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CANADA

MEDICAL JOURNAL.

ORIGINAL COMMUNICATIONS.

Chloral Hydrate. A lecture delivered during the session, 1870–71 By WILLIAM WRIGHT, M.D., L.R.C.S.E., Professor Materia Medica, McGill University.

The chief steps for making chloral, C_2 HCl_3, by Liebig's plan, are to pass chlorine gas through absolute alcohol to saturation, to treat the mixture with concentrated sulphuric acid and collect the product.

Thus got, it is a limpid fluid, sp. gr. 1·502, boils at 201. When mixed with water it developes much heat and becomes a white, crystalline hydrate. It is commonly seen as a solid, in irregular fragments, made up of fine acicular pieces aggregated together. At first they are transparent, but they soon become opaque and have a tendency to effloresce. They sublime unchanged by a slight heat, are easily soluble in water, and exhale an odour something like that of melons. The taste is pungent, and approaches to that of a bad bitter orange. The watery solution when acted on by free alkalies, grows opaque and milky-looking, and is transformed into a formiate of the base and chloroform.

Chloral comes to us with a great flourish of trumpets; from what we hear of it, almost in every medical paper we take up, we would expect to find it a safer, surer, and quicker hypnotic than any other hitherto used.

Firstly.—It is SAFER. Opiates, as you know, after they are taken, leave behind a faulty state of the digestive system and of secretion. It is not so with chloral. One of its great advantages is, that it leaves after its action no dryness of the mouth, furred tongue, bitter taste, thirst, nausea, loss of appetite, constipation, &c.; nor does it cause dry skin, scanty urine, &c. On the contrary, after chloral, the appetite is often more keen and indigestion unheard of. Other narcotics tend to increase the destructive powers from the injury they cause in weakening the stomach. It is the reverse with chloral, it rather raises up the formative processes by promoting assimilation. The difficulty hitherto felt in chronic wasting diseases, as phthisis, cancer, &c., of giving sleep so

as not to impair the general tone is now removed. Again, opiates are apt to leave a feeling of depression and other marks of disordered innervation. The only symptom of the kind after chloral, in proper doses, has been headache. Where the patient has his sleep out it does not occur; and, under any circumstances, it has not happened in more than ten per cent. of those who have taken the drug, and it has not lasted more than an hour. The very cases where opiates are likely to be injurious are those where chloral may be employed beneficially; for example, certain brain affections where cerebral congestion threatens to be imminent, and especially cases of uræmic poisoning; also in certain cardiac cases, where to stimulate the heart or embarrass the respiration would be detrimental, chloral may be safely given, as it induces neither of these effects.

Secondly.—Chloral is SURER than other agents of the same class. Its action is not so likely to be prevented by the conditions that oppose these others. It has a wider range of applicability. Usually it may be given wherever sleep is needed, be the cause almost what it may. It may be resorted to under circumstances quite opposite to one another, in insomnia attended with gastric disorder or nervous exhaustion—with fever or without—with delirium or not—with structural brain disease or mere anæmic disorder. It is not contra-indicated by any age; it is as appropriate in early or advanced life as during the intermediate periods. Chloral sleep is, again, more prolonged, more calm, more refreshing than sleep from other narcotics. Like other medicines, however, it may fail, but its failures are less frequent. In three cases where it was given under my directions, at the General Hospital, it failed. In one case ʒij was the dose, in each of the others ʒ ss. In these it caused either a slight dizziness or drowsiness with more or less of a feeling of intoxication. One of these persons was in the habit taking an after dinner nap, and he blamed the chloral for keeping him out of it, as it had been given just before, and he continued wide awake afterwards. These three patients did not need it. They knew what was expected to happen, and the interest this aroused may have helped to defeat the end in view. In upwards of seventy persons to whom it was given in the Royal Infirmary, Edinburgh, no sleep is reported to have followed in thirty. In some rare instances its effect is postponed for twenty-four hours, as sometimes occurs with morphia, &c. The success of chloral depends upon the circumstances under which the patient is placed, his habits, the time of its administration, quality, &c. Much talking, or a bright light in the room, or moving about of the patient, will impede its action, as they do the action of other cerebro-spinants. Inebriates appear to resist its action

or to require larger doses than the temperate. Administering a stimulant with chloral seems to weaken its effect. The worst time for exhibiting it is generally the morning, the best about half an hour before bedtime. Lastly.—It is very important it should be pure. The chief impurities are alcohol and aldehyd. Instead of being an hydrate it may be an alcholate, alcohol taking the place of water with the base. It is then weaker, as it contains but 76·3 per cent. of real chloral instead of 90 per cent. To detect alcohol I would suggest the same tests as those mentioned yesterday, when lecturing upon chloroform. Aldehyd is less common, as an addition, than spirit. It arises from acetic acid present in the material of which chloral is made.

Thirdly.—Chloral is QUICKER than many older sleep producers. Its celerity in medicinal doses is often equal to that of other narcotics in fatal doses. Sleep begins in from ten to twenty minutes, and lasts from half an hour to five hours or more. I have seen it act, however, more quickly than this. A common expression with patients is, they fell asleep soon after, or just after, taking the medicine. The usual dose advised is ℈ij. I think it unnecessarily large as a rule. If good, and the conditions favorable, ℈j or ʒ ss, will suffice. In one case where I gave it, ℈ss was enough. It was that of C. W., æt. 19 years, who had been admitted after her first confinement, for sub-acute rheumatism. The dose was repeated thrice daily, and each time sent her asleep before many minutes were over. The largest amount I have prescribed has been 120 grains, in divided doses, during 24 hours. J. B., while in hospital with necrosis of the sternum, caught typhoid fever, which was ushered in by profuse diarrhœa. From night time to the visit hour, 10 a.m., he had about twenty stools. Chloral though given to the extent of ʒ ij, as stated, was well borne, moderated the purging, and was followed by no worse effect than great drowsiness. Eighty grains is the largest single dose I have read of. Dr. Madden directed it to be given in a case of hysterical mania, where there was violent excitement, coming on suddenly. It caused sleep for several hours, from which the patient awoke more composed. There were no bad results. Larger daily doses have been given in tetanus, perhaps, than in any other disease,—chloral falling in with other remedies equally tolerated on as huge a scale. From ʒ iss—iij have been taken in divided quantities in the day, without exciting any tonic symptom.

The CHARACTERS OF THE SLEEP from chloral are these: it is like natural sleep, but more deep; it is sound, not broken by starts or dreams, the patient is easily awoke, and generally, if not much disturbed, soon drops off again, he may be wakened to take nourishment, &c., in the

meanwhile; the pupils as in natural sleep are contracted and dilate on awakening.

The INFLUENCE of Chloral Hydrate ON ANIMAL HEAT has been variously stated. The conclusions arrived at from some experiments in th Royal Infirmary, Edinburgh, were, that it caused little or no reduction in the heat of fever: though in health it makes a decrease from ½ a degree to 2 degrees. At my request Mr. W. G. Ross paid special attention to the first of these points, viz., the influence upon fever heat. The observations for more ready use he arranged in tables which are appended. They were taken from cases of typhoid fever; 8 from one, and 7 from another; any inconstancy or uniformity of action being more obvious from several consecutive observations on the same person than from 15 separate persons.

They shew no change in 2.

Decrease in 5; from one ¼ degree to 1½ degrees; beginning in from 15 minutes to one hour after administration of medicine, and lasting an hour to 1 hour and 15 minutes.

Decrease followed by an increase in 3.

Increase in 7 (all in the one case, H. C.'s), from ½ a degree to 1½ degrees; beginning in from 15 minutes to ¾ of an hour after medicine; lasting from forty-five minutes to one hour and fifteen minutes; and gravescent in three. After the decline of increase, heat lower than before chloral was taken in 2.

No instance of increase, decrease and a second increase on the one day. The seven instances of increase were on seven successive days. In a case of the same disease where no chloral was given, the heat on seven successive days stood at the corresponding time at 101½, 102, 101½, 100½, 101½, 99½, 102½.

To shew the relation of the heat to the pulse and respirations, their rate is also recorded on the same line in the table.

From these additional observations it appears that after chloral, increase of heat was generally accompanied by increase of pulse and breathing, and decrease of heat by their decrease.

Several exceptions to this rule were noted: 1. Increase of heat attended with higher pulse, and fewer respirations. 2. The same attended with a rise, a fall and a rise again in the respirations. 3. Increase of heat with marked fall in the pulse, respiration slower, and either quicker at first or not so.

This last observation also noted when heat unchanged.

When heat was the same after as before chloral, pulse and respiration have been found much more frequent than at first, but subsequently they fell below what they then were.

The heat remaining the same, the pulse and respiration which had been as 98:20, in half an hour after became as 92:44.

The LOSS OF normal RATIO between the PULSE and RESPIRATIONS was detected, also in other cases under my charge.

For example: in one of Phthisis where there was extensive softening and excavation, before Chloral, pulse 110, respirations 40; an hour afterwards, pulse 116, respirations 54. Mr. Webb, who watched the effect, was so much struck with the anomaly, that to assure himself he says: "I took particular notice of this increase in the number of respirations; counted them three times."

