature are universal in their operation, then it must follow, that the excretion of the fluid portion of the blood into the alimentary canal in Cholera, has been fully accounted for. That the cause is a physical one, there can be no doubt whatever. The action of some kinds of purgatives upon the bowels belongs to the same class of phenomena, but differing in degree. *If blood be placed on the one side of a capillary membrane, and certain purgative solutions on the other, the serum of*

the blood will pass through the membrane, to unite with the medicine. This is just what occurs in the body; and I think the evidence already afforded, that such phenomena are dependent upon electrical attractions, should satisfy all reasonable minds.

Pathology likewise, according to the best authority, is altogether in our favour. A vermilion injection of the gastro-intestinal mucus membrane of the alimentary canal, indicative of inflammation proportionate to the prolongation of the disease. Sometimes patches of gangrene, indicating the violent electric action that had been in operation; while in every other part of the body all such action, (even normal) had entirely ceased. The same membrane also covered with a pultaceous substance, of a white-grey colour. The stomach contracted in its substance; hard, and frequently thickened.

The liver shows marks of congestion or inflammation, and is of a darker colour than usual. The gall bladder distended with bile, while the ducts remain quite pervious. The bile is generally considered by physiologists, the natural purgative of the bowels. It must be electro-negative, having been secreted from the blood, after that fluid has been deprived of its electricity in the systemic capillaries, through which it has passed before arriving at the *vena porta*. Why, in a cholera patient, does the bile not flow into the intestines through the open ducts? Answer—*Because two negatives do not attract each other.*

Here I might close my case, and claim a verdict, on the ground that this theory accounts for all the phenomena of the disease, as far as I have ascertained, which, in the abstract, would be deemed a legitimate conclusion, unless other facts could be brought forward, contravening the hypothesis; but I have some evidence of a more positive character yet to offer, which, if it can be relied on, in my estimation, sets the matter beyond a reasonable doubt; of that, however, the reader must judge for himself.

From the *London Lancet* of November last, I extract the following. A letter from St. Petersburg states, "that whilst Cholera was at its highest, the action of the magnet was nearly neutralized, which now, the disease is gradually subsiding, assumes by degrees its former power. A magnet block, which used to carry eighty pounds, would not carry more than thirteen pounds during the worst time of Cholera. *The Electro-Magnetic Telegraph at one time would not work at all.*"

Here was a report from the arcana of nature by the Telegraph itself, informing us of the cause of this disease. *Murder will out.*

Several authors on Cholera have, as it were, groped around the truth, but the want of a proper knowledge of Chemistry has occasioned some of them to commit strange blunders. When treating on this subject, Dr. Tunstall of Bath, in a paper in the *Lancet*, of the same month, uses the following language :—"If we adopt the theory, that in Cholera the impurity of the blood arises from its containing too much positive electricity, we must bear in mind that the secretions from

the bowels and stomach show an excess of acid, or, in other words, of oxygen, a positively electric condition." Now there can be no doubt that in Cholera the evacuations are positively electrical, but if he is correct in saying that these excretions are acid, and that acid or oxygen is positively electrical, then I have been greatly misinformed by the best Chemists the world has ever produced, as well as by my own senses. However, as far as the evidence accords with chemical science, it is corroborative of the position I maintain.

Again we have in the *Lancet* of the 8th November, the following from J. C. Atkinson, Esq. :—"I am desirous, at the present moment, of directing the attention of scientific readers to a very interesting phenomenon, more or less present, in the collapsed stage of Cholera, which seems to have hitherto escaped the observation of medical men, namely, animal electricity or phosphorescence of the human body. My attention was first attracted to the subject during the former visitation of that fearful disease in the metropolis. It was indeed singular to notice the quantity of electric fluid that continually discharged itself on the approach of any conducting body to the skin of a patient labouring under the collapsed stage. Streams of electricity, many of them an inch and a half in length, could be readily educted by the knuckle when directed to any part of the body, as if it were a charged Leyden jar. I may remark the coincidence that, simultaneously with the heat of the body passing off, the electricity was evolved. I am therefore led to ask the question—Are not heat, electric and galvanic fluids one and the same thing? Does not the passing off of both imponderable substances, at one and the same time, strengthen this conclusion? Again, are not the whole of what we call vital phenomena, produced by the electro-galvanic magnetic matter and motions? And do we not find that these vital phenomena are continually affected by the relative state of the surrounding electric medium? To what can we attribute the present fluctuating condition of the Barometer if not to this?"

If the reader will remember the variable results obtained by Gay Lussac, in experimenting on the chemical affinity of the same substances, with the electrometer, under what he conceived to be the same conditions, at different times, the occult nature of the cause of Cholera, or the eccentricity of its character, will not excite much wonder.

In the same periodical Dr. Smellie remarks, "that on those days on which the disease was most prevalent, the electric condition of the atmosphere was in a highly disturbed state; and the various instruments used to exhibit the phenomena of electricity failed to be depended on, by reason of the paucity and the irregularity of the electric distribution in surrounding nature. The magnet also exhibited a diminution of seventy per cent. of its usual power.

During the prevalence of cholera in St. Petersburg last year, we had authentic reports testifying to the same general fact. One report says, *that a magnet which would, under ordinary circumstances, sustain forty pounds weight, was not capable of sustaining more*

than four or five pounds when the disease was at its height.

The *London Lancet* for March last, contains a report from the Registrar General, in which the electrical state of the atmosphere and the number of Cholera cases weekly, are stated in tabular form; by which it appears, that the decrease of electricity in the atmosphere maintained a proportion to the increase of the disease, and when the cases amounted to a certain number, no indications of electricity could be obtained. What stronger evidence could any person require?

In drawing this subject to a conclusion, I will briefly direct the attention of the reader to the points which I have endeavoured to elucidate:

I commenced with the simplest form of capillary attraction, and proved by good authority that the passage of liquids through porous substances, whether they be physical, vegetable, or animal, is due to the same cause; and inasmuch as the rapidity of the current is concerned, it depends upon two conditions: First, upon the attraction of the flowing liquid for the capillary substance; and secondly, its affinity for the matter on the other side of the capillary series.

Secondly,—It has been shown that all such phenomena are caused by the tendency of all substances, differently charged with electricity, to unite together, so as to bring the electric fluid with which they are charged to an equilibrium; or, in other words, that capillary attraction, cohesive attraction, and affinity, are but modifications of electric attraction.

Thirdly,—I have maintained the theory of a single electric fluid, and endeavoured to shew that it is adequate to account for all the facts of the science, without involving the obvious difficulties of the double theory. I have directed attention to the universal influence which electricity exercises over vegetable and animal phenomena. I have proved by Professor Faraday and others, that the electrical, the galvanic, and the magnetic forces are identical; and that heat is a modification of the same agent. It has been proved that there are constant currents of electricity passing round the earth, *from east to west*—that these currents are liable, from astronomical or other causes, to periodical and irregular variations in their quantity and intensity, by which animal and vegetable substances are both sensibly and insensibly affected.

Fourthly,—Independent of astronomical or geological causes, I have adduced one good reason that *may account* for the origin of Cholera in India, in the year 1817, on the foregoing principles. I have proved that, in the great majority of cases, eight out of every ten, the producing cause of Cholera has been food, in an electro-negative state, which almost puts it beyond doubt, considering the occult nature of the essential element, *that such food produced Cholera in all cases.* I have demonstrated that the cause implicated is fully competent, according to *natural law*, to produce the effect; and in conclusion, I have proved by the most indubitable evidence, that the cause identified actually did exist, in proportion to the effect observed. *That cause was a great diminution of the ordinary electricity of the food and air;—that effect was ASIATIC CHOLERA.*

That Cholera has often been ascribed to the cause which I have identified, is a fact of which I have given several illustrations; but the statement has been as often and as flatly contradicted; because the chain of natural relations subsisting between the disease and the cause presumptive was not made manifest. This *desideratum* I have endeavoured to supply: with what success, let each determine for himself.

In conclusion, it is pleasing to observe that those remedies which are now the most generally recognised as being the most beneficial in the treatment of Cholera, are just the medicines indicated by the electric theory, viz., those of a positively electric character—hydro-carbons and the alkaloids. Amongst these may be mentioned, camphor, petroleum, or Barbadoes tar, turpentine, veratria, quinine, alum, &c. I would also recommend strychnine, naphtha, and creasote. Substances that have a powerful affinity for oxygen, or those that are very combustible, seem to be the best. In the first stage, I would recommend an emetic of ipecac. A gentle cathartic may also be necessary. If the attack is not very severe, the cure may be completed with a few doses of the compound tincture of camphor. Where the symptoms are more urgent, the selection of the appropriate remedies will depend upon the judgment of the enlightened physician, who ought to be in attendance as soon as possible after the first symptoms make their appearance.

“Prevention is better than cure.” And the means of prevention that I would recommend, are cleanliness, temperance—both in eating and drinking; friction to the skin daily; light flannels next the body; exercise, when the air is dry and pure. When the weather is damp, even though sultry, it would be advisable to keep up a coal fire in sitting rooms, in connection with bed-rooms, &c. Avoid the use of acids, unripe fruit, or uncooked vegetables; avoid everything like tainted meat, or buttermilk; avoid physical and mental exhaustion. Use, principally, a farinaceous diet, with the soup of good animal food, rather than the meat itself, unless you have a good deal of bodily exercise. Use good bread and butter. If you drink much water, it ought to be filtered through charcoal. A little clean powdered charcoal in the water that you drink will be a very good substitute, or, if it is preferred, a few drops of the compound tincture of lavender will have a good effect. By attending to these requirements—by doing what we can to alleviate the miseries of those who have not the means of providing for themselves—by maintaining a clear conscience, and a contented mind, we will be best prepared to meet Cholera, or any other evil with which Divine Providence may be pleased to visit us.

Montreal, April, 1849.

PRACTICE OF MEDICINE AND PATHOLOGY.

The Prevention of Cholera.—The result of the experiment made in Dumfries, under the direction of Dr. Sutherland, to allay the progress of cholera, as an epidemic, has naturally excited great attention. It is now in operation in Glasgow and Coatbridge, under the superintendence of that gentleman; and, as will be seen from the letter of our correspondent in London, some

of the parochial authorities in the Metropolis are prepared to adopt it, if necessary.

The chief points of this experiment were a daily house to house visitation, enquiring as to the health of the inmates, prescribing, and administering medicine wherever premonitory symptoms were discovered, by the medical staff, in addition to their ordinary duty of attending upon patients attacked by cholera; the temporary removal of persons to a House of Refuge; and the cleansing of dwelling-houses, during the absence of the inmates.

By far the most important part of the plan is the daily house visitation system; it is, moreover, novel, while the others have been suggested by the General Board of Health. That Board, no doubt, inculcated by the general orders the necessity of attending to premonitory symptoms; but, practically, the great mass of the population will not do so, unless under some such system as that adopted here. Seeing, therefore, the great importance of this subject, it seems only a matter of justice to make the following extract from our journal of 28th November last:—

“In almost all cases, the premonitory symptom of looseness in the bowels has occurred; and all persons who experience this, should immediately consult a medical man. This is the safe and proper course to take. At the meeting, on Monday, Dr. Blacklock stated, that he had been visiting the houses in his district, and enquiring as to the health of the inmates, with the view of prescribing for any such incipient stages of the disease; and it would be well if this course were followed by the other practitioners.”

Dr Blacklock, therefore, deserves the high credit of suggesting a plan, of which Dr. Sutherland instantly saw the value, and which he was, fortunately for Dumfries, and probably for the interests of humanity in general, empowered to enforce; and which, by his energy, and the ability and industry of the medical staff, has been eminently successful in the prevention of the progress of a severe and fatal epidemic.

We believe that the idea of using this preventive measure in cholera, occurred to Dr. Blacklock, from what he had seen adopted in the navy, during the prevalence of fever in one of the fleets, when stationed off Bermuda.

House to House Visitation in Cholera.—(To the Editor of the Dumfries and Galloway Courier.)—Dumfries, Jan. 15, 1849.—SIR,—I have read, with much surprise, a letter from Dr. Sutherland, in your paper of the 9th instant; and beg that you will allow me to remind you, and your numerous readers, that Dr. Sutherland arrived here on Wednesday, the 6th December,—addressed the Parochial Board the same evening, in the Council Chamber, reiterating the directions of the General Board of Health, dated 5th October, issued for the sole purpose of inducing clergymen and other benevolent persons to visit their poor neighbours, and impress upon them the necessity of applying, at the nearest dispensary for advice and medicines, when threatened with any disorder of the stomach and bowels, Dr. S. adding, that “*this duty could be better done by the citizens themselves than by paid officials.*”

On the following evening I had the pleasure of an interview with Dr. Sutherland, by his own request, when, in the presence of a medical friend, who remembers distinctly all that passed, I explained to him the propriety of dividing the town into districts, as had been done by the resident medical practitioners on the 24th November, and of employing *medical men as visitors from house to house*, for the purpose of discovering the premonitory symptoms of cholera amongst the poor, as well as for the treatment of the disease when no longer doubtful. I had not only done so, I said, in my own district, but had endeavoured to convince the Parochial Board, on the morning of the 26th November, of the importance of such a measure, both *viva voce* and by a written report, setting forth the sanitary state of my district. The very next morning (Friday, December 8), Dr. Sutherland again met the Parochial Board; and, after stating that, since he last addressed them, he had been “*acquiring information,*” “*the result of his inquiries had forced him to conclude that the state of the town was most alarming, and that immediate and extensive measures were necessary to stay the progress of the disease.*” Had the original arrangement been adhered to with the medical men in the town, he had no doubt, from the skill with which their duty had been performed, that the disease would have been manageable; it had now gained a head which would require great

exertion to suppress. *He thought it requisite that the original division of the town into nine districts should be resorted to; and that a medical man of experience in cholera, and, if possible, acquainted with the localities, should be appointed to each, with an assistant. The house visitation must be conducted by these men.*" Not a word now about citizens performing this most important duty. Dr. Sutherland, fortunately, had the power to compel the Board to adopt this measure, which they would not even listen to before; and he did so without delay. I could only advise them to adopt it.

Moreover, Dr. Sutherland, in writing to me from Glasgow, calls this scheme the "Dumfries Experiment," and, further on, "our experiment." Why such expressions if the thing had been already tried in Edinburgh and Leith, or any other place?

I regret that there should be the least uncasiness or doubt in the mind of Dr. Sutherland regarding this matter; but I shall still maintain my claim to whatever merit is due to the individual who first advised the division of a town into small districts, with a medical officer to each, whose duty should be to visit the poor daily, for the purpose of discovering the premonitory symptoms of cholera, and at once prescribing for them, as the most likely means for arresting the progress of that fearful disease, until something more satisfactory than Dr. Sutherland's letter is produced.—I am, Sir, your obedient servant,

ARCHIBALD BLACKLOCK.

[With reference to this subject, we have made some inquiries since our last, the result of which has an important bearing on the question at issue. It will be recollected that the special instructions from the General Board of Health, and from which so much benefit resulted, were served on the Inspector of the Parochial Board on the 11th December. These regulations were nine in number; and the first four are as follows:—

1. That the Parochial Board divide the parish into nine districts.

2. That to each of these districts they appoint forthwith two competent medical officers.

3. Each such medical officer shall forthwith make house to house visitation, once each day at the least, and at such other times as he may be directed or find convenient to visit throughout the district assigned to him; and on such visits he shall inquire as to the instances of diarrhoea and premonitory symptoms of cholera.

4. Each medical officer shall carry with him medicines for the treatment of diarrhoea, and premonitory symptoms of Asiatic cholera, and also of cholera itself; and shall on the spot administer the medicines, where he shall see occasion, to any person or persons whom he may find afflicted, and direct the further treatment of the person, either by removal to a house of refuge or by regimen, as he, the medical officer, may deem necessary.

It is quite clear that these special instructions must have been issued in consequence of advice from Dr. Sutherland; and, as they are dated *London, 9th Dec.*, Dr. Sutherland must have formed his plan, and applied to the Board for powers to enforce it on the 7th, and before the evening of that day. He must, therefore, have abandoned the idea of visitation by clergymen and other parties the very next day after proposing it, doubtless, in consequence of a fuller knowledge of the actual circumstances and exigency of the case. The mode of visitation by clergymen was never put in practice; but the medical staff set to work as soon as it was reinforced, and the complete system established when the special instructions and farther complement of medical officers arrived.

While, therefore, Dr. Blacklock is entitled to the full credit of seeing for himself the advantages of the visitation system by medical officers, putting it in practice, and recommending its general adoption, these facts lead to the conclusion that the plan must have been familiar to Dr. Sutherland, previous to his arrival in Dumfries where its benefits have been so signally apparent.—*Ed. D. G. C.*]

GLASGOW, 4th Jan., 1849.—SIR,—In your paper of Tuesday last I perceive you have attributed to a suggestion of Mr. Blacklock, the use of the system of house to house visitation in Dumfries. This is a mistake, as you will find from the first Notification of the General Board of Health, bearing date, October 5, 1848, in which the indispensable necessity of the practice is clearly

laid down, and the method of carrying it out pointedly indicated. Moreover, Dumfries was not the first parish to which it was applied. For it was made matter of special regulation, not only to the parishes of Edinburgh and Leith shortly after the cholera appeared, but also to several other places. The idea which occurred to Mr. Blacklock, and to which you refer, is, therefore, not new, and has, besides, been put in force by other medical men elsewhere; but I am sorry to say that no adequate advantage resulted from its partial application. The great value of the Dumfries experience arises from the fact that, in the peculiar circumstances of the case, the General Board of Health felt it necessary to issue such special regulations as placed the town under a complete system of sanitary supervision, and that nothing was left optional.

The house to house visitation was one part of a whole, every detail of which had been arranged in my own mind before I had the pleasure of Mr. Blacklock's acquaintance; and there was no one portion of it which had not previously been more or less effectively in use elsewhere. The only thing borrowed was the division of the town into nine districts, which was copied from a placard issued by the Parochial Board; because it was deemed advisable to adopt existing machinery as far as possible.—I am, Sir, your obedt. servant,

JOHN SUTHERLAND.

[From the Notification of the General Board of Health, of 5th October.]

"It will be indispensable, therefore, on the first outbreak of cholera, that the local authorities should immediately make arrangements for daily house to house inspections of the poorer localities in their respective districts; this being the only practical means by which, in the most dangerous situations and among the most susceptible subjects, the existence of the premonitory symptom can be ascertained in time to administer the proper remedies, so as to arrest the progress of the disorder.

"Heads of families, masters of schools and workhouses, proprietors of large establishments and works, such as factories, mines, warehouses, wharfs, and docks, should either be their own inspectors, or employ some trustworthy agent to examine daily every person in their employment, and to give at once the proper remedy, if the premonitory symptom should be present.

"Each member of the Visiting Committee should be provided with proper remedies, prepared in appropriate doses for administration on the spot, in every instance in which the premonitory symptom is found to exist; and should report every person so treated as requiring the instant attention of the medical officer."

[The remarks alluded to by Dr. Sutherland were made by us because we believed that Dr. Blacklock originated the idea of the visitation system, and deserved high credit for so doing. We are quite certain that Dr. Blacklock was ignorant of the facts stated by Dr. Sutherland, as to its previous operation, or he would not have given out the idea as original.

We regret that any doubt should exist on this subject; but it seems proper to state that the visitation scheme proposed by Dr. Sutherland, on the 7th Dec., when he arrived here, was, in his own words—"It was of the utmost importance to organize a system to secure the earliest inoculation, and supply the means of prevention, which, in his opinion, would be better done by the citizens themselves than by paid officials. Clergymen, assisted by other benevolent men, would be the best parties to intrust with this important duty." This is what may be called an amateur system of visitation, similar to that which is recommended in the directions by the Board of Health. On the 9th, however, Dr. Sutherland abandoned this plan, and arranged that the inspection should be made by the medical staff.—*Ed. Dumfries and Galwey Courier.*]

On the Pathology and Treatment of Tetanus.—By R. B. TODD, M.D. F.R.S.; Delivered at the Royal College of Physicians, London.—The next subject to which I shall beg your attention, is the pathology of those convulsive affections, of which tetanus is the type.

We have very satisfactory means of demonstrating that in tetanus the phenomena are dependent on a peculiar state

of the nervous system, as it is so easy to produce all the phenomena by the application of stimulants to the spinal cord.

Thus by successive shocks from the magneto-electric machine, transmitted through the spinal cord, the state of tetanus may be produced, and it will remain for some time after the current has ceased to be transmitted. If similar shocks are passed through the chief nerve of a limb, a similar tetanic condition of the muscles immediately follows, but it ceases *instantly* the transmission of the current is discontinued.

So, also, the administration of a few grains of strychnia will produce tetanus; and in cold-blooded animals, as in the frog, opium will also develop tetanus, but in a less degree than strychnine.

The phenomena developed by the transmission of a rapid series of galvanic shocks through the spinal cord, are not to be produced by stimulating any other nervous centre in the same way. You may apply the galvanic power to any part of the brain, only keeping clear of the centre of implantation of the nerves, and you will fail to produce any tetanic phenomena whatever.

The most striking proofs may be obtained to show that the spinal cord is the seat of excitation in poisoning by strychnine. If you give an animal strychnine so as to produce tetanus, you may pith him, and yet the tetanic state will continue. Or in a cold-blooded animal (in which the nutrient actions, although more feeble, are more enduring), if you pith the animal first, and then administer strychnine, the tetanic state will nevertheless come on, and last for a considerable time; but the moment you destroy or remove the spinal cord, that instant all rigidity of muscles disappears, and the stiffened limbs become immediately relaxed.

And it is very remarkable that while, by the introduction of a minute quantity of a particular alkaloid, or, in cold-blooded animals, of opium into the blood, you can produce the state of tetanus with great facility,—it is very difficult, if not impossible, to obtain tetanic symptoms by wounds inflicted for that purpose, even in the most highly sensitive parts; a fact of much interest in reference to the frequent endemic occurrence of tetanus, and of other convulsive affections of a tetanic kind, and tending to show that a particular state of the blood is favorable to the development of tetanus.