A remarkable lowering in their rate was also observed in a case of tertiary syphilis where ℈ii chloral hydrate were given, from 26, before its administration, they were reduced to 16 in the minute; to the pulse their ratio had been as 1:3, it was changed to 1:5, and nearly 1:6. Another time ʒss was given to the same patient, and the same reduction in the respirations followed, but as they fell the pulse rose. Before chloral the pulse was 66, respirations 28; one hour and 15 minutes after, they were 76 and 17 respectively. During this time he had been awake, but afterward he began to sleep, and they gradually returned to what they were at first.

I may here observe that the ACTION of chloral UPON THE PULSE (as ascertained by the Sphygmograph) is to diminish arterial tension, rendering its quality softer and more regular.

After large single doses BAD EFFECTS are not uncommon. Dr. Reynolds narrates a case where very serious symptoms were induced by "45 to 50 grains" in a middle-aged lady who had previously taken ℈ss, and 15 grains with benefit. The symptoms came on in an hour, and were mainly those of extreme prostration, an intolerable sense of sinking, gasping, confusion of thought, and weak, irregular, intermitting pulse. Relief ensued after the exhibition of albumen, stimulants, and exposure to fresh air, but the symptoms came back with increased severity in about an hour, while the mind wandered. In a notice in the *British Medical Journal*, April 30 1870, it is said 7 out of 50 to whom chloral was given, were greatly excited, four wildly, delirious, and 12 had more or less headache. These occurrences seldom take place after less than a ʒ ss or ʒ j, dose. When delirium supervenes it lasts about two hours. I met with one striking example of this accident where the dose was moderate.

W. G. W., in advanced Phthisis, just getting over a copious hæmoptysis, had slept hardly any for three nights. At 3 p.m., Mr. Webb, by my direction, gave him ℈j of chloral hydrate, thirty minutes afterwards he felt drowsy, in fifteen more he went to sleep. He slept thirty-five minutes restlessly, "seemed like one in a nightmare." When he woke, he was (to

use the words of the report) "very much excited and delirious, fancies there is a broken up train of cars in the ward, points over to the wreck of a locomotive and says many people have been killed, among them his wife!" Half an hour after he was "still quite excited and positive in his delusions." From then, 5 p.m., till 3 o'clock, next morning, he was more or less excited and restless. Delirium after chloral is more likely to take place when the latter has been given in insufficient doses. It is also likely to show itself when the patient is awakened suddenly and not allowed to have his sleep out.

In none of the cases under my observation could any ODOUR OF CHLOROFORM be detected IN THE BREATH. This fact is against the assertion of some who say such an odour can be recognized. When first brought into notice, chloral was thought to act by becoming changed, in the blood, into chloroform, and the effects were referred to the latter. Liebrich and Richardson, from experiments on frogs, rabbbits, dogs, pigeons and even human beings, inferred that the blood decomposes chloral, and chloroform is eliminated. The production of chloroform from chloral is easily effected when it is left in vessels in contact with caustic alkalies—and with bicarbonate of soda, when the temperature reaches over 70°. Dr. Gramg thinks, however, it is probable it does not occur during life, while blood is in circulation, not merely on account of the control of vital force, but, also because the alkalinity of the blood is chiefly due to basic phosphate of soda. This fluid, however, contains some bicarbonate of the same base, and at the temperature of normal animal heat, the conditions are present for allowing the change into chloroform. Personne affirms it really occurs, but the odour cannot be detected, though chloroform may be recognized by the usual tests for finding it in the blood. His view is deeper than any former one taken. He says chloral, after reachingthe blood, is changed into formic acid and chloroform; which again is ultimately converted into chloride of sodium, and formiate of sodium, under which state it is ultimately eliminated; these are got rid of by the kidneys, and may be discovered in the urine.

Out of the foregoing, a question naturally arises, and it is this: Is there any CORRESPONDENCE between the effects of CHLORAL and CHLOROFORM except as sleep produces. Can one be substituted for the other as an anæsthetic? These were points to which I also gave some attention.

The first point to test was whether chloral would intensify the effects of chloroform. It has been said "before operations, a dose, if given, would render the patient more amenable to chloroform and make the effects of the latter more permanent; the patient sleeping for hours afterwards." This statement, as you will see, was not borne out by the

following cases, and the effect in them was what was witnessed in others.

F.—— M.——, æt. 6 years,—admitted for club foot, was given gr. xv Chloral Hydr., before I commenced tenotomy. It caused neither sleep nor any other perceptible change. Half-an-hour subsequently, ʒ iiss. chloroform were administered by inhalation and acted as if no chloral had been taken. Three tendons were divided. The somnolent action was not more lengthened than usual after chloroform in children. She woke up quite bright and without any unpleasant after result.

A.—— M.——, came into hospital with anchylosis, of the knee. Before excising the joint I wished anæsthesia to be induced to see whether the union was really bony or false. ℈ij chloral were exhibited at 25 minutes past 10 a. m., September 10, 1870. At 11, no sleep had supervened. It was thought he was beginning to be drowsy. He was then removed to the operating theatre and put under chloroform. ʒ ij were succeeded by the usual narcosis. It was not preceeded by excitement nor special deviation. On trying to move the joint he cried out several times and more chloroform was given. Chloral did not appear to modify in any way the action of the latter. On the 19th, when excision was performed, chloroform was given without chloral, and the result (as appears from notes taken by Messrs. Stark and Mitchell) was as on the former trial when the two were given.

So far from suspending feeling in the nerves of common sensibility, chloral, when administered to animals, was found by Demarquay to be followed by a condition of exquisite HYPERÆSTHASIA." In one of my cases the skin was very sensitive two hours after ʒ ss. of the medicine had been taken. Mr. Webb in his report, remarks, "When I put my hand on his pulse he drew his hand away as if I had touched him with a red hot coal." In another instance the sensibility of the surface of the abdomen seemed remarkably increased. But with these exceptions no hyperæsthesia was noted by the other patients to whom chloral was exhibited. When used by hypodermic injection it is also apt to be followed by a state of hyperæsthesia in the part.

Another point of difference between the actions of chloral and chloroform is, that, after chloral, REFLEX ACTION is often HEIGHTENED, and when not so, is nearly, if not quite, unimpaired; but after the latter agent reflex action is suspended.

Again, so far from acting like chloroform, it has been said to act against it, and to give rise to EXCITEMENT which lasted as long as the inhalation continued. I think I have seen something of this, but never to any very appreciable extent, and perhaps it was not more than might have been after chloroform alone.

Once more: when given after chloroform to those (especially very young subjects) who remained very agitated, it is alleged it has caused peaceful sleep for from 5 to 11 hours.

Lastly:—upon this question of similarity of operation, it has been affirmed, that, the of SAME ORDER of successive PARALYSATION of the various nerve centres occurs after both agents.

The ANODYNE power of chloral properly falls in with its anæsthetic ability; let us then see if it can allay pain when it does not induce sleep. I tried it in some cases of acute rheumatism ℈ss. three times a day was given. The patients slept much better and longer. Upon wakening, however, the pains were felt with their former severity. The remedy had no influence over the course of the disease. And if we are to concur with the advocates of mint water we may ask what other would be more likely to cut it short? If the patient gets the benefit of perfect rest a comfortable bed, genial heat, an equable atmosphere, suitable diet, &c.; in a word, if he is placed under circumstances the opposite to those under, which he has been previously to taking sick, what other palliative would give him more comfort than chloral? As an anodyne in dysentery, I found it mitigated the tormina and tenesmus, but neither in this affection, nor in diarrhœa, where I also used it, did it seem to exert any permanently repressing effect over the discharges.

In other painful diseases, however, a much better account has been given of its efficiency. Dr. S. Walker thinks highly of it in cardialgia with excessive secretion of gastric juice, and in subduing sympathetic palpitation of dyspepsia. Mr. Morgan prescribes it for relief of the severe suffering from burns, ulcerated nodes, &c. Dr. Brady has witnessed the happiest effects from it after the failure of morphia and atropia in painful disorders of the bladder, ovaries, &c. And Mr. Cooke reports the benefits it yields in cancer. He gave ℈ss. with hydrocyanic acid M v. 3 times a day. His words are "excellent, restores comfort, appetite, &c."

I have used chloral as an HYPNOTIC in delirium tremens, phthisis, epilepsy and ague.

In delirium tremens it has been pronounced to be almost a curative agent. Dr. Balfour has published six cases illustrating the rapidly beneficial results that have succeeded it in doses from ʒ ss to gr. xlv; an amount that may be given every half-hour for three or four times. My experience inclines me to regard it favorably. It seemed to me to be useful primarily as a stimulant. I have been told it acted something like "a hair of the dog" that caused the bite. It has agreed well, even where there had been violent excitement or delirium; probably because these symptoms were due to nervous debility, and not to over-power as

some suppose. After its first effect, sleep supervenes, where the remedy succeeds, and afterwards the patient often wakes up quite rational.