The symptoms of tetanus as it affects man and some of the lower animals, the horse for example, so precisely resemble those of the disease as it is artificially produced, that it is impossible to resist the conclusion, that not only the part of the nervous system affected, but also the nature of the affection, must be the same in both (if I may use the distinction), the artificial and the natural disease.

The part of the nervous system affected is clearly the spinal cord, and at least the greater part of its intracranial continuation, the medulla oblongata; and it seems highly probable that the interior horns of the gray matter of the spinal cord and the centres of implantation of the encephalic nerves, are more particularly affected.

And the nature of the morbid process is not one of inflammation, nor does it arise, out of any alteration in the *quantity* of blood flowing through the cord; it is not due to any congestive state, nor to any anæmic state: it consists of an exaltation in the special property of the nervous matter; an exaltation in the generating power of that portion of the great nervous battery in which the chief cerebro-spinal nerves are implanted: in short, it is a state of exalted polarity of that centre, produced either by the extension of a similar polar state, developed at the distal extremity of some nerve, or by some modification of the nutrition of the cord caused by the development in the blood of a material having similar properties to that of the alkaloid, strychnia.

Or, in the language of physics, the exalted polar state of

the battery is due either to an altered condition of its generating and conducting plates, or to an increased activity of the fluid by which they are excited—perhaps, indeed, to both.

Such, then, is the pathology of tetanus. A man receives a wound—this wound occasions an irritated, a polar state of certain nerves,—and this polar condition is communicated by a process of induction to the whole spinal cord, which, by some modification of the nutrition of the cord due to some altered state of blood, assumes that state the more readily, and retains it the longer.

Unless we admit that the blood has some share in the production of the phenomena, we shall fail in explaining the occurrence of tetanus without injury, or the tetanus of infants, but more especially we shall fail in explaining its greater proneness to be developed in certain localities, or in certain states of atmosphere and climate.

And surely the fact to which I have already adverted, of the much greater facility of inducing this polar state of the spinal cord by the introduction of certain substances into the blood even in almost infinitesimal quantity, than by mere mechanical irritation of the nerves, strongly points to and favors the conclusion, that a change in the natural condition of the blood may greatly promote, if not wholly cause, the development of the tetanic state; and this change in the blood may be caused either by the introduction into it of some new material from without, or by the generation within it of some new matter possessing highly poisonous qualities.

All that I have said respecting the clinical history of the trismus masentium, and of laryngismus stridulus, shows that these diseases must be precisely similar to tetanus in the essential points of their pathology.

The trismus, indeed, is only a very acute form of tetanus, and its endemic character, and its proneness to occur under circumstances unfavorable to free ventilation, and good general nutrition, are highly confirmatory of the view I have ventured to advocate of the probable influence of a morbid state of blood in promoting the polar state of the spinal cord and medulla oblongata.

Laryngismus differs from tetanus in the fact that the polar state of the nervous centre is less permanent, and that the medulla oblongata is more affected than the spinal cord. In tetanus, the spinal cord is more affected than the medulla oblongata. The proximity of the medulla oblongata to the centre of emotions, explains the extreme excitability of children suffering from laryngismus by mental emotions.

In laryngismus, there is nothing whatever of an inflammatory nature, nor is there anything of a congestive kind: it is most important that practitioners should be well impressed with this fact.

Whatever congestion may arise in the nervous centres is venous, and is caused by the convulsive paroxysms, which impede respiration, and consequently delay the return of the venous blood. It is, then, an effect and not a cause of the convulsive state.

We have in laryngismus only an exalted polarity of the nervous centres, caused either by peripheral irritation, as that of dentition, or by a morbid blood produced by imperfect feeding, artificial nursing, bad air, neglect of cleanliness, or associated with a highly scrofulous diathesis.

These views of the peculiar condition of the spinal cord in tetanus and the allied affections, were, so far as I know, first put forward by Dr. Marshall Hall, to whom science is under great obligation for the introduction of sounder views on many points in the application of physiology to pathology. That distinguished physiologist, with whom I regret to find myself at variance on many points, in an interesting and valuable essay on convulsive affections, makes these remarks:—"Tetanus and hydrophobia consist in an induced spinal erethismus, the paroxysms consisting of augmented

or excited spasm, from external excitants. The infant, under the influence of what I will designate the convulsive tendency, susceptibility, or erethismus, may therefore be compared to the patient attacked by tetanus. The causes are similar—irritated nerve, inducing spinal erethismus, and great susceptibility to excited reflex actions; the effects are analogous—tetanoid affections.²⁹

Hitherto the various plans of treatment pursued in tetanus have received but a small amount of success. I am inclined to attribute their failure partly to the fact that practitioners have not sufficiently kept in view the important point, that death takes place, not by any disorganisation of important vital organs, nor by the destruction of processes essential to life, but by the exhaustion consequent on the frequent renewal of the paroxysms of tetanic convulsions,—and partly, also, to this fact, that our treatment has been hitherto so empirical, that no definite plan seems ever carried out with sufficient fixedness of purpose in a sufficiently large number of cases.

The pathology and clinical history of tetanus point out three objects which the practitioner ought constantly to keep in view in the treatment of it.

1. To support the strength of the patient as much as possible, so as to oppose the exhausting effect of the convulsive paroxysms.
2. To remove all possible sources of irritation or of deprivation of the blood, in vitiated secretions, bad diet, impure air.
3. To diminish and reduce the exalted polarity of the nervous centres to their normal condition, and, if possible, to effect this by means which will not exhaust or reduce the powers of the patient.

Now, the first indication is of primary importance: if the patient can be duly supported, we gain time, and we have abundant proof that the natural powers of the system are often capable of doing the rest without any assistance from art.

To accomplish this object, the practitioner should set himself diligently to devise means of giving nutriment and stimulants in the manner in which they may be most readily assimilated. As a general rule, this may be done best by giving them frequently, and in small quantities; and it is wonderful how much may be taken in this way if they are only administered with care and judgment.

Any process of depletion—by loss of blood, or by evacuations of any kind, carried to a great extent, would be highly objectionable, as being calculated to oppose the object in view.

In addition, then, to the various articles of food best adapted to the assimilating powers of the patient, and also to wine, or other alcoholic stimulants, the practitioner ought not to withhold the liberal use of quinine, ammonia, iron, or other drugs, which experience tells us exercise a tonic power over the system in general,—and he may give them in large doses.

The second point may be best attained by means calculated to promote the various natural secretions, especially those of the bowels, skin, and kidneys. But in administering remedies for these objects, care should be taken not to use those of a violent and irritating nature: drastic purgatives should be avoided; too profuse sweating or diuresis should be guarded against; and the practitioner should bear in mind that the object is to alter and improve, not to pull down.

To obtain the third object—namely, to reduce the polarity of the spinal cord, is at once the most important and most difficult. The various sedative remedies—opium, hydrocyanic acid, belladonna, conium, tobacco—have been fairly tried and failed. Opium is not a sedative to the spinal cord; its use in tetanus may be laid aside excepting in small doses as a sudorific. In cold-blooded animals it exalts

the power of the spinal cord, and it is not impossible that in warm-blooded animals it may have a similar tendency: it is, therefore, a remedy of little value in tetanus, save as a sudorific, and in large doses it may be of an injurious tendency.

Neither is hydrocyanic acid a sedative to the spinal cord; on the contrary, it tends to produce epilepsy, and to excite the polar state of the cord by induction from the brain.

Belladonna has a decidedly sedative influence, but it disturbs the action of the brain so much, that it is not a safe or manageable remedy. The same may be said of conium. Tobacco undoubtedly reduces the polar state of the cord, but it produces at the same time a state of fearful depression. It is likewise an unsafe and not a manageable remedy. I have seen more than one patient die, cured of tetanus, under this remedy.

There are two agents which certainly exert a considerable power over the polarity of the spinal cord, which have not yet been tried sufficiently fairly, and which I think fully deserve to be put extensively to the test of experience. These are—cold and chloroform.

Of cold I can speak favorably from my own experience; I have tried it by the application of ice in ox gullets to the spine, taking care to renew them frequently. I have adopted this practice in tetanus, and in convulsions in which the spinal cord was much involved, and in other more partial states of exalted polarity of the spinal cord, and with a sufficient amount of success to justify me in forming a very favorable opinion of the powers of cold as a depolarizing agent.

In order to give the remedy a fair trial, great vigilance is required on the part of the attendants of the patient to renew the bladders very frequently, otherwise they become elevated to the temperature of the body. This should never be permitted, as it is only by the long-continued application of cold that the spinal cord can be reached by it.

Another point which the practitioner who uses cold in this way must keep in view is, that when the cold fairly reaches the cord, its influence is shown by a marked depression of the action of the heart, which leads to general depression and debility. During the application of the bladders in this way, increased vigilance will be necessary in the administration frequently, and at short intervals, of nutritious and stimulant substances.

Sometimes the depression of the heart's action reaches a point below which it would be unsafe to suffer it to go. Under these circumstances the ice must be removed, and kept off until the heart in some degree recovers itself, when it may be resumed. Thus by removing and reapplying the bladders from time to time, the influence of the cold may be kept up sufficiently long to produce a favorable effect upon the cord without producing such an amount of depression as may operate to the disadvantage of the patient. But to carry out this plan, great vigilance, and care, and judgment will be needed on the part of the practitioner, in order that all precautions may be duly observed, and that the patient may be encouraged to persevere in the use of a remedy which involves some degree of personal discomfort.

Of chloroform, in tetanus or tetanoid affections, I have no experience. Two years ago, however, I performed some experiments, by which I satisfied myself that the analogous agent, ether, when introduced into the system by inhalation, exercised a most powerful controlling influence over the polar state of the cord, as induced by strychnine.

In these experiments I found that previous etherisation retarded the polarising influence of the strychnine; and that, after poisoning by strychnine, life might be prolonged for a considerable time by the administration of ether.

A guinea-pig was thrown into tetanus by a quarter of a grain of strychnine: immediately the tetanic symptoms showed themselves, he was etherized; the state of tetanus

immediately passed off; in a short time, however, it recurred, and was again controlled by ether; and by thus repeatedly etherizing the animal when the tetanic symptoms reappeared, life was prolonged for many hours, whereas another animal of the same size, and poisoned at the same time by the same dose, but not etherized, died rapidly.

These experiments illustrated in a very striking manner the antagonistic power which ether (and chloroform, as possessing identical virtues) can exert over the polarity of the cord. The great point which ought to engage the attention of practitioners in the application of these agents to the treatment of such cases as tetanus, is to know how to avail themselves of its depolarising power, and at the same time to guard against the injurious effects of its depressing influence. Chloroform weakens the force of the heart,—sometimes diminishing, at other times increasing the frequency of its action. Hence, while administering it in tetanus, we shall find it necessary to use with increased diligence the means calculated to uphold our patient's strength; and we must take care that the sleep of chloroform does not prove to him the sleep of death, by depriving him too long of those supplies which alone can counteract the destructive asthenia.

In the absence of any experience of the use of chloroform in tetanus, I should advise that a patient be not kept under its influence for any length of time, and that if, after the administration of it, and after its more profound effects have passed away, he should continue to sleep, the sleep should be interrupted at intervals of an hour or of half an hour, according to his strength, in order to administer support. If the patient does not sleep after the administration of the chloroform, and if the effects pass off, then it should be administered a second time, and a third time; after which several hours should elapse before it is again administered, and then it should be given in a similar manner, taking care that it be given not more frequently than at three, or, at most, four different periods in twenty-four hours.

These suggestions, however, are prior to experience: they want the support or the modification which observation only can give, and I should not venture to offer them were it not that it seems to me of great importance that we should not discard an agent so powerful as chloroform, against certain morbid states, without giving it fair play, sifting its merits and demerits, and employing it in various ways, so as, if possible, to secure the benefit of the former, and to guard against the disadvantages of the latter. In some of the cases of tetanus in which I have heard of chloroform being employed, it has seemed to me that the patient was kept too long under it at once,—that its renewal was at too short intervals,—and that sufficient precautions were not taken to counteract its depressing influence.—*London Medical Gazette*.

MIDWIFERY.

Mental Influence of the Mother on the Child—By BUTLER LANE, M.D.—The mental influence of the mother on the fetus was fully believed in the olden times, though discredited by medical philosophers of the present day; but general rules may admit of exceptions, and the occasional asserted instances of transmission to the child of maternal mental impressions, which come under the notice of medical practitioners, might be worth some investigation, though almost invariably shunned from the dread of the imputation of credulity or scientific heresy.

The case which I am about to mention certainly presents the semblance of a result of maternal mental influence rather than that of coincidence; and as I can vouch for the facts, they may perhaps be deemed worthy of record.

On the 24th of last October, I attended Mrs. A. in her confinement with her fourth child. The labour was natural, and she

gave birth to a fine boy, who, on examination, was found to suffer severely from hare-lip and cleft palate towards the left side of the mesial line. The former children were perfect. Mrs. B., who I then considered fully six months advanced in pregnancy, saw the child from motives of curiosity. She informed me that she experienced no feeling of alarm, though somewhat surprised at the morbid appearance. I believe she saw the child accidentally on two or three subsequent occasions.

On the night of February the 1st, she herself gave birth to a very fine healthy female infant, quite perfect, but from the septum of the nose extending downwards to the left of the mesial line, and through the thickness of the labial convexity, the outline of a hare-lip was perfectly distinct; on and near the nasal septum small clots of varicose capillaries formed the apex of the figure, the outline then continuing downward with dark lines, and through the thickness of the labial margin a livid hue distinguishes the marked surface from the normal structure. The hard and soft palate are perfect and natural. The child is now a fortnight old, and the mark has faded considerably, and I hope will not disfigure it hereafter. If we are to recognize cause and effect in this occurrence, it will be interesting to bear in mind the period of pregnancy at which the impression was made. Admitting a nervous connection between the mother and the fetus, that connection would doubtless become stronger after the middle of pregnancy, if indeed it may not be supposed first to date from thence—viz., the period of quickening, when the fetus is first endowed with motor power. In other cases of supposed maternal mental influence which have come within my notice, the impression has occurred subsequently to the period of quickening. This I should be inclined to anticipate. At the earlier periods of utero-gestation, while the fetus is as it were parasitically connected with the mother, its existence is most precarious, and its destruction is very apt to ensue from any severe maternal shock; but at the later periods, the being of the fetus is more certain and independent, and then probably it is that the vital stimulus is transmitted by a nervous channel as well as in mere connection with the sanguinous current. If we allow the occasional occurrence of maternal mental influence on the fetus, it would also be a matter of curious speculation as to the circumstances under which it is liable to occur. I do not believe it to be always ascribable to violent mental influence; in the present instance such was not the case, and the mother is a very sensible woman, of lively and cheerful disposition, but not of very excitable and imaginative temperament; there was merely the visual impression combined with some degree of curiosity and surprise.—*Prior. Med. & Surg. Journal*.

[A case somewhat similar occurred in our own practice a few months ago. A lady, then about six months pregnant, went on a visit to Quebec with her husband. One night he was attacked with night mare. His wife, awakened with his cries, rose for the purpose of lighting a candle, and in passing the foot of his bed, got a violent blow from his foot on the right eyebrow, producing extensive ecchymosis. On their return, she frequently alluded to the circumstance, expressing her fears that the infant would be marked. I found it impossible to remove from her mind the impression under which she laboured. The child was born at its maturity, and a tumour has existed from the time of its birth over its right eye, on the superciliary ridge, requiring for its removal a trifling operation. This case, like Dr. Lane's, is, to say the least, a strange coincidence.—Ed. B. A. J.]

New Sign that a Child has been Born Alive.—Dr. Virchow has announced that the presence of uric acid in the kidney, which may be detected with the naked eye, is conclusive of a child having been born alive. His conclusions are—

1. That uric acid deposit is never found in children born dead, or who have died within forty-eight hours after birth.
2. That the deposit does not occur before forty-eight hours after birth.
3. That it is not generally found later than the twentieth day after birth.—*Medical Times*, January 20.

MATERIA MEDICA AND CHEMISTRY.

Researches on the Principal Metallic Poisons, and the Mode of Ascertaining their Presence. By M. ABRUE. Read to the French Academy, &c.—It often happens that persons called upon to make toxicological examinations of substances entrusted to their care, regret the absence of a positive and unique method to serve as a guide when they are entirely without any indication as to the direction which should be given to their research.

Indeed, the treatises on toxicology which, in other respects afford so much valuable information on the research after poisons, often leave the reader in a state of the most serious embarrassment, in proposing to him for each poison various processes, differing very much in value, and of a very dissimilar kind.

Hence arises a grave inconvenience. The investigator who wishes to ascertain with accuracy the presence of a poison in the suspected matter under investigation, finds it necessary to make so many experiments before he can in any way arrive at the probable nature of the poison for which he is searching.

This void we have endeavoured to fill as far as concerns the principal metallic poisons, and to bring the medico-chemical operations to the point of a single problem of analytical chemistry:—*One or more metals being given in the contents of an organic matter to determine their nature.*

To arrive at a solution of this important problem, we have passed successively in review the different well-known methods which up to the present time have been proposed for the special research of each metal.

Struck with the distinctness of the results obtained in the research after antimony, by the process of M. Millon, which consists, as is well known, in destroying the organic matter by the combined action of hydrochloric acid and chlorate of potash, we have conceived the idea of drawing up the basis of a general method, and have arrived at a modification of this process in such a manner, as not only to extend it to the research after all the principal poisons, but still more completely to disembarass us of the organic matter.

This method comprehends the compounds of the following metals:—

Arsenic	Mercury	Tin
	Copper	Zinc
Antimony	Lead	Silver.

The operation will be as follows:—Analysis of the solid matters found in the stomach, the matters vomited, and if the stools, the tissues of the gastro-intestinal canal, the liver, and other organs, or any other suspected solid matter, the blood, the urine, and other organic liquids, previously concentrated at a gentle heat.

The investigator should first attentively examine by the naked eye, or better still, by a glass, the substances passed in the vomits and the stools, the matters found in the digestive canal, and the mucous surface of the same canal. He may thus in some cases furnish himself with valuable indications, which will put him in the way of research, and it is possible, as is sometimes the case, that he may find in the digestive canal, and particularly in the folds of the mucous membrane, solid particles of the poisonous substance.

In this last case, he must carefully remove, by means of a small pencil, the particles of poison, and hasten to examine them by the ordinary methods; but supposing that no important indication results from this physical examination, he must proceed as follows in the research of the poisons comprised in the above table.

With very clean scissors dividing the suspected matter into very small portions, take a given weight, which should never be less than two hundred grammes (about seven oz.) and introduce it into a glass flask, with one half its weight

of pure and smoking hydrochloric acid. At the neck of the flask is to be adapted a cork, perforated with two holes, of which the one is destined to receive a tube of fifty-five to sixty centimetres (twenty inches) in length, and one centimetre (three-eighths of an inch) in interior diameter, dipping an inch in hydrochloric acid. From the other opening arises a tube bent back at a right angle, of which the second vertical branch plunges through a cork into distilled water contained in a receiver. The cork of this is furnished with a second hole destined to receive a straight tube which will not plunge into water.

Things being thus arranged, the flask is placed on a sand-bath, and the receiver in cold water changed from time to time; the sand-bath is maintained at a temperature near the boiling point of the liquid, without reaching that point, during at least four hours, agitating the contents of the flask from time to time.

The fragments of organic matter gradually dissolve in the hydrochloric acid, and at length form with it a dense, homogeneous, and more or less dark liquid. Remove the sand-bath, and place the flask on the naked fire, and boil the liquid during two or three minutes. This done, commence to introduce by little and little, crystals of chlorate of potash by the larger tube (taking care to agitate the flask continually) until about sixteen to eighteen grammes have been added for each one hundred grammes of the suspected matter under examination.

A vivid reaction and abundant disengagement of chlorine gas takes place; the liquid gradually clears, and at last becomes completely limpid and of a yellow colour, the intensity of which, varying much in its shades of colour, appears to depend especially on the great excess of chlorine which remains in solution, and not only the liquid in the flask, but the water in the receiver exhibit in a high degree the characteristic odour of chlorine. Small fragments of carbonaceous matter and of a resinoid substance float on the surface of the liquid in the flask, which are less abundant in researches on the blood, and is very abundant when the operations are conducted on the liver and other parenchymatous organs.

Allow the apparatus to cool, filter the liquor in the flask and mix with the water in the receiver, and that which has served for several washings the residuum which remains in the filter. Pass a current of well washed sulphuretted hydrogen through the liquid for some time, and allow it to remain until the next day in a closed bottle. In every case there will be formed a precipitate more or less abundant in which should be sought for all the metals comprised in our table, except silver and zinc. The precipitate may nevertheless contain only sulphur and a small quantity of organic matter, which may be got rid of in the following manner:—Throw the precipitate on a filter without folds, wash with distilled water, and put it into a small flask with its weight of pure and fuming hydrochloric acid; boil, and add a few crystals of chlorate of potash. When the reaction is over add a small quantity of distilled water, and apply heat with much precaution to drive off all the free chlorine. Filter again, and thus a limpid, scarcely yellow coloured liquid will be obtained. It is in this liquid that arsenic, antimony, mercury, copper, lead, and tin is to be found, if the suspected matter contain either of these substances. As to the zinc, as it is not precipitable by sulphuretted hydrogen from an acid liquor, this metal must be sought for in the liquid obtained by filtration after the action of sulphuretted hydrogen. As silver can only be found in an insoluble state, it must be sought for in the residue of the first filtration.

After having thus described our process, we pass to the examination of the most sensible methods for ascertaining the presence of the different metals contained in the above table, endeavouring to avoid all the causes of error which

are likely to arise. In the liquid obtained in the last place, we search simultaneously for arsenic and antimony by means of Marsh's apparatus, as modified by the Academy of Sciences: we then pass to the research after mercury, copper, lead, and tin, in the liquid contained in the apparatus, after having dissolved in *agua regia* all that is deposited at the bottom of the bottle. As for zinc and silver, the first must be sought for in the liquid obtained by filtration after treatment with sulphuretted hydrogen; and the second in the residue of the first filtration. We have often operated on two milligrammes (1-38th of a grain) mixed with considerable quantities of animal matters.—*Dublin Med. Press*, Oct. 18, from *Pharmaceutical Journal*

MEDICAL JURISPRUDENCE.