In phthisis it is useful as a calmative. Dr. Bennett has written strongly in its praise and finds it useful "to induce sleep, relieve cough, and quiet irritation." The advantage over other soothing agents, already pointed out, seem to entitle it to the preference. I think it is contra indicated where there is unusual congestion of the lung tissue, the seat of tubercule, or hæmoptysis, as it might increase them. The lowering of respiration it causes seems to suggest caution in its employment in such cases.

In epilepsy I found it capable of checking the paroxysms. There was one case in particular that shewed the marked control chloral is able to exert over the recurrence of the paroxysms. From some notes of the history by Mr. J. H. Mathewson, it appears from 28th August to 3rd September following, the patient, J. McK., æt. 17, had 4 or 5 fits each night. On 3rd September he had 7, on the 4th 6, on the 5th 5. During this time he had been taking a mixture of iodide of ammonium and potassium with bromid potassium. On 6th he took ℈ij chloral hydr. at 10 p.m., a little before the expected time of the first seizure. He fell asleep almost immediately after, slept soundly all night, and had no fit. 7th.—No chloral, and he had 8 fits; 5 as severe as any he ever had, and 3 slight. 8th.—Given chloral. Before it was taken he had 2 fits, but none afterwards. From then to the 18th he had chloral each night, and no fits. The next 4 nights, no chloral, no fits. On 22nd 25th and 28th.—Had chloral each night. For twenty days he had escaped a seizure, but on the night of the 29th, he had two paroxysms, Chloral was again given. He had subsequent returns, but I cannot give further particulars as my term of Hospital attendance expired on 1st October. At the same time chloral was given, the patient took arg. nit. & gr $\frac{1}{3}$, ter in die, which was steadily continued for for over three weeks. Puerperal eclampsia is a more likely case for the success of chloral than confirmed epilepsy, as the above, where the most to be expected was the patient would be shielded from his dreaded attack, only while under the narcosis of the remedy. In puerperal eclampsia where it was exhibited, "the convulsions were checked speedily after chloroform inhalation and other measures had failed."

Towards the end of my quarter, a patient with ague was admitted, and, wishing to see if chloral would have any influence over its periodicity, I directed it to be given. As patients had been cheated out of their paroxysms by moving on the hands of a clock,—by a hard gallop, &c.,—it was now to be seen whether they could be equally so by sleep. Nor,

after all, was the remedy so far fetched, for during the Peninsula war, a common practice was to administer opium and ether to the affected soldiers, not as a soporific, it is true, but as a strong stimulant antispasmodic.

G. D., tertian intermittent, cold stage began about 8 a.m. 22nd September.—The day of fever should have come, ʒij. chloral hydr. given at 7.45 a.m.; fell asleep and continued so for about two hours; 24th—Repeated, fell asleep fifteen minutes and slept soundly for an hour. 26th.—Repeated chloral as before. 28th.—No chloral. 30th.—Has hitherto had no attack; has escaped four paroxysms. But this morning he had a seizure about the usual time. It was, however, mild; cold stage slight, not much fever after, and nosweating. I now gave over the case to my successor, Dr. Fenwick, who, I was told, put him subsequently upon quinine, under which the patient sufficiently recovered to leave the Hospital. Fortunately for chloral, if it failed, it was no wonder and it failed in good company. No wonder, for the man had had the disease off and on during twelve months; the longest interval he had been free from it was two months, the recurrences often ensued in a week or two; he had marked paludal cachexia, deranged innervation, and enlargement of the spleen. If chloral failed so had everything else that was tried before, and in the company was quinine, which he had freely taken. And I have no doubt, till his blood, nervous system and spleen are first rectified, no remedy will be more than temporary in its benefits. How far chloral may answer in ague, in recent and uncomplicated cases remains to be seen. In these I have hitherto had no opportunity of giving it a trial.

In asthma, chloral will yield relief to the urgent distress. Among the notes I took is the case of B. H., æt. 45, admitted 9th August, 1870, with chronic bronchial catarrh attended with pseudo-asthma. After a trial of cannabis, lobelia, prussic acid, &c., and subcutaneous injections of liq. opii. sed. which afforded more or less relief, but only for a time, she was put upon chloral. She was kept upon it longer than the others, because it seemed the most useful; the cough became less often, breathing more easy, rhoncus and sibillus, which before were heard, while standing about her bed, could only be heard by the ear near the chest and over less extensive space, and she continued for a week at a time without a paroxysm of dyspnœa; she had no other medicine except a sharp liniment to the chest, and an occasional aperient. She was still in hospital when I left.

By others chloral has also been used in tetanus, chorea, nervous affections, insanity, fevers and surgical cases.

In tetanus ʒ ss. has been given every four or five hours. Recoveries after it have been recorded, and so also have deaths. It subdues the spasms while its effects last causes extreme muscular relaxation, and leads to sleep.

In chorea small doses repeated during the day for one, two or more weeks are said to afford marked benefit.

In nervous affections generally it is favourably spoken of.

In acute mania it has been found successful as a safe hypnotic, ℈ij. to ʒj. are required for the purpose. It is represented as not having failed in 1 per cent of the cases. In puerperal mania it has also been resorted to advantageously. And in the paralysis of the insane it is very serviceable where the patients are destructive and violent.

In fevers it has been selected when the patient is wakeful and suffers from want of sleep. In re-instating "tired nature's sweet restorer," it serves greatly to maintain the strength of the patient, and to enable him better to withstand the violence of the disorder, so that fatigue and exhaustion are much less likely to be extreme, especially in delicate constitutions.

In surgical cases it has been extensively employed in Edinburgh, particularly after severe accidents and capital operations, the object being not merely to afford sleep, but to give ease and soothe irritation.

And, lastly, it has also been prescribed in protracted labour from rigid os uteri.

And, lastly, chloral has been used as an ANTIDOTE. Dr. J. H. Bennett records several experiments which serve to demonstrate that, after a fatal dose of calabar bean had been administered to a rabbit, the exhibition of chloral appeared to prolong life, though death ultimately supervened. And Mr. Grover narrates a case of poisoning by strychnia in a dog, where about an hour after it had been swallowed, chloral was employed. Two doses were given and the animal recovered.

ADMINISTRATION.—Chloral should be given in solution. Owing to its unpleasant flavour and pungency various agents have been advised in combination, *e. g.*, syrup of tolu and aq. menth pip. (Squires); a few drops of chloroform or spt. menth. pip. (Ogle); Glycerine answers very well. I have often ordered it with mucilag acaciæ.

The doses I have mentioned in which chloral hydr. is to be prescribed in different cases refer of course to the substance in its solid state. Preparations of it such as the syrup made by Ferris & Co., of Bristol, or others, when selected, must be apportioned so that each dose will contain an equivalent quantity of chloral to what would be required if the latter were dispensed in the crude state. I mention this as a mistake, apt to

be made, is to prescribe the syrup in doses in which chloral in substance is ordered to be given.

When chloral was first introduced it was sold at a very high price. A year ago last fall, in England, 12s. were exacted for an ounce. The price, however, soon fell. Last summer the same quantity could be purchased there for 1s. 6d. It is imported into Montreal direct from Berlin, and sold wholesale to druggists in amounts of 28lbs. each, at the rate of $3.25 or $3.50 per lb. When it could only be obtained retail at 50 cts. per oz., I procured for our Hospital a supply at half this price or at the rate of $4 per lb.

Observations made upon the action of Chloral Hydrate in Typhoid Fever under Dr. Wright. By W. G. Ross.

I. CASE OF HENRY COOPER.

Sept.	Time.	Temp.	Pulse.	Resp.	Remarks.
	P.M.				
10th.	5.30	104	96	28	At the time the draught was given.
	5.40	.....	.....	.....	Became very drowsy.
	6.00	104	106	31	Was sleeping soundly.
	8.00	.....	86	26	Sleeping: evening exacerbation over.
13th.	5.30	102½	92	31	Burning sensation after the draught.
	5.45	103	98	34	Went to sleep during the examination.
	6.00	103	98	31	Sleeping quietly.
	7.00	104	99	32	Sleeping quietly: awoke at 10.00 p.m.
14th.	5 30	103	94	32	Was drowsy during the last three examinations but did not sleep and was restless during the night.
	5.45	103½	98	32	
	6.00	104	98	34	
	6.30	103½	98	36	
	7.00	102½	88	30	Sweating: evening exacerbation over.
16th.	5.45	102	90	30	
	6.00	102	100	32	Went to sleep during the examination.
	6.30	103	92	26	Sleeping.
	7.00	103	104	26	Sleeping.
18th.	6.00	103	96	26	
	6.15	103½	92	30	Sleeping quietly.
	6.30	103	96	26	Still asleep.
	7.00	101½	92	26	Sleeping: evening exacerbation over.
19th.	5.30	101½	92	22	
	5.45	101½	92	24	Went to sleep during the examination.
	6 00	102	92	26	Sleeping quietly.
	7.00	103	84	20	Still asleep.
21st.	5.30	99½	85	20	
	5 45	100	88	20	Was sleeping lightly during these two examinations, as he awoke while they were being made and went to sleep immediately afterwards.
	6.00	100	86	18	
	....	.....	.....	.....	
	....	.....	.....	.....	
	7.00	99	80	18	Sleeping quietly: sweating profusely: evening exacerbation over.
22nd.	5.45	99	86	19	
	6.00	100	82	22	Feels drowsy.
	6.15	100½	80	16	Went to sleep a few minutes after this examination and slept well during the night.

The fever gradually declined from the commencement of the examinations. The pupils were dilated for a few days about the 10th, but were neither then nor afterwards affected by the Chloral. The patient always complained of a burning sensation in the throat after taking the draught, but was so stupid that any alteration in the sensations could not be made out: he could not even tell at what time he awoke. Twenty grains dissolved in an ounce of water were given at each experiment. The first line of figures denotes the observations made just previous to giving the Chloral; and the remarks are the appearances noted at the time on the line of which they stand.

II. CASE OF GEORGE MITCHELL.

Sept.	Time.	Temp.	Pulse.	Resp.	Remarks.
	P.M.				
22nd.	6.00	103⅔	94	19	Complained of burning in the throat after the Chloral.
	6.15	103¼	92	24	Wandering in his mind during sleep, was awoke by the examination but went to sleep again during it.
	6.30	103½	100	24	Woke up at this time and complained of great dryness of the tongue and throat.
23rd.	5.45	103	100	20	
	6.15	102½	90	30	Sleeping uneasily with much starting. The respiration was jerking and irregular.
	6.45	103	86	36	Groaning and turning about during sleep. The respiration more jerking in character than at 6.15. Surface moist, woke up very thirsty, pupil not dilated.
25th.	5.30	103¼	98	22	
	5 45	103½	98	20	Drowsy and went to sleep during the examination.
	6.15	103½	92	44	Groaning in his sleep. Respiration jerking and irregular, much like that of a child labouring under acute Pleurisy.
26th.	5.45	103	112	22	
	6.00	103½	104	18	Quite awake and feels none of the effects of the drug.
	6.15	103	96	36	Sleeping quietly and breathing softly although so quickly
	7.00	103	84	34	Sleeping quietly: pupil not dilated.
27th.	5.45	104	100	22	
	6.00	103¾	100	21	Sleeping lightly, as he awoke and went to sleep again during examination.
	6.15	103½	102	34	Sleeping and breathing lightly and quietly.
	7.00	104	112	30	Asleep, moaning and talking.
28th.	5.30	104	98	24	
	5.45	103¾	98	26	Awake, does not feel drowsy, pupils normal.
	6.00	103½	92	27	Awake but feels drowsy.
	7.00	104	106	32	Moving about, groaning, and muttering during sleep which is quite sound.
29th.	5.30	104	104	27	
	5.45	103¾	94	24	Is not sleeping but feels drowsy.
	6.00	103½	92	34	Sleeping lightly and quietly.
	7.00	104	98	36	Sleeping quietly and soundly, sweating.

The observations have been made at the height of the fever. The pupils were not dilated by the disease or the Chloral. The patient exhibited great aversion to the drug after its first administration, he said it burnt like whiskey, but did not at any time complain of sensation, similar to those produced by that stimulant, he used to speak familiarly of the draught, as "you are bringing that whiskey again to-night." It frequently caused slight eructations, there was at no time marked hyperæsthesia. He generally awoke about 3 o'clock and was very restless until day-light. The first line denotes the observations made just previous to giving the Chloral (twenty grains to an ounce of water.) and the remarks are stated on the line opposite the time to which they stand.

Case of Epithelioma of the Tongue. Removal: subsequent return. By W. CANNIFF, M.D., M.R.C.S., ENG., Professor of Surgery, Victoria Medical School, Toronto; President of the Medical Section — Canadian Institute; late Vice-President Canadian Medical Association; Corresponding member of the Gynæcological Society, Boston.

John B, aged 42, a Scotchman, was admitted into the Toronto General Hospital on the 17th December, 1869, with Epithelioma of the tongue. The account he gave was, that about six months previous he noticed a small lump upon the right side of his tongue, about midway between the tip and the root. The tumour gradually enlarged and eventually ulcerated. He then applied to a druggist, who repeatedly applied caustic to the ulcer, which had the effect of aggravating its character. For some time past he had been under the care of a medical man in Toronto; but

the ulcer had steadily increased. He admits that for many years he was in the habit of using almost continually during his working hours, a short lay pipe. He is not aware that any member of his family was ever affected with cancerous disease. Upon examination, a large ulcer with hard inverted edges and with cauliflower excrescence was found involving the right side of the organ, from near the tip to the root, and extending in the middle to the opposite side. He is a great sufferer, the pain being excruciating when he swallows.

At a consultation of the Hospital staff, it was decided to remove the tongue. Consequently, on the 8th of January, 1870, the operation was performed. I was kindly and efficiently assisted by Drs. Beaumont, Hodder, Richardson and Geikie. A large number of the profession of Toronto was present. The mode of procedure adopted was to make an incision in the median line beneath the chin from the symphysis nearly to the hyoid bone, down to the floor of the mouth. Then, the *ecraseur* having been prepared, the chain was introduced doubled, by means of a needle and ligature, beside the *femur*. A strong linen ligature was then passed through the tongue well back, by which the organ could be drawn forward and slightly upward. The chain being duly passed back over the tongue to the root, especially on the right side, so as to include the diseased mass, the instrument was set to work. Gradually the enclosed structure was strangulated, and finally severed. But little hemorrhage took place, which was readily controlled by pieces of ice placed in the mouth. The constitutional disturbance was very slight. Fluid diet of beef tea and milk, with a limited amount of stimulant, was regularly administered. The day following, he was for a while unable to swallow, but this difficulty soon ceased. The patient's recovery proceeded with no untoward event. After a layer of slough had been thrown off, healing by granulation rapidly followed. By the 27th January there was only a point unhealed. On the 11th of February the patient was discharged well. But upon the mucous membrane immediately anterior to the right anterior pillar of the fauces appeared a degree of induration not very assuring. In every other respect he was in excellent health, and could so far utter words as to made himself distinctly understood. He then went to the country and was not seen for a number of months.

Upon the 14th December, 1870, he was again admitted into the hospital. He stated that for upwards of seven months he continued perfectly well; he then found a swelling in the floor of his mouth on the right side, (but at a place quite removed from that where had been noticed when he left hospital, a suspicious looking condition of the membrane.) After a few days the swelling resulted in the opening of an abscess beneath the

chin, when the swelling in the mouth disappeared. However, almost immediately afterward a tumour began to form upon the floor of the mouth on the *left* side, which has continued steadily to grow. It was found upon examination, that at the present time there is not only this tumour forming within the mouth, but that the whole of the space between the sides of the lower jaw is thickened and hardened, while there is an ulcer in the median line. It is plain that the disease is extending. From the notice of the present morbid growth it is of course impossible to offer any hope to the patient. He remained an inmate of the hospital until the 20th February. By this time the growth had much extended, so that the mouth is nearly filled, and below a prominent tumour exists which seems to be incorporated with the bone. He experiences a good deal of difficulty in swallowing, and occasionally when lying down in breathing. In view of a probably early fatal termination, he determined to go home.

Although the case has finally resulted unfavorably, it must be remembered that before the removal of the tongue, he suffered very much pain. Afterward he enjoyed months of perfect health, and when the disease did return the pain did not, so that he now enjoys comparative comfort.

Fatal case of Measles. By Dr. Sheriff, Huntingdon, P.Q.

C. S., a strong healthy young man, aged 27, sometimes engaged working a farm, at other times driving a stage between Huntingdon and Caughnawaga, of which his father is proprietor. The measles broke out in their family about the 6th of February, and by the 16th five of them were sick, and measles well developed. On the 10th Edward began to complain of the usual premonitary symptoms, but he continued his work, and on the 18th worked all day at a bee, hauling wood; on the 19th he drove about all day, and to a late hour, notwithstanding my advice to keep quiet. On the 20th he continued working, but in the evening he sent for some Podophylin pills and I sent him three, each $\frac{1}{4}$ gr. and 1 gr ex. hyosciamus, which next day operated freely. On the 21st he went out a little, and in the evening the measles had made their appearance

February 22nd.—He remained in bed; body covered with eruption; pulse only 72; had no great cough, I gave him liquor acet. ammon and spirit, and the pill every two hours.

February 23rd.—Symptoms the same as yesterday, every one favourable; had no headache; had diarrhœa, but ceased spontaneously.

February 24th.—Called at the house at a very early hour, as I was leaving home to attend a midwifery case; did not see him as the family were all in bed, but was told all were doing well. At 10 p.m. the same evening was asked to see him, as he had not been so well since drinking cider; was told that he continued well all day until near night, when having taken a dislike to the drinks he was using he sent a brother for a bottle of cider; it was bottled, and had been kept in a cold cellar, and before drinking it he asked it to be left out of doors for a while to make it still cooler. He then drank, as near as I can make out, half a pint. Soon afterwards he complained of feeling sick, and wished he had not drank it. He became nervous and restless. It was 10 o'clock when I saw him; his head was hot, but his pulse was still the same, about 72 per minute; skin moist; was restless and uneasy; bowels had been opened that day; ordered ʒj. bromid. potass. every six hours.