Important Inquiry at Maryport.—The inquiry into the death of the young man, Wilson, the particulars of which appeared in our paper of last week, was resumed by Mr. Lamb, the coroner, on Monday last. The strong feeling which existed in the town was not diminished by the adjournment, and the large Court House was literally crammed with spectators to hear the proceedings. On the preceding days, John Wood, the accused party, had not deemed it necessary to employ any solicitor in his behalf. On this occasion Mr. Christian appeared for him. The evidence of the medical men was carefully recapitulated on this occasion.

Mr. Pearson was first called, and after detailing the facts given in our last, he spoke of lobelia inflatus, which John Wood avowed having administered to deceased. Lobelia is a poison of the nature of tobacco; 20 grains should be given with caution. I consider 60 grains a very dangerous dose to a person in health, and more so to an invalid. From all that I have witnessed, both before and after the death of deceased, also from what I observed at the post-mortem examination, I consider the death accelerated by lobelia. I have never administered lobelia, nor have I seen it administered. I have never before seen any one who had been poisoned by it. 180 grains was given to Wilson. I consider a person taking such a dose might survive three, four, or five hours. In a subsequent part of Mr. Pearson's evidence he says, my opinion is, had the deceased not taken lobelia his malady was of such a nature that he was not likely to recover. Mr. Curtis said he was induced to see the deceased Wilson, in company with Mr. Pearson, a short time previous to his death. The appearance of deceased was altogether that of a person who had taken poison or some deleterious drug. His disorder was a very stubborn case of constipation of the bowels. He received no relief from our treatment.

Mr. Curtis then went into the particular appearances that presented themselves at the post-mortem examination. From what I observed I am of the same opinion as the last witness, that the death of the deceased had been accelerated by lobelia.

Cross-examined by Mr. Christian—I would consider 60 grains a very dangerous dose, and, of course, 120 doubly so. Appearances similar to those presented in the stomach of the deceased would be produced by cayenne pepper and other drugs. Had I seen the body at the post-mortem examination for the first time, and not known what had been administered, I should have been very cautious in giving it as my opinion, that the deceased had died from the effects of lobelia. Mountain flax and yarrow tea I consider no way deleterious.

Mr. Symes, also a medical practitioner—I entirely concur in the medical testimony which I have heard as to the cause of death of Thomas Wilson.

Cross-examined by Mr. Christian—I never have seen lobelia administered as a medicine, nor have I ever before witnessed its effects. All I know about it is derived from medical books, not from actual experience. I should think 60 grains a dangerous dose.

Mr. Christian now addressed the jury in defence of Wood, the accused. He regretted that he had not been called upon till the

eleventh hour, when it was impossible for him to do that justice to the accused which he felt satisfied his case was capable of. The evidence of the medical men who had been examined was any thing but satisfactory and conclusive, for he would prove by most respectable witnesses that whatever they might know of the medicines they administered, they were profoundly ignorant of this lobelia inflatus, and its effects on the human system. Mr. C. having commented on the hesitating and sometimes unintelligible manner in which the medical testimony had been given, contrasted with the open, manly, and candid avowal of Wood himself, he impressed upon the jury the necessity of their giving the evidence on both sides their due attention, for if his client had been guilty of so grave an offence as alleged, they should not be satisfied with slight evidence. On the other hand, he would prove to them by two witnesses—he might call twenty—all of whom would tell them that the same lobelia inflatus had been frequently taken by them, not in mere grains, but in drachms. They would do well to consider that all the evidence against the prisoner was hearsay, or derived from medical books of the old school, while the evidence he was about to call was that of eye witnesses to the fact of its effects—persons who had taken it repeatedly, and with the best results. He then called

James Brooker, ship carver—I have seen lobelia, and know well what it is. I have taken it—two large spoonfuls at a time, and repeated this within two hours, adding half a teaspoonful; in all, not less than 270 grains! And this I took with beneficial effects. I have also seen my wife take it at various times, and always with beneficial results.

Edward Smith, a stonemason—Two years ago I was very ill and had advice and medicine from Dr. Pearson and Dr. Curtis, but received no benefit. I then applied to Dr. Coffin's agents, when Mr. Pearson told me I was in a consumption, and would not live many days, adding, that Dr. Coffin had coffined many a one and would coffin me. I have taken lobelia—four teaspoonfuls (240 grains) within two hours, and with good effect. I never felt ill after taking it. I ascribe my recovery entirely to Dr. Coffin's medicines. I have taken lobelia more than once, and I should not hesitate to take a few spoonfuls now before the jury.

Mr. Curtis declined calling any more witnesses, as he deemed the case for Wood clearly established, though twenty were in the room who were ready to give similar testimony to the two last witnesses.—The Coroner then summed up the evidence with the utmost fairness, clearness, and impartiality. He begged the jury to dismiss from their minds all prejudice, and give so serious a case their most anxious attention. After recapitulating the various points on both sides, he complimented Wood, the accused, for his straightforward, open, and plain statement of the facts, though this witness had been duly cautioned not to say any thing calculated to erminate himself. In commenting on the medical testimony, the jury were called on to consider its harmony as to the nature of the drug administered by Wood—causing the death of Wilson—but at the same time they were at liberty to infer that such evidence might, in some degree, be influenced by the consideration, that this was a rival system of medicine, that the regular practitioners might be supposed to regard with jealousy, lest it trench upon their own practice. There was no difference whether the person who administered in error of judgment medicine which produced death, being a qualified or unqualified person. In either case it was manslaughter. They had heard the evidence adduced on both sides, and it was for them to consider on which side that evidence preponderated; and, if they had any doubt in their minds, it was their duty to give the accused the benefit of that doubt. If they found that this John Wood had administered a drug, which they at the same time were satisfied had caused the death of the deceased, then he was clearly guilty of manslaughter. But if, on the contrary, they found on the evidence that no such quantity as was administered by Wood, could produce death, then they would be bound to acquit the accused of the charge brought against him.

There were 13 jurymen, and after about three hours deliberation, 12 were brought to be unanimous in a verdict of manslaughter—the thirteenth strongly protesting against it. Wood was committed to Carlisle on the Coroner's warrant, to take his trial at the next assizes. The consternation at the result has not yet subsided.—*Provincial Paper*.

THE
British American Journal.

MONTREAL, JUNE 1, 1849.

THE PUBLIC HEALTH.

The sanitary condition of the various cities in Canada, should, at the present moment, be an object of prime solicitude. No one can predict the time when Cholera, that scourge of the human family, will appear amongst us; and certainly no one can say that its advent is not certain. In time of peace to prepare for war is an axiom with all governments, and, *mutato nomine*, in time of health to prepare for disease, would appear to be an axiom equally founded on prudence and wisdom. We are not alarmists; but when we consider that the Cholera has appeared in the United States, and advanced northward as far as Cincinnati and Chicago, on the high road to the cities of the Western Province on the one hand, and that a vessel left Limerick, a large proportion of the passengers in which died of Cholera, its progress in the mean while providentially stayed as far as this route is concerned; when we consider that it has made its appearance at New York, a city in daily communication with this one, who can say that the fell disease will not visit us, and possibly decimate us as in 1832. We ask the question, should we not be prepared for its arrival? Should no sanitary precautions be observed? And finally, is it the proper time to adopt them when the disease has manifested itself, and its virulence has been aggravated by the dirt and filth which furnish a nidus for its incubation and its propagation, and which might have been removed at a more opportune period. Yet opposed to common sense and ordinary reason, as would be the negative answers to these questions, the Executive authorities are acting upon these assumptions. The Bill for "Preserving the Public Health" has received the sanction of the Governor General, and is therefore Law. Why are its provisions not at once acted upon? Is it the time when the disease has broken out among us, that its clauses are to be put in force; or would it not rather be more characteristic of wisdom and prudence, to frustrate, as it were, the disease, and vanquish it in its malignity, by the removal of every circumstance favourable to its propagation? We hope that the Executive will ponder over these questions, and reply by acting in accordance with their obvious import. We agitate a question of no mean importance, and what is applicable to our own city is applicable to every city in the Province, and comes home to every inhabitant. A great deal requires to be done; and that is not the time for doing it when the disease has broken out, and is daily

numbering its victims. Let proper precautionary measures be *immediately* adopted. Let the Boards of Health issue their directions. Let the cities be *cleansed*, and this one particularly, for we believe none requires it more; and if the Cholera arrives, we will be prepared for it: but if, in accordance with the overruling ways of a gracious Providence, it should not, an incalculable degree of good will, to say the very least, have been effected. It is our duty to be prepared for the worst, under either contingency, for we have no right to expect an exemption from that fate which has attended the principal cities of Great Britain, and even of this continent. Two cases of sporadic Cholera, presenting a number of the features of the Algide variety, and terminating fatally—the one in twenty-one hours, the other in eight—have occurred during the last week in this city. Cases of a similar description occurred in anticipation of the epidemic in 1832. We hope that our authorities will profit by the warning.

THE ACT TO AMEND THE ACT OF INCORPORATION
OF THE PROFESSION OF LOWER CANADA.

The amendments to the Act of Incorporation of the Profession for Lower Canada, have passed the Legislature, and we are perfectly assured will meet the approval of every true lover of his Profession. They are, it will be seen, as liberal as it was possible to make them; and emanating, as they have done, from the Board of Governors, whose only desire it has ever been to reconcile the differences which at present divide the Profession, it will be at once seen that they have been in many respects most grossly misrepresented. The amendments speak for themselves, and require, therefore, no comment from us. It remains for the Profession, one and all, to enrol themselves in the Corporation *at once*,—to become a portion of it,—and by their example and their influence to fraternize all, that the Profession may become a united body, powerful for good to those who may follow in the same path in which itself is now treading. We hope to hear no more of the Repeal Association, its sayings and its doings. We have sufficiently exposed *their object*; and we think that the futility of their scheme has been amply demonstrated in the unanimous vote of the Legislative Assembly on the present amended Act. We beg of them now to cease an opposition,—which, if it still exist, must do so merely for opposition's sake,—and to join, heart and hand, in promoting the welfare and best interests of that profession to which its members belong. The following is the Act:—

An Act to amend the Act to incorporate the Members of the Medical Profession in Lower Canada, and to regulate the study and practice of Physic and Surgery therein.

Whereas it is expedient to amend in the manner hereinafter mentioned the Act passed in the Session held in the tenth an

eleventh years of Her Majesty's Reign, and intituled, "An Act to incorporate the Members of the Medical Profession in Lower Canada, and to regulate the Study and Practice of Physic and Surgery therein;" Be it therefore enacted, &c.

And it is hereby enacted by the authority of the same, That for and notwithstanding any thing in the second section or in any other part of the Act cited in the Preamble to this Act, all persons resident in Lower Canada, and licensed to practice and actually practising Physic, Surgery or Midwifery therein, at the time of the passing of this Act, shall be and are hereby declared to be Members of the Corporation of the "College of Physicians and Surgeons of Lower Canada."

II. And be it enacted, That upon, from and after the next election of the Board of Governors mentioned in the fourth section of the said Act, three of the six members of the said Corporation, who under the said section are to be elected Members of the Board of Governors, shall be taken from among the Members of the Corporation resident in the District of Three Rivers, and three from among those resident in the District of St. Francis; and that of the members of the said Board of Governors, eight shall be resident in the City of Quebec, and eight in the City of Montreal; and that at each election of the Board of Governors, every Member of the said Corporation shall have the right of voting by proxy.