February 25th.—Saw him before 8 a.m.; had taken only one dose of the bromide; has slept none; was in a frightful nervous state all night, wandering about and occupying another bed; makes no complaint of pain; pulse still 72, and skin moist; measles have nearly disappeared, can see their marks; gave 3 or 4 grs. of calomel and pulv. act. of Rhydrat chloral ʒjii. syrup ℥j. aquæ ℥jii. a tablespoonful to be given every two hours until sleep was induced.

February 26th.—Owing to professional calls to various places, and more particularly to a fatal accident of an axe being driven up to the eye into the first intercostal space, causing great hemorrhage and wound of the lung, I did not see my patient Edward until 10 a.m. It appears that he remained in a stupid state all day, taking little notice and refusing all medicines and food; he had not taken a drop of the chloral solution. About 2 a.m., of the 26th, his nurse remembered that he had not urinated since Friday. My confrere, Dr. Lamare, was sent for, and used the catheter and drew off over a quart; he returned about 8 a.m. and gave him a calomel powder and some diuretic mixture, but of which he took not a drop. Soon after my arrival I cupped him freely from the nape of the neck, and gave him an enema of senna, salts, oil and croten oil, which came away in an hour or two. With Dr. Lamare's consent, I had ordered the following prescription: ℞ oleum crotuis gtt. ix. calomel grs. x. fl. fil. xi. one every three hours until they operate. They operated freely after taking four, which were administered with great difficulty; the stools were passed involuntarily. He refused to swallow anything although spoonful would occasionally go down. He kept fluids in his mouth for some time and then rejected them with force; he never spoke any connected words. After cupping him I tried him a long time to make water either

into a bottle or chamber, but could not succeed. At 7 p.m., I used the catheter, and drew off a little over a pint of an orange colour: I expected to find it albuminous but it was not. We tried to administer liq. acet. amonia, and spirit nit., but could scarcely get him to swallow anything. I cupped him again freely, and applied mustard poultices to his back.

February 27th.—Saw him at 7 p.m., had been attended all night by a medical student; pulse about 80; pupils contracted; still unconscious and moves his lower extremities very little, used catheter same as last night; had began giving nourishing enemas as he would swallow nothing. Dr. Anderson of Durham, saw him at noon, but made no change in treatment. More epispastics were applied to back and epigastrum; still does not move lower extremeties, but uses the upper frequently, throwing them over his head; used catheter at 7 p.m.; urine scanty and like dirty water; in the evening pupils not so contracted; pulse 80; skin moist.

February 28th. 7 a.m.—Used catheter; urine not so dark as the last; pulse variable from 100 to 116; at ten shaved head and applied a fly blister and mustard to epigastrum. Having to visit some patients at a distance, I left him a little after noon: all symptoms unfavourable; pulse 118; respirations 40; hands cold and bedewed with sweat: purple spots on forehead; pupils are now natural, contract and expand by the application and withdrawal of light; seems to feel the blisters. Returned at 8 p.m.; was just dying and expired in fifteen minutes. I, as well as Dr. Cameron, examined the lungs this forenoon, and found the murmur natural wherever we examined. The first bad symptoms began almost immediately after drinking the cider. This I have examined and find it very acid, but that the acid is malic as it gives no precipitate with lime water. I have also distilled four ounces, from which I have obtained about three drachms of alcohol. I considered that the eruption had been nearly long enough out. It was very vivid on Wednesday and Thursday, and it began to be plainly visible on Tuesday.

Case of Early Menstruation. By DR. ROBILLARD, Ottawa, Ontario.

If you think the following communication worth the attention of your readers, I have no objection to your giving it publicity by inserting it in your valuable journal. The case in question, though not certainly the most extraordinary on record, still we may find it sufficiently out of the usual order of things to find some interest in it.

Being called on some time since to attend a young girl of fifteen suffering from menorrhagia, I was shown a younger girl by two years, who, as the mother said, had been a little woman ever since she was

four years of age. Meaning that she (the girl) had had a menstrual flow since the age of four years. I was assured by the mother that this precocious child, now thirteen years old, of stout frame and very well developed physically, and rather above medium height for her age, had as a general rule enjoyed the best of health; that she had had her menses regularly since she was four years of age, the flow lasting only one day up to the age of eight years, when she had a suppression for three months; after this being regular again. The flow generally lasted two or three days each month.

My subject, as I said before, is a stout, healthy looking girl of a billious sanguine temperament. The mammæ, I remarked, had not attained more development than you would expect in a stout girl of her age.

As I said before, Mr. Editor, this case is interesting, and at all events I do not remember of seeing many cases on record in our Canadian journals, at least with regard to that peculiar function of menstruation.

Extracts from a Thesis on Medicinal Plants of Canada. By A. A. HENDERSON. (Prize Thesis McGill University, Session 1870.)

In the following pages is a short account of the most authentic information which I have been able to collect respecting some of our plants.

BOLETUS LARICIS CANADENSIS.—*Class,* Thallophytes. *Order,* Fungi. —This fungus, popularly known throughout the rural districts of Canada as the pine apple, or, the bitter apple, bears a resemblance, in some respects, to the larch algaric of Europe. It is obtained from the white pine, on which species alone it grows. It is situated on the trunk of the tree, and very often at a junction of a branch with the stem. Its perfect growth is not, as sometimes stated, the last act of vitality of the tree; but it grows only on the living tree, coincidently with the life of which its growth ceases. This is proved by the fact that when taken from a *dead* tree, it is found to be dry and devoid of vitality; but, when obtained from a *green* tree, it shews every sign of life.

In considering its actions, we may divide them into three parts, and consider—I. Its local action on the mouth and salivary glands. II. Its action on the stomach. III. Its action on the system in general, as a remedial agent.

Class I.—Its local action on the mouth and salivary glands.—When a small quantity of the powder is slowly masticated, it soon produces a characteristic effect on the mucous membrane of the tongue, gums, fauces, &c., making them feel as if directly acted on by the substance, and seeming to have imparted to them a bitter taste. Soon the salivary glands also

become affected, and discharge a considerably increased amount of saliva. This latter effect is in all probability chiefly due to the action of the drug as a local irritant, and, consequently, as a direct stimulant to the salivary glands. But its effect in this respect is somewhat more than that of an ordinary irritant, as manifested by its results. Its local action on the mouth, as stated by many who have used it, seems to resemble that of nux vomica, to a certain extent.

In consequence of this stimulant action upon the salivary glands, together with its effect upon the nervous system, it has been used with benefit in cases where the patient has wished to overcome the habitual use of tobacco. To produce this effect, a small quantity of the powder must be slowly chewed, allowing the saliva to come freely in contact with the buccal mucous membrane, and in a few minutes a disgust is felt for tobacco smoke, and if a smoke be then taken it produces as much nausea as is experienced after that well-remembered event by all smokers, viz., the first smoke. The remedy must be persevered with, and repeated as often as the desire for smoking returns, till the habit becomes gradually overcome. It must, however, be remembered, that though this is its rule of action, yet, as is the case with all other medicines, there are exceptions; so that, although some persons may be found upon whom the boletus does not produce this effect in such a marked degree as it does upon others, yet it cannot justly be said, on that account, that the drug does not produce this effect at all. I dwell at some length, and cite several cases to prove its effects in this respect, not because I think its action in this respect alone is of any very great importance, but because in order fully to comprehend the effect of any medicine upon the system, its effects upon all the tissues and organs must be known and understood. When once that has been thoroughly accomplished, the reasoning from it as a basis, its application for the cure of the classes of disease for which it is suited, may be easily accomplished. With this object in view, I cite the following cases, hoping that they may aid at arriving at a complete knowledge of our Canadian bitter apple.

Case I.—H. H., aged 41 years, height 5 feet and 7 inches, fair complexion; place of birth, London, England; occupation, merchant. He is a married man; general health good. He stated that he had smoked for twenty-five years, and began, by request, to use the boletus, without having any desire permanently to give up the use of tobacco, but simply to ascertain if it really was capable of producing the disgust for tobacco which it was said to cause. Upon chewing a small quantity of the powder for some time, and swallowing the saliva, he found that an increased flow of saliva was soon produced, and that if much were chewed at once, a

feeling of uneasiness at the stomach, almost amounting to nausea, was produced. After chewing, he felt that although his accustomed time for smoking had arrived, he felt such a disgust for the accustomed stimulus that he had not only no desire to smoke, but had a decided disinclination to do so. The dose of the drug had to be repeated as often as the desire to smoke returned, and always produced the same result. He stated that he doubted not that if sufficiently long continued, and used with a desire to give up the use of tobacco, a permanent cure might be effected. He found, however, that after a number of trials he could chew tobacco first after using it, but found that he had no desire to smoke till he discontinued its use.