III. And be it enacted, That after the passing of this Act, it shall not be necessary that a license to practise Physic, Surgery or Midwifery in Lower Canada be granted in any case by the Governor of this Province, but that from and after the passing hereof no person shall practise Physic, Surgery or Midwifery in Lower Canada, unless he shall have obtained a license from the Provincial Medical Board, who are hereby authorized to issue such license.

IV. And be it enacted, That after the passing of this Act, the seventh and eighth sections of the said Act shall be interpreted and have effect as if the words "certificate," and "certificate of qualification," were struck out of the said sections wherever they occur, and the word "license," were inserted instead thereof.

V. And be it enacted, That the said Provincial Medical Board shall have power to grant licenses without examination to such graduates of Universities in the United States as may have been practising in Lower Canada, for a period of not less than ten years, provided such graduates prove to the satisfaction of the said Board that they are of good moral character, and apply for such license, and produce the necessary testimonials and proof within one year from the passing of this Act.

VI. And be it enacted, That the penalty imposed by the ninth section of the said Act shall be recoverable with costs, and that the same may be sued for and recovered by the said College of Physicians and Surgeons of Lower Canada, by its corporate name, and being recovered shall belong to the said corporation for the uses thereof; and neither in any such suit or in any other civil or criminal action to or in which the said corporation may be a party or interested shall any member of the corporation be deemed incompetent as a witness by reason of his being such member.

VII. And be it enacted, That the words "a certificate to obtain a license," in the first paragraph of the tenth section, the words "a certificate for license," in the second paragraph of the said section, and the words "a (or 'the') certificate for license," in the twelfth, thirteenth and fourteenth sections of the said Act, respectively, shall be construed as meaning a license from the Provincial Medical Board under the provisions of this Act.

THE CHOLERA.

In Paris, up to the 7th May, there had occurred in the hospitals and infirmaries, 3620 cases and 1950 deaths. In the city of Paris there had occurred 916 deaths. The cholera has broken out in Dublin, Ballinador, Belfast, Galway, Kilkenny, Ballymagarret, Thurles, Tralee, Cork, Ballinasloe and Limerick, up to the latest advices. From the latter city a vessel sailed to Quebec, the Mary,

with 111 passengers, of whom only nine were saved, the rest died of cholera. The remaining passengers and the baggage have undergone quarantine at Grosse Isle. On this continent, the disease rages at New Orleans; in that city between the 3rd March and 21st April, it numbered 1007 victims. It still exists there. It has appeared at St. Louis, Cincinnati, Chicago, and New York. In the latter city, only a few cases have appeared within the last week. In St. Petersburg, between the 25th March and 10th April, there occurred 282 cases, of which 104 died. In London, during the week ending 21st April, only one case of Asiatic cholera occurred, which, however, proved fatal: it occurred at Whitechapel.

THE MANAGEMENT OF THE REPEAL ASSOCIATION.

DEAR SIR,—Will you be so good as to inform me, through the medium of your valuable Journal, or in such other way as you think best, how my name, or one which I suppose is intended to be mine, became attached to the petition of the Repeal Association, as I never ordered or gave permission for it to be placed there. Please add my name to the counter petition. Dr. J. C. Butler, of Dunham, also requests me to send his name to be placed there with my own.

I am, Sir,

Your obedient Servant,

T. R. F. HILDRETH.

Stanbridge, }
May 12, 1849. }

[We are not, and have never been, in the secrets of the Repeal Association; and we therefore know little or nothing of their manœuvring, beyond what events have unfolded. We are inclined to the opinion that Dr. Hildreth's name is not the only one which has been unauthorizedly employed—and we know, as a fact, that a signature was obtained in ignorance of the intention of the petition, and was paraded after a distinct disavowal, on the part of the same gentleman, by letter read at the meeting in Quebec, when the by-laws passed the corporation. Proceedings such as these are not creditable to any cause, and most assuredly require a full explanation. In a factious opposition to the college, the Repeal Association is agreed; but we have reason to believe, that they are by no means agreed among themselves as to what they do want; and certainly some among them do not even understand the intent of the bill proposed by themselves! One thing is perfectly clear, that they do not represent the Profession in its wishes or its wants; and that they possess not even the merit of representing the most influential portion of it. We say this without intending any disparagement to a few gentlemen whose names appear on the list, and whose design in countenancing it differs from that of a large majority, who would destroy, merely for destruction's sake.—ED.]

Conviction of Dr. Dill.—This person, whose arrest on a charge of rape, committed upon a young woman whom he was professionally attending, has been tried at the Hamilton Assizes, and found guilty. He stoutly denied his guilt to the last moment. He was condemned to suffer the extreme penalty of the law on the 8th June. We have little doubt that his sentence will be commuted to imprisonment in the Penitentiary for life, but if ever a wretch deserves the gallows, Dr. Dill does; for his crime was doubly heinous, when we consider the profession to which he belonged, and upon the morality of which he has thrown discredit.

Counter-Petition to the House of Assembly.—We have received instructions to add the following names to those on the lists previously published for this District:—Drs. T. R. F. Hildreth, J. C. Butler, R. H. Wight, and G. E. Johnstone. The letter of Dr. Hildreth will be found in another column.

Convocation at McGill College.—A convocation was held in the University Hall on the 5th of May, when the following gentlemen graduated:—

IN THE FACULTY OF MEDICINE.

Doctor of Medicine and Surgery.

Thesis.

Jules Maurice Quesnel, Brcancour, C.E.	On Asiatic Cholera.
John Nicholas Buxton, Terrehonne, C.E.	On Syphilis.
Moses Sabourin, Montreal, C.E.	On Typhus Fever.
Francis Challinor, Montreal, C.E.	On Epidemic Cholera.
Thomas M'Grath, Quebec, C.E.	On the Anatomy of the Eye.
Israel Powell Marr, Ancaster, C.W.	On Intermittent Fever.
George Cronyn Wood, London, C.W.	On Gonorrhoea.
Aeneas M'Donell, Montreal, C.E.	On Cynanche Trachealis.

William Odell, Surgeon 19th Regiment, On Phthisis Pulmonalis.

IN THE FACULTY OF ARTS.

Bachelor of Arts.

Alexander Morris.

The Honorary degree of D.C.L. was conferred on the Rev. W. T. Leach, A. M., Edin., Vice-Principal of the University.

LICENTIATES OF THE MEDICAL BOARD OF CANADA WEST.

Egerton Perry,	Nov. 4, 1848
George Perks,	Jan. 20, 1849
William Gavin Middleton,	April 14, 1849
James Langstaff,	April 21, 1849
Uzzial Ogden,	April 21, 1849
William Thomas Aikens,	April 21, 1849
Charles J. S. Askins,	April 21, 1849
Alexander Harvey,	April 21, 1849
Robert Mullen,	April 21, 1849
Thomas M'Kee Ferguson,	May 5, 1849

LICENTIATES OF MEDICAL BOARD OF CANADA EAST.

The following gentleman obtained his license at the period specified, but has not been Gazetted:—

Thomas M'Grath,

LICENTIATES OF THE COLLEGE OF PHYSICIANS AND SURGEONS OF LOWER CANADA.

Louis Genand,	Nov. 18, 1848
William Oscar Dunn, M.D.	March 30, 1849
John Nicholas Buxton, M.D.	May 19, 1849
Israel Powell Marr, M.D.	May 19, 1849
Francis Challinor, M.D.	May 19, 1849
George Cronyn Wood, M.D.	May 19, 1849
Jules Maurice Quesnel, M.D.	May 19, 1849
Joseph Carrier, M.D.	May 19, 1849
Fredrick Benjamin Going, M.D.	May 19, 1849
John Wanless,	May 19, 1849
Charles Greenwood Moore,	May 19, 1849
Joseph Alexander Crevier,	May 19, 1849
Joseph Antoine Tetrault,	May 19, 1849
Henry Auguste Rolland,	May 19, 1849
Julius Edouard Prevost,	May 19, 1849
John George Bethune,	May 19, 1849
Augustus Brisson,	May 19, 1849
Charles Aylmer Coates,	May 19, 1849
Alfred Nelson,	May 26, 1849
Alexander H. Nellis,	May 26, 1849

COLLEGE OF PHYSICIANS AND SURGEONS.

SEMI-ANNUAL MEETING OF THE BOARD OF GOVERNORS.

Abstract of Meeting.

Quebec, May 8, 1849.

The Semi-Annual Meeting of the Board of Governors of the College of Physicians and Surgeons of Lower Canada, was held this day at the School of Medicine, St. Louis street, when were present.

Drs. Nelson,	Drs. Bédard,	Drs. Bibaud,
" Arnoldi, junior,	" Von Iffland,	" J. A. Sewell,
" David,	" Michaud,	" Fremont,
" Marmette,	" Bardy,	" Fowler,
" Painchaud,	" Robitaille,	" Douglas,
" DeS. Laterrier,	" Nault,	" Landry.
" Sutherland,	" Blanchet,	

Dr. Nelson, Vice President of the College for the district of Montreal, took the chair, in the absence of Dr. Morrin.

The minutes of the last semi-annual meeting were read.

The secretary read a letter from Dr. Lebourdais, one of the governors of the College for the district of Montreal, resigning his seat: when it was moved by Dr. Arnoldi, seconded by Dr. Sutherland, and unanimously resolved,

"That Dr. Lebourdais' resignation, now offered, be accepted."

The secretary also read a letter from Dr. Bouthillier, one of the governors, assigning satisfactory causes for his non-attendance at this meeting.

It was moved by Dr. Painchaud, seconded by Dr. Michaud, "Que chaque candidat soit examiné devant un quorum de sept membres." When it was moved in amendment by Dr. David, seconded by Dr. Sewell, "That the word *four* be inserted instead of *seven*; and if the four be not unanimous, three more be added, and the majority of the seven to decide." Which motion, in amendment, was carried, and the original motion lost.

Dr. Bibaud wished his vote registered against the amendment.

On the motion of Dr. Bardy, seconded by Dr. Sutherland, it was resolved, "Que le secrétaire soit autorisé à annoncer aux candidats qu'il leur sera loisible de répondre devant le bureau, *viva voce*, ou de répondre par écrit à des questions écrites, et que ces derniers seront enfermés dans une chambre et surveillés par un ou deux membres du bureau." The candidates all preferred being examined *viva voce*.

Geo. C. Wood, M.D., Israel P. Marr, M.D., John N. Buxton, M.D., Jules M. Quesnel, M.D., all of the University of McGill College, and Joseph Carrier, M.D., of the University of Edinburgh, were duly sworn, and granted their certificates.

Dr. Morrin, vice-president of the district of Quebec, then entered and took the chair.

Mr. John Wanless, bearer of a license from the Medical Faculty of Glasgow, authorising him to practise in that city, was examined and granted a certificate.

Mr. Frederick Going, L.R.C.S.I., was examined on the practice of physic, and granted a certificate.

Messrs. Alfred Nelson, Jules Ed. Prevost, C. G. Moore, Joseph A. Crevier, Joseph A. Tetrault, A. Brisson, and J. G. Bethune, were, after examination, granted certificates of license.