He continued the experiment for five days.

Case II.—George C., a married man, aged 48 years; complexion dark, eyes blue; a native of Quebec city, present residence Fitzroy Harbour; occupation, bookkeeper.

He stated that he had smoked heavily for forty years. He had been in the habit of using a tincture prepared from the boletus, occasionally as a stomachic, but till the present instance had never used the powder. He began on July 13th to use the powdered boletus, by request, determined to watch its effects, and, if possible, to continue the use of tobacco. He used it freely, taking from seven to fifteen grains at a time, chewing it slowly so as to allow the saliva, impregnated with the juice of the fungus, to come in contact with every part of the buccal mucous membrane, and then swallowed it. He felt its effects so violently on the salivary glands within twelve hours, that saliva flowed profusely, and he considered it better to diminish the quantity in which he used it. He continued its use for four days, and by that time was so profusely salivated that he thought it better to desist. He felt, in an excessive degree, the effects of the drug on the salivary glands, yet he succeeded in using his pipe during the time of the experiment.

He further stated that he noticed a marked effect on his nervous system while using it, as shewn by the fact, while under its influence, his hand was much steadier than usual while writing. I may here explain that his hand often trembled considerably, frequently to such an extent as to annoy him while writing.

Not wishing to press the experiment further, and feeling quite satisfied with its success so far, he discontinued its use, after having used it for four days.

The author gives two cases more, which, from want of space, we omit.

Class II.—Its effects on the stomach.

In the districts of Canada in which this fungus abounds, it is

frequently used steeped in alcohol, as a stomachic. It is lauded by many who have used it, as being highly serviceable for this purpose. There is one remarkable effect, however, which it produces, especially in persons of sedentary habits, which is, that if a large dose be taken in the morning, a feeling of depression of spirits is felt during the afternoon and evening. But, when taken in moderate doses, this effect is not usually perceptible, and, as is well known in those districts of the Dominion in which it exists, it is used by many, especially during the heat of summer, to improve an impaired appetite and to keep the stomach in proper tone. It is largely used for this purpose in the Upper Ottawa shanties, by the lumbermen, many of whom look upon this alone as a medicine quite sufficient for nearly all their necessities. Although this opinion carries its virtues farther than they merit, yet the very fact that it is, and has been for many years, considered by numbers to be almost a universal remedy, proves that it must have some health-giving virtue. It surely, then, is our duty to investigate its nature, properties, and actions, and, where it is found an efficient remedy, to adopt it. The pine apple of Canada, like the digitalis of Western Ireland, was used by the populace long ere the profession adopted it; let us hope the similitude will be carried out to the end.

Class III.—Its actions on the system as a remedial agent.

As a remedy in amenorrhœa.—The effect of the bitter apple in this disease has been known in Canada for a number of years, but the information has been confined to rather a limited number. The reason of its being kept in such secresy seems to be due partly to the fact that the older females, who were aware of its virtue, wishing to have the reputation of being skillful, shrouded the matter in mystery, and when consulted with regard to such a case, either gave the medicine themselves without telling the patient what was given, or perhaps communicated the information to the younger female who required to use it, and who, from a natural feeling of delicacy, refrained from mentioning either her illness or her cure to any one. But, be the reason what it may, the facts remain before us: 1st, That it has been successfully used in this complaint; and, 2nd, That although this be the case, yet, because the fact has not been laid satisfactorily before the Medical Faculty of our Universities, it has never been recommended to the profession as having the efficacy which it really possesses. I have also been informed by persons from the west of Scotland, that the bitter apple that is to be found there, and which, as before stated, somewhat resembles our Canadian fungus, is used there also as a remedy for this complaint as well as for other purposes. I have not yet had an opportunity of proving this assertion,

but from circumstances attending the statement, especially of one of them, I feel rather inclined to credit the story.

The use of this fungus has not been restricted to a remedy in cases of disease, but it has been used as a potent abortive agent by young women who have wished to avoid publicity.

The following cases in proof of its efficacy in cases of suppressio mensium have been furnished me, and I can certify as to their accuracy. The names of the parties have, for an obvious reason, not been mentioned here; but I am authorized, if required, to give both name and address to the medical faculty.

The method of its administration is as follows:—Scrape from the fungus a sufficient quantity of powder to make the dose before stated, and take it in water or milk as the patient may prefer. No food should be eaten for several hours before taking it. The proper time for commencing its use is said to be nine days before the time at which the menstrual period should begin, and continue it till it appears. It is thought best to take it just before retiring for the night.

Case I.—Miss ———; residence, Ottawa city. Dark complexion; dark brown hair.

For several years after arriving at maturity she enjoyed good health. Then her health seemed to become impaired, ending in complete menstrual suppression, which continued for *fourteen months*. She seemed at the time to be fast sinking. A friend, who became aware of her condition, then advised her to use the Canadian bitter apple in the powdered form, and in the usual dose. The result was that, in a few weeks,—though she does not at present recollect the exact time,—the menstrual discharge returned, and from that time her health rapidly rose to its usual standard. Since that occurrence, whenever occasion demanded it, she used the boletus powder herself, and recommended it to others, and always with a similar result.

Case II.—Mrs. ———; fair complexion; fair hair; blue eyes. Residence, Ottawa city.

She stated that she became unwell, but continued to go around as usual for some months. At last she was confined to bed and a medical man called in, and for eight weeks she remained under his care, but still total suppression continued. It was then resolved to resort to the *boletus alone*, given in the usual way. The result was that, in nine days after commencing to use it, the catamenia returned. Her strength gradually increased, and she is now in the enjoyment of her usually good health.

(The author gives more cases tending to establish still further the merits of the drug.

Before concluding this part of the subject, however, there is another affection to be mentioned, in which it has been used, it is said, in many instances, with success, by persons in country districts, who wish to treat themselves instead of putting themselves in medical hands; that is, in cases of *gleet*. I have only had it in my power to procure one case in which the person admits having used it for this complaint, for, although many may state that they have heard that it is useful in this affection, yet they generally do not like to allow themselves to be brought forward as proofs of the efficacy of any remedy for it.

LYCOPODIUM.—*Class*—Acrosens. *Order*—Lycopodiacæ.

Use.—In cases of derangement of the heart's action, produced by weakness or irritability of the nervous system, or where it is due to some obstruction of the respiratory organs and the heart's action consequently increased as an attempt of nature to overcome the difficulty, its effect is, in many instances, instantaneous; a feeling of quiet and comfort being soon produced. Lycopodium is here said to act in a manner that justly merits its use, as the heart gradually but decidedly responds to the remedy to a greater or less degree, according to the extent to which the drug is pushed. Respecting its effect in organic disease of the heart, I have not got it in my power to make any decided statements.

Given as a tincture in dose of 2 to 5 m., and repeat when necessary.

THE CANADIAN MALLOW.—*Class*—Exogens. *Order*—Malvaceæ.

II. As a means of reducing abnormal muscular contractability.

Cases of this kind are not of unfrequent occurrence in many parts of Canada, among persons exposed to cold and wet. The flexor muscles of the affected limb become contracted and painful, and, as a means of relief, the limb is obliged to be maintained in a semi-flexed position. The strength of the patient soon begins to sink from the effects of constant suffering, and profuse, cold night-sweats set in as a consequence. A few applications of the mallow, if properly prepared, will be found to produce a markedly beneficial effect on all the symptoms. The pain and perspiration diminish as the contractability gradually yields, and in a short time the patient is usually restored to his usual health.

Mode of preparation.—The leaves and stem of the mallow should be boiled in a quantity of water just sufficient to cover them, until they are reduced to a pulp. This is then to be applied to the affected part as hot as the patient can bear it. It is considered best to apply it thus at night, and allow it to remain on till next morning. A few applications in this manner usually suffices to reduce even the most refractory case of this kind.

I need not bring forward any cases in proof of its efficacy in reducing

ordinary swelling, but regarding its effect on muscular contractability I will cite two cases.

Case I.—The first instance in which I saw it used for this purpose was by an Indian. The Indian and his family were passing on their way along the Ottawa River, one autumn, a few years ago. An old man, one of the party, was seized with an attack of the complaint under consideration. The right knee was semiflexed and exceedingly painful. The tendons of the rigid flexor muscles could be felt hard and unyielding. He stated that for some nights previous to the first application of the mallow he had such a profuse cold perspiration that he had to change his underclothes at midnight, and again in the morning. After the lapse f twelve hours from the application of the mallow, a decided diminution had taken place in all the symptoms, and after the expiration of a few days he could use his leg with moderate ease, and then continued his journey.

Case II.—R. J. T. states that he had an attack of this complaint some years ago, and used the mallow as a remedy. He further states that he is willing to certify as to its efficacy in this affection.

In order not to make this thesis too long, I will not state too many cases respecting each plant, but after giving a few proofs of the accuracy of the statemants made, will pass on to another part of the subject.

The author, who was the gold medallist of McGill University, for session 1869–70, concludes his thesis with a few brief remarks on a few other Canadian plants, less useful than the former, as the spikenard, the poplar and the mullein. He expresses the hope to be able to pursue the whole subject of the Canadian materia medica more fully at a future period, and we shall be happy to chronicle the results of his enquiries.—*Eds. Med. Journal.*

MEDICO CHIRURGICAL SOCIETY OF MONTREAL.

MEETING HELD 18TH FEBRUARY, 1871.

Dr. Robert Godfrey, Vice-President, in the chair.

Dr. Trenholme read the following paper on

A CASE OF PROLAPSUS UTERI.

MR. PRESIDENT AND GENTLEMEN,—The subject of this short paper is the successful treatment of a case of prolapsus uteri, that has just passed from under my care. The patient, as you will see by the following remarks, had been a considerable length of time almost entirely incapacitated from following her household duties, as well as a great sufferer in many ways, by her serious and distressing complaint.

History,—Mrs. D., aged 20 years, native of Canada, is of large size, spare habit, fair complexion, and of general healthy appearance. Has had leucorrhœa, more or less, since her marriage about five years since, which was increased after her first confinement about three and a half years ago, and also aggravated by the addition of bearing down pains of the womb, pains in the small of the back, loins, &c., &c., caused by her refusing to remain in her bed after the third day of her confinement.

This state of things continued with slight variations for another year, when during a severe attack of typhoid fever she had a miscariage. Her convalescence was very protracted, and when once more she was able to move around the house, found, in addition to an increase of the leucorrhœa pains, &c., that the womb, or some kind of tumor, began to make its appearance between her thighs.

This new complication gave her serious inconvenience, in addition to augmenting all her previous troubles; within the last few months the tumour, so she says, has increased considerably in size.

Present Condition,—In addition to the pains, &c., already mentioned she has variable appetite, furred tongue, pains at pit of stomach after eating; constant rumblings and distension of the bowels, flatulance and constipation. Is much troubled with palpitation of the heart and shortness of breath after exertion.

Upon examination, the uterus was found quite prolapsed, and much increased in size and density, specially the cervical portion.

The mucous membrane of the original walls had by long exposure to the atmosphere, and friction of the parts, lost its natural moist velvety character and felt and looked somewhat like true skin. The os uteri was much enlarged, infiltrated or hypertrophied and firm to the touch. About half an inch above the os, the neck was fully two and a half inches in diameter, and through the largest part of the prolapsed organ about four and a half inches. The membrane covering the anterior part of the womb, seemed to be loosely attached, and gave the impression of partia prolapsus of the posterior wall of the bladder, although I discovered nol fluid in connection with it. I regret I omitted to pass the catheter to settle this question.

The os uteri was largely, (and readily admitted the finger some distance) dilated and filled with mucous, having a slight trace of pus, which flowed freely from the canal.

So far as could be seen, there was no ulceration of the os or cervical canal, and the sound passed most readily into the uterine cavity. There was a little tenderness of uterine walls, and the depth of the cavity was five and a half inches.

The uterine secretion was not examined specially, as there seemed to be no particular reason for doing so.

The uterus was easily returned to its natural position in the pelvis, when the perineum contracted well, and did not present that distended flabby aspect that might have been expected after its prolonged distention by such a large body.

The cause of the present hypertrophied and indurated condition of the uterus (the prolapsus being merely a necessary consequence of this hypertrophy) appears to be entirely due to imperfect involution, after the patient's confinement and miscarriage. The uterus has, to all appearance, the congested and indurated enlargement which results more from an atonic, passive state of the parts, rather than from active inflammatory action.

Treatment. The only thing in my judgment calling for treatment is the hypertrophied condition of the uterus; once remove the disease, and then the prolapsus, which is not a disease *per se*, will remedy itself. In this case, as well as in others of a similar nature, I refrained from using the pessary to sustain the womb, although at first I had serious misgivings as to ever seeing the organ retained in the pelvis without one.

With the exception of small doses of pulsatilla to aid in digestion and remove the flatulence, the treatment was local, and adopted with the view of reducing the congested and hypertrophied state of the womb by dissolving, or melting away all the imperfectly formed tissue, and by this means, perhaps, happily restore the organ to something like its normal condition and position.

To effect the purposes I have indicated, the acid nitrate of mercury, prepared by dissolving about 5 grs. calomel in 3 j. strongest nitric acid, was freely applied by means of a piece of cotton fastened to the end of a wood splinter to the cavity of the cervical canal and uterus. After the application, the os was filled with dry carbonate of soda to prevent excoriation from any excess of acid, and the womb was returned to its place.

The patient was directed to wear a perineal bandage, and to lay down as much as possible for a few days, at least, after each consultation.

The application of the caustic was followed, for some hours afterward, by increased pains in the small of the back and loins, and for two or three days by a great increase in the quantity of discharge from the womb.

This treatment was continued throughout at intervals of about eight days, except when the catamenia interfered, when it was delayed for three or four days after she was well. At first the progress toward recovery seemed to

be very slow and unpromising, yet by the 16th December there was a perceptible decrease in the size and density, and the patient had been able for a day or two, now and again to keep the womb from protruding externally. The sound indicated the satisfactory diminution of the depth of cavity by one inch, being now four and a half inches and correspondingly reduced in bulk.

By the end of December the depth of the cavity was still further reduced seven-eighths of an inch, being now $3\frac{5}{8}$ inches; was better able to retain the womb in its place; suffered much less from the bearing down; and although the discharge was very great, was steadily progressing toward recovery.

On the 4th of February, examined the patient for the last time; was obliged to use the speculum, as indeed I had already done on the last four or five consultations; found the os well up in the pelvis, of nearly normal size, density and appearance.

On introducing the sound found the depth of uterus to be $2\frac{1}{2}$ inches

As the patient feels entirely well, able to attend to her household duties, &c., without inconvenience, she is therefore relieved from further attendance.

Such, gentlemen, is the brief history and treatment of a case that has been of a good deal of interest to me on account of the unexpected and satisfactory results obtained, and that, too, without being obliged to resort to that objectionable instrument, the vaginal pessary.

Dr. F. W. Campbell said the case was an exceedingly interesting one illustrating, as it did, the result of the application of the acid nitrate of mercury, which was the now favorite caustic of Dr. Storer of Boston, He enquired from Dr. Trenholme at what period between the menstrual flow did he apply the acid, and whether the application was made at his own surgery or at the patient's house, and whether he had confined the patient to the recumbent posture for any time afterwards. Dr. Campbell said that Dr. Storer had found that midway between the menstrual periods was the most successful time for its application, and that to prevent any bad consequences, it was well to use the acid at the patient's house, and confine them to the recumbent posture for twenty-four or forty-eight hours. He also enquired as to the amount of pain that followed the application.

Dr. DRAKE remarked that Bennett and others in similar cases, used prucei putty, the potassa fusa or potassa cum calce.

Dr. HINGSTON would enquire whether there had existed any malposition together with the prolapse, and also whether there was simple elongation of the cavity of the uterus or whether enlargement had taken place in all directions. Thinks that the pessary should only be a *dernier resort.*

Dr. HOWARD enquired when Dr. Trenholme first examined the case, and what period had elapsed since her miscarriage?

Dr. TRENHOLME replied that he first saw her at the time mentioned, and that the mis-carriage had occurred two years before.

Dr. HOWARD enquired the distance from the reflexion of the vaginal wall to the mouth of the os.

Dr. TRENHOLME could not give the exact measurement.

Dr. HOWARD said that it had been shown the length of the uterus was at first 5½ inches, and that it was much hypertrophied. This was, from the history, apparently due to deficient involution, or partly to actual outgrowth from other causes productive of such hypertrophy: but this point could not be definitely settled since the case had not been under observation from the time of the mis-carriage to the time of first seeking advice. It was a well known fact that often after confinements the uterus never returns to its normal size. In a woman, therefore, who of necessity stands a good deal, and who has the vagina and perineum much relaxed, from the gravitation of the uterus and posterior wall of the bladder, elongation of the cervix will take place. The treatment adopted in the case under consideration was not new, but was very interesting. It was similar to the old French treatment, which was by means of the actual cautery and powerful caustics. It was interesting to see how the action of strong caustics will cause absorption of the structures of the uterus.

Dr. DRAKE suggested in similar cases the use of sponge tents for the purpose of dilatation, following the plan of Sir James Simpson.

Dr. TRENHOLME explained that, of course, in the use of such a powerful caustic great caution was necessary. He allowed three or four days to elapse after the cessation of the menses before making the application, and then did it at his own office—there was no malposition of the uterus; did not believe that prolapse of the womb ever took place without some degree of hypertrophy of the organ. The acid was applied by means of a pledget of linen, tied on to a tapering piece of wood, and no pain of any moment was complained of. He had in other cases applied iodine, and found intense pain to follow its use, so much so that nothing could induce him to use it again.

Dr. HINGSTON remarked that Dr. Storer, of Boston, never applied the caustic sooner than from fifteen to twenty days after the menstrual period was passed, and has stated that the fatal cases which he has met with in his practice occurred from a too early application of the nitrate, and perhaps from having permitted the patient to walk about afterwards.