Three gentlemen were, after due examination, remanded to their studies.

The following were admitted to enter upon the study of medicine: Anselme Paquet, Frs. Vigeant dit Toussier, Louis De-rocher, and Matthew Adam.

The Board then adjourned for an hour.

3 p.m.—Met conformably to adjournment. Present, the same members. It was moved by Dr. Von Iffland, seconded by Dr. Sutherland, and resolved, "In consequence of the acceptance of the resignation of Dr. Lebourdais, one of the governors of the College for the district of Montreal, the governors present proceed immediately to fill the vacancy." The Board then proceeded to ballot for a governor, when Dr. Josiah Chamberlin, of Freligsburgh, was declared duly elected—the scrutineers being Drs. Fowler and David.

The secretary read a letter from Mr. A. Beaupré, student in medicine, asking whether it was obligatory for him to qualify himself for the study—the Board decided they had the right to compel him to do so.

The Board again divided into Committees, when Messrs. Wm. Rousseau, and Chs. A. Coates, were duly examined, and granted certificates.

Two gentlemen were remanded. The Board then adjourned till 8, p.m.

8 p.m.—Met pursuant to adjournment. Present, Drs. Morrin, Blanchet, David, Bardy, Michaud, Badeau, Painchaud, Von Iffland, Sewell, Marmette, Arnoldi, Robitaille and Landry.

Drs. Michaud, Badeau and Bibaud, were named a Committee to examine the treasurer's accounts.

The Board then proceeded to discuss the amendments to the present Act regulating the Study and Practice of Medicine and

Surgery, when amendments were agreed upon, such as constitute those now before the Legislature.

The Board then adjourned till the following day at 10 a.m. 10 a. m., 9th May, 1849.—Met pursuant to adjournment. Present, Drs. Morrin, Arnoldi, David, Von Iffland, Bibaud, Michaud, Sewell, Blanchet, Blais, Marmette, Badeau, Sewell and Landry. Dr. Morrin, V. P. in the chair.

The board then divided itself into Committees for the purpose of Examination, when Mr. Henry Rolland, J. J. Marion and A. H. Nellis, were granted their certificates, and five gentlemen were remanded to their studies, as also one for preliminary examination.

The meeting then adjourned.

J. E. J. LANDRY,
Secretary for the District of Quebec.

BOOKS, &c., RECEIVED.

Anæsthesia, or the Employment of Chloroform and Ether in Surgery, Midwifery, &c. By J. Y. Simpson, M.D., F.R.S.E., &c. Philadelphia: Lindsay & Blakiston. 1849.

Geological Survey of Canada. Report of progress for the year 1847-48. Printed by order of the Legislative Assembly. Montreal: Lovell & Gibson. 1849.

TO CORRESPONDENTS.

Professor Croft's paper has come to hand. Letters have been received from Dr. Foster, Sheffield; and from Dr. Gilbert, Hatley.

OBITUARY.

In this city, on the 20th ult., Dr. Seraphim Gauthier, aged 25 years.

MONTHLY METEOROLOGICAL REGISTER AT MONTREAL FOR APRIL, 1849.

DATE.	THERMOMETER.				BAROMETER.				WINDS.			WEATHER.		
	7 A.M.	3 P.M.	10 P.M.	Mean.	7 A.M.	3 P.M.	10 P.M.	Mean.	7 A.M.	Noon.	6 P.M.	7 A.M.	3 P.M.	10 P.M.
1,	+25	+31	+27	+28.	29.76	29.65	29.67	29.69	W N W	W N W	W N W	Fair	Snow	Snow
2,	" 27	" 45	" 40	" 26.	29.70	29.68	29.72	29.70	W N W	W N W	W N W	Fair	Fair	Fair
3,	" 37	" 59	" 50	" 48.	29.75	29.54	29.54	29.61	W	S	S W	Fair	Fair	Cloudy
4,	" 45	" 63	" 49	" 54.	29.67	29.61	29.47	29.58	W	W by N	N W	Fair	Fair	Cloudy
5,	" 48	" 41	" 34	" 44.5	29.28	29.23	29.60	29.37	N W	W	S W	Rain	Rain	o'erc'st
6,	" 29	" 48	" 39	" 38.5	29.92	30.01	30.00	29.98	N W	N W	N W	Fair	Fair	Fair
7,	" 38	" 50	" 54	" 44.	29.93	29.58	29.51	29.67	N W	S	S	Rain	Rain	Fair
8,	" 43	" 51	" 38	" 47.	29.78	29.85	29.92	29.85	W by S	W	W	Fair	Fair	Fair
9,	" 36	" 54	" 38	" 45.	30.03	29.95	29.86	29.95	N W	E by N	E by N	Fair	Fair	Fair
10,	" 41	" 39	" 42	" 40.	29.66	29.47	29.37	29.50	E S E	S E by S	S E by S	Rain	Rain	o'erc'st
11,	" 35	" 39	" 30	" 37.	29.46	29.70	29.85	29.67	E	S W	W	Snow	Fair	Fair
12,	" 28	" 47	" 41	" 37.5	30.03	29.90	29.86	29.93	W	W	W	Fair	Fair	Fair
13,	" 40	" 50	" 38	" 45.	29.79	29.53	29.52	29.61	S S E	S S E	S	Cloudy	Sh'rs	Cloudy
14,	" 25	" 27	" 19	" 25.	29.56	29.55	29.47	29.53	N W	N W	N W	Fair	Fair	Snow
15,	" 14	" 22	" 18	" 18.	29.40	29.32	29.21	29.31	N W	W N W	W N W	Cloudy	Snow	o'erc'st
16,	" 17	" 27	" 26	" 22.	29.23	29.22	29.31	29.25	W N W	W N W	W N W	Snow	Snow	Cloudy
17,	" 27	" 45	" 36	" 36.	29.37	29.37	29.38	29.37	N W	W	W	Fair	Fair	Fair
18,	" 35	" 57	" 43	" 46.	29.39	29.35	29.34	29.36	S by E	S by E	E	Fair	Fair	Fair
19,	" 37	" 58	" 44	" 47.5	29.30	29.23	29.31	29.28	N	N	N	Fair	Fair	Fair
20,	" 37	" 36	" 32	" 36.5	29.41	29.52	29.64	29.52	W N W	W N W	W N W	Cloudy	Fair	o'erc'st
21,	" 26	" 42	" 34	" 34.	29.73	29.79	29.80	29.77	W	W	W	Fair	Fair	Fair
22,	" 33	" 50	" 35	" 41.5	29.86	29.78	29.82	29.82	W N W	W	W	Fair	Fair	Fair
23,	" 36	" 53	" 45	" 44.5	29.88	29.56	29.36	29.60	S W	S	S	Fair	o'erc'st	Rain
24,	" 38	" 46	" 36	" 42.	29.55	29.72	29.73	29.68	W	W	W	Fair	Fair	Fair
25,	" 37	" 57	" 35	" 47.	29.83	29.73	29.84	29.80	W	W	N W	Fair	Fair	Fair
26,	" 20	" 38	" 37	" 29.	30.12	30.15	30.15	30.14	N N E	N N E	N N E	Fair	Fair	Fair
27,	" 27	" 46	" 41	" 36.5	30.39	30.12	29.96	30.16	N N E	N N E	E	Fair	Fair	o'erc'st
28,	" 44	" 48	" 46	" 46.	29.70	29.51	29.51	29.57	S E	S E	S	Rain	Rain	Rain
29,	" 37	" 49	" 35	" 43.	29.71	29.73	29.86	29.77	W	W	W N W	Fair	Fair	Fair
30,	" 40	" 58	" 50	" 49.	29.91	29.61	29.47	29.66	W	W	W N W	Fair	Fair	Fair

THERM. } Max. Temp., +63° on the 4th
 } Min. " +14° " 15th
 Mean of the Month, +39.6

BAROMETER, } Maximum, 30.39 In. on the 27th
 } Minimum, 29.21 " 15th
 Mean of Month, 29.656 Inches.

DAY.	Barometer at Temp. of 32°.			Temperature of the Air.		Tension of Vapour.		Humidity of the Air.		Wind.			Rain in in.	WEATHER.
	7 A.M.	3 P.M.	10 P.M.	Mean of 24 h.	7 A.M.	3 P.M.	10 P.M.	Mean of 24 h.	7 A.M.	3 P.M.	10 P.M.	Mean of 24 h.		
1,	29.938	29.841	29.701	29.783	31.2°	38.0°	—	—	—	—	—	—	—	—
2,	29.869	29.771	29.631	29.783	30.2	44.9	36.0°	36.3	71	52	57	—	—	Clear and uncl'd
3,	29.642	29.495	29.631	29.561	37.2	52.2	45.2	44.2	85	52	87	—	—	Very fine day
4,	29.553	29.345	29.188	29.361	44.7	46.4	41.0	43.9	78	53	82	—	—	Clear to 10 am Light cl's rem Day fine
5,	29.301	29.631	29.833	29.578	37.6	42.0	31.4	36.5	85	55	97	—	—	Overcast Slight fr. a intervals dur day
6,	29.986	29.912	—	—	37.6	40.0	—	—	78	61	83	—	—	Overcast till 6 pm Clear fr 7 pm Fine night
7,	29.585	29.457	29.726	29.591	41.4	58.6	45.6	47.6	64	69	83	—	—	Generally overcast
8,	29.970	29.915	—	—	41.4	45.2	—	—	82	75	64	—	—	Thunderstorm 3 to 6 am Day gen cl'd
9,	29.874	29.712	29.490	29.659	41.4	45.2	41.4	40.0	75	57	65	—	—	Generally overcast
10,	29.203	29.917	29.432	29.246	43.2	56.3	36.6	41.9	70	57	65	—	—	Clear till noon Th' storm noon to 1 pm
11,	29.790	29.854	29.932	29.866	30.0	42.7	31.6	34.5	81	70	83	—	—	Clear till noon Th' storm noon to 1 pm
12,	29.950	29.820	29.752	29.837	32.7	39.0	37.2	35.9	87	81	87	—	—	Dry clouded
13,	29.608	29.601	29.758	29.653	35.0	43.8	31.2	37.3	83	73	81	—	—	Mostly clear A few passing clouds
14,	29.786	29.785	29.725	29.757	24.6	25.8	23.0	24.2	78	77	76	—	—	Generally clouded A few clear spaces
15,	29.551	29.395	—	—	24.4	30.2	—	—	77	55	88	—	—	Overcast from 10 am Clear at 1 pm Fine aurora 9 to midnight
16,	29.299	29.297	29.402	29.331	28.6	37.6	31.0	31.3	63	71	77	—	—	Part cl'd Snowing fr 8 pm till midnight
17,	29.383	29.206	29.121	29.252	32.8	45.4	37.4	38.1	79	56	84	—	—	Generally clouded all day
18,	29.034	29.179	29.266	29.159	36.0	39.4	36.4	37.1	71	56	72	—	—	Clear till 3 pm Mostly clear from 3 pm
19,	29.286	29.343	29.198	29.376	36.6	45.1	33.8	38.4	75	50	71	—	—	Partly clear Light cl's Spitting fr 11 pm
20,	29.575	29.618	29.622	29.656	31.7	40.6	31.0	34.2	64	50	64	—	—	Partly clear all day Sit on at 4 35 pm S. 6 pm
21,	29.762	29.682	29.754	29.696	33.0	39.2	33.0	34.6	69	66	95	—	—	Light clouds generally dispersed
22,	29.631	29.683	—	—	38.8	41.4	—	—	77	55	77	—	—	Mostly clear A few passing clouds
23,	29.690	29.341	29.464	29.508	38.8	41.4	41.4	39.9	83	79	82	—	—	Densely clouded all day
24,	29.783	29.757	29.757	29.765	34.4	43.5	34.8	37.1	79	74	85	—	—	Overcast
25,	29.767	29.681	29.810	29.756	39.0	49.8	40.4	42.2	67	57	67	—	—	Den of R'ning fr noon till 5h 10m pm
26,	29.968	30.000	29.993	29.987	37.8	39.5	33.7	36.7	83	63	85	—	—	Partly clear Clear pm Fine day
27,	29.957	29.820	29.799	29.799	36.0	41.9	37.4	38.2	76	69	76	—	—	Clear save a few cl's at 6 and 6 pm
28,	29.431	29.416	29.620	29.491	43.4	60.6	38.2	47.3	67	59	64	—	—	Partially clouded
29,	29.840	29.781	—	—	40.2	45.9	—	—	71	61	71	—	—	A few fr cl's Halo P'd moon 9 & 10 pm
30,	29.525	29.327	29.367	29.392	39.9	54.6	55.8	49.7	65	58	84	—	—	Very perfect
Mean	29.609	29.546	29.598	29.585	35.9	44.8	36.8	38.74	79	65	78	—	—	R'n fr 3 to 6 pm Cal till 3 pm Rem clear and unclouded Very fine day

Highest Barometer, No.	Lowest Temp.	Highest Temp.	Mean Daily Range.	Extreme Daily Range.	Mean Temperature at 3 p.m.	Do to 6 a.m.	Do to 3 a.m.	Monthly Range 1,005		Sum of the Atmospheric Cardinal directions, in miles	North	West	South	East	Year.	Temperature, Max.	Mean.	Range.	Mean.	No. Days.	Rain.	Inches.	Winds.	Mean Days.	Snow.	Inch.
								1,005	Range 66.6																	
30.032	29.0	52.9	16.3	33.9	44.8	48.1	44.8	10.6	10.6	233.6	2858.6	659.0	1160.1	1810	42.70°	32.70°	10.0	45.9°	14	3.420	212	98	3	0.1		
30.032	29.0	52.9	16.3	33.9	44.8	48.1	44.8	10.6	10.6	233.6	2858.6	659.0	1160.1	1810	42.70°	32.70°	10.0	45.9°	14	3.420	212	98	3	0.1		
30.032	29.0	52.9	16.3	33.9	44.8	48.1	44.8	10.6	10.6	233.6	2858.6	659.0	1160.1	1810	42.70°	32.70°	10.0	45.9°	14	3.420	212	98	3	0.1		

* Correction: This designation applies properly to all the similar tables since August 1848, instead of the actual heading "Proportion of wind from each quarter." The instrument employed is Robinson's Anemometer. (Report of British Association, 1848, p. 111.)
 The means are deduced from six observations daily, viz: 6 a.m., and 2 and 10 p.m.; and 7 a.m., and 3 and 11 p.m.
 Further explanatory notes will be found at the foot of all the Registers for 1845 and 1846.—No Magnetic Disturbances observed during the month of April.

TO MEDICAL STUDENTS.

CLINICAL LECTURES ON DISEASES OF THE EYE AND EAR.

BY DR. HOWARD,

Oculist and Aurist, Surgeon to the Montreal Eye and Ear Institution.

DR. HOWARD will deliver Clinical Lectures on Diseases of the Eye and Ear, three days in each week, during the months of MAY, JUNE, JULY and AUGUST, 1849.

The Lectures will be illustrated by numerous cases under the daily observation of the Students, and every opportunity will be taken to make them practically familiar with the operations peculiar to this department of Surgery

For particulars, apply to Dr. HOWARD, 142, Craig Street.

Montreal, April 2, 1849.

COLLEGE OF PHYSICIANS AND SURGEONS OF LOWER CANADA.

THE BY-LAWS of the COLLEGE having received the sanction of the Executive, its BOOKS are NOW OPEN for the REGISTRATION of MEMBERS.

It is required of such as desire to register, that they forward to the undersigned (post-paid) their name, legibly written in full, their age, birthplace, date of Provincial License, and the College Fee, viz., Ten Dollars in current money of this city.

All such as signed the Petition to the Legislature for the Act of Incorporation, are entitled to Register forthwith, provided that at the time of their signing they were in possession of a Provincial License to practice Medicine, &c., &c.; and in virtue of the By-Law which refers to Membership, the Books of the College shall be kept open during a period of Six Months from the time of the passing of the said By-Laws, viz., the Tenth day of October, 1848, for the Registration of every Member of the Profession who desires so to do, provided such Member has been in possession of a Provincial License to practice Medicine, &c., &c., Four Years at the time of the passing of the Act of Incorporation, viz., 27th July, 1847.

FRANCIS C. T. ARNOLDI, M. D.

Registrar & Treasurer,
Coll. Ph. & Surg., L. C.

58, CRAIG STREET,
Montreal, 1st Dec., 1848.

MEDICO-CHIRURGICAL SOCIETY.

THE next Monthly Meeting of this Society will be held at the Rooms of the Mechanics' Institute, on Saturday Evening, June 2, at 8 o'clock P.M.

HECTOR PELTIER, M.D.,

Montreal, June 1, 1849.

Secretary.

THE Subscribers have their usual assortment of genuine Drugs and Chemicals, which they offer low for cash, or approved credit.

WM. LYMAN & CO.,
194 & 196, St. Paul Street, Montreal.



URQUHART'S

FLUID EXTRACT OF JAMAICA SARSAPARILLA.

THE Subscriber begs leave to submit to the Medical Profession and to the public, his preparation of Sarsaparilla which has been extensively used in their practice, by many of the most eminent Medical Gentlemen in the City, and with the most beneficial results, as the following testimonials, with which he has been very politely favored, will satisfactorily show.

For sale only at the Medical Hall, Great St. James-Street.

ALEX. URQUHART.

August 2.

ALEXANDER URQUHART, ESQ.—DEAR SIR,—I have much pleasure in bearing testimony to the faithful manner in which you prepare your Fluid Extract of the Compound decoction of Sarsaparilla. This I am enabled to do on account of several of my patients having derived the greatest benefit from its use.

For Constitutional Syphilis and Chronic Rheumatism, I have prescribed it with the most marked effects; I can therefore, without the least hesitation, recommend your preparation as one possessing all the Medicinal qualities of the Compound Decoction of Sarsaparilla, while it is, at the same time, more palatable, and less apt to derange the stomach.

I remain, Dear Sir,
Your most obed't serv't,

W. FRASER, M. D.
Lecturer on Medical Jurisprudence,
M'Gill College.

Montreal, 9th February, 1847.

Montreal, February 10th, 1847.

I beg to certify, that I have employed very extensively, the "Fluid Extract of Sarsaparilla," made by Mr. Urquhart, in all those diseases in which that Medicine is usually prescribed, and that I have found it a most valuable preparation. I can, moreover, state from personal investigation, that the proprietor employs none but the purest ingredients, and bestows the greatest care and attention upon the mode of preparing the remedy.

ROBERT L. MACDONELL, M. D.,
Lecturer Institutes of Medicine,
M'Gill College,
Physician to the Montreal General Hospital.

Mr. Urquhart's Sarsaparilla is the only preparation of this valuable Medicine that I can, with entire confidence, recommend to my patients.

M. M'CALLACH, M. D.

Montreal, 10th February, 1847.

DEAR SIR,—I have frequently prescribed your Fluid Extract of Sarsaparilla, and I have no hesitation in recommending it as a very elegant and convenient form for administering that Medicine.

Yours very truly,

GEO. W. CAMPBELL.

To Alex. Urquhart, Esq.

Montreal, 10th February, 1847.

CHLOROFORM.

THE SUBSCRIBERS have prepared, for Sale Chloroform, or Trichloride of Formyle, the new Anæsthetic Agent, as a substitute for Ether, recently proposed by Dr. Simpson, of Edinburgh. This Agent has received the recommendation of the highest Medical Authorities in Great Britain, and has been used with increased success in this vicinity.

S. J. LYMAN & Co.,

Chemists, Place D'Armes, Montreal.

Jan. 31, 1848.

UNIVERSITY OF M'GILL COLLEGE.
FACULTY OF MEDICINE.

SUMMER SESSION.

The Summer Courses will commence on the second Monday of May, 1849.

Medical Jurisprudence,
Botany,

by Dr. Fraser.

" Dr. Papineau.

A. F. HOLMES, MD. & P.

Secretary Med. Fac.

AYER'S CHERRY PECTORAL.

AN Anodyne Expectorant, prepared on the new plan of combining the isolated, active principles of medicine, in their purity: a plan which is found to give an energy and certainty of remedial effect far surpassing any other in use. The substances of which it is composed are those known to be most relied on for the relief of pulmonary disease, viz.: Morphine, Sanguinaria, Emetine, Tart. Ox. Antim. et Pot. Hydrocyanic Acid, Saccharum, Spt. and Aqua, combined so as perfectly to resist the action of time; and affording to physicians a compound of *free, permanent* hydrocyanic acid—a desideratum in medicine not hitherto obtained. Its formula has been published in this and other Medical Journals, and also submitted to some of the highest medical authorities in this country, among which are the Berkshire College of Medicine, Pittsfield, Mass.; Willoughby Medical College, Columbus, Ohio; Bowdoin Medical College, Brunswick, Me.; Vermont College of Medicine, Castleton, Vt.; Geneva Medical College, Geneva, N. Y., and also in manuscript to a large part of the medical faculty of the United States.

The attention of practitioners is respectfully solicited to this preparation, and it is confidently believed it will commend itself to their favour and confidence, having been found an invaluable remedy in treating the most obstinate as well as milder forms of pulmonary disease.

Sold by WILLIAM LYMAN & Co., Chemists, 194 and 196, St. Paul Street, Montreal.

QUEBEC SCHOOL OF MEDICINE.

THE course of LECTURES of this SCHOOL will open on the 15th MAY next, and will be delivered as follows:—

- Midwifery, - - - - - Dr. Painchaud.
- Theory & Practice of Medicine, Dr. Sewell.
- Theory & Practice of Surgery, - Dr. Fremont.
- Medical Jurisprudence - - - Dr. Bardy.
- General & Practical Anatomy, - Dr. Jackson.
- Clinical Medicine, - - - - - Dr. Painchaud.
- Clinical Surgery, - - - - - Dr. Douglas.
- Materia Medica, - - - - - Dr. Nault.
- Botany, - - - - - Dr. Bardy.
- Chemistry, - - - - - Mr. A. N. Aubin

For the conditions, regulations and by-laws of the School, and for all other information, apply to the undersigned Secretary.

P. M. BARDY,
Secretary, Q. S. M

Quebec, February 16, 1849.

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