Dr. REDDY hardly thought from the method of its preparation that it really was the acid nitrate of mercury which Dr. Trenholme had applied.

Dr. DRAKE also took exception to the method made use of by Dr. Trenholme, in making the preparation he applied to the uterus. He thought with Dr. Reddy that it was hardly the acid nitrate of mercury which he had applied. Calomel was not soluble in nitric acid.

Dr. TRENHOLME was perfectly satisfied that a very large quantity of the calomel was dissolved by the acid.

The chairman having tendered to Dr. Trenholme the thanks of the Society for his interesting paper, the meeting adjourned.

MEETING HELD MARCH 4TH, 1871.

Dr. GEORGE W. CAMPBELL, President, in the chair.

Dr. GODFREY read the following paper on

SPONTANEOUS INVERSION OF THE UTERUS.

MR. PRESIDENT AND GENTLEMEN,—I bring before your notice this evening a case of spontaneous inversion of the uterus, the details of which are as follows:

On Friday, the 22nd February, 1867, I was called on to attend Mrs. W., a strong, healthy, well-developed young woman who was about to be confined of her second child.

On examination I found the presentation natural, the os well dilated, the pains regular and strong. After a couple of hours attendance she was delivered of a healthy living child, and in about fifteen minutes the placenta and cord, both in a normal condition, came away with natural pain and consequently requiring scarcely any traction.

I then applied a bandage moderately tight without any compress. The discharge did not exceed the usual amount. I went into the sitting room, chatting with her husband for about half an hour, and before leaving the house went into her room and wished my patient good night, leaving her quite comfortable, and everything all right.

On my visiting her on the following morning she told me she suffered very severely from after pains during the latter part of the night; she was then suffering, and the discharge was increasing very fast. I gave her three powders containing a grain of acetate of morphia, one-third of a grain in each; one to be taken every three hours until the pain was relieved.

Visited her again at one p.m.; she had just taken the second powder; was no better; her pulse was extremely weak, her face very anæmic, and I began to feel very uneasy for the safety of my patient. At this visit I made a vaginal examination, more for the purpose of ascertaining the amount of clots that might be in that locality than anything else. I did

not feel the uterus, it seemed very high. Visited her again at half-past 9 p.m. the same day; symptoms somewhat better. She was easier; discharge not so profuse. Unpinned and reapplied the bandage and gave the third powder.

Sunday morning on calling I found them in a great consternation. While she was sitting on the chamber a large body, the size of a child's head, passed out of the vagina and was resting on the bed. The nurse supposing it to be another after-birth tried to remove it, but the pain was so severe that Mrs. W. insisted on her waiting until the Doctor called. Her husband ran to my surgery for me, but not finding me he went for Dr. Girdwood, who kindly went with him, and found her on his arrival just as I have described. I arrived in a few second afterwards, and on consultation, we had little difficulty in diagnosing it as a case of complete inversion of the uterus, and decided to put the patient under chloroform and try to reverse it if possible.

We placed the patient on her back with her knees drawn up, bringing her to the edge of the bed, and when she was completely insensible, I grasped the uterus with my right hand (the hand and arm having been previously anointed) and pushed it steadily up into the vagina. I then brought my fingers down without removing my hand, and formed their tips into a cone, pressing them steadily against the centre of the fundus I continued the pressure onward in the direction of the os (which I fel distinctly) until the whole organ was reverted to its normal position.

Her recovery was very tedious. She was not able to leave her bed for nearly six weeks.

Mrs. W. was again confined on the 24th of April, 1868, of a still-born child, one year and sixty-one days after the inversion. The child was full grown and had arrived at the full period: could not account for its being dead born. The placenta came away without any trouble as in the last case. Treated her as I had before, except that I gave her an anodyne to relieve the after-pains before leaving the house.

Again on the 24th day of April, 1869, exactly a period of twelve months after her last confinement, I attended her, when she gave birth to a healthy living child. Both mother and child are alive and well at present.

There are a few points connected with this case which are interesting and worthy of consideration.

In the first place, the probable length of time that had elapsed since inversion had taken place. I am of opinion that when I made the vagina examination the fundus was implicated in the os, which would account for my not having felt it. I consider the amelioration of her symptoms at my evening visit was owing to complete inversion having taken place, and that the inverted uterus remained in the vagina until the following

morning, when it was expelled by the effort of getting on the bed pan. The remarkable ease with which the organ was reverted while under the influence of chloroform is also worthy of consideration, for I find some of the earlier writers on the subject look upon it as a proceeding not often attended with success.

Had I failed in my efforts to reduce the organ, it was my intention to have applied belladonna round the neck: or, had this failed, I should have been inclined to divide the neck nearly through with a bistoury. Both remedies would be, I think, attended with great risk; the first from the large amount of open blood vessels. Consequently, the probable rapid transmission of the belladonna into the system, and the other from the liability of opening into the peritoneal cavity.

There is another symptom in this case which has caused me much thought, and which makes me anticipate with pleasure the remarks I hope to hear from the members of the profession present on the subject. I allude to the alarming prostration which at one time was so great that the patient appeared almost moribund. Most writers call this collapsed state, shock, but I have seen a case where the uterus was ruptured from the fundus to the neck, the child and placenta thrown into the abdominal cavity, and yet the shock was nothing like so great as in this instance. Therefore, I feel disposed to think that the most alarming symptoms were caused by air entering through the open veins, for when complete inversion took place the neck acted as a tight ligature, preventing the ingress of air, and her symptoms began to improve.

Dr. THOMPSON read the following paper on

ACUTE INVERSION OF THE UTERUS

caused from pulling too much on the cord in the removal of the placenta.

I was called up during the night of the 17th December, 1869, to assist in a midwifery case. It appears that Mary M., aged 37, the mother of six children, was taken in labour about ten o'clock a.m., on the 16th, and after natural and easy labour was delivered at half-past twelve, a.m., on the 17th, of a female child. Some little hæmorrhage followed the expulsion of the child, in consequence of which the person in attendance endeavoured to remove the placenta by forcible traction at the cord, about an hour before my arrival. When I entered the room I found the patient in an extremely exhausted condition, evidently labouring from or under some aggravated nervous shock.

Her face and lips were pale and ex-sanguine; there was a cold sweat on the face and forehead; she had just fainted and vomited, and I could detect no pulsation at the wrist. I immediately gave her some brandy

and cold water, and I at once proceeded to ascertain the cause of the untoward symptoms. I found on the bed close to the vulva, in a pool of blood and numerous clots, lay the placenta, still partially adherent to some body within the vagina. On passing my hand into the vagina I found the whole cavity of the pelvis, which was very capacious, occupied by a firm globular tumour, which was pressing forcibly on the perineum; I could detect no uterus above the pubes by my hand being applied over the abdominal parities; but the extremities of my fingers could be felt within the vagina. I at once detached the placenta which was then only adherent to the extent of about two square inches (the entire surface had evidently been forcibly detached,) and then with my fingers flexed I endeavoured to replace the inverted uterus, and after a few minutes continued pressure it began to yield, and at last resumed its normal position; my hand occupying the cavity, and was not withdrawn until expelled by the uterine contraction, so as to ensure the patient against a repetition of the accident, and I also assured myself that the *restoration was complete.*

I removed the adherent placenta in order to diminish the bulk of the inverted fundus, and thus facilitate the reduction.

When the inverted uterus was restored to the natural position or situation, I took every precaution necessary to avoid a recurrence of the accident, or what is more likely, prolapsus of the uterus.

I kept up a continued pressure with my hand over the uterus for about an hour or more, on account of repeated oozings of blood; I administered during the time about half a pint of brandy and some infusion of ergot. She complained of great dizziness and of noises in her ears; but arterial action being established, and all hemorrhage having entirely ceased, a firm pad was applied over the uterus and I left.

The next morning she felt much better, and had a far less anæmic appearance than the night previous.

She complained of great debility and great pain in the head, especially across the brow; free from fever; pulse 68, full volume, very soft and compressible; tongue much improved; has had no sleep. She gradually improved, taking nutritious diet and tonic medicine, and on the 3rd of January she was able to get up, and gradually resumed her household duties.

Dr. G. W. CAMPBELL said a case of inversion had a few months ago been under his care. The patient came from the country, a farmer's wife, and since her last labour, four years previously, had been troubled with profuse menorrhagia, from which she was much reduced in strength and quite anæmic. He examined her at the hotel where she was staying, and passed his fingers round, what he at the time considered a fibrous

polypus protruding from the os uteri and firmly embraced by the cervix. He had met with several cases of uterine polypi within the last few years, such as he believed this to have been, and had generally succeeded in detatching them by enucliation with the finger nail. The patient was admitted into a private ward in the Montreal General Hospital, and with the assistance of Drs. Wright, Ross and Roddick, he proceeded to perform the operation. Having been ætherised, and placed on her left side with the nates close to the edge of the bed, the tumour was grasped by a volsellum, pulled down to the os externum, and a noose of broad tape slipped over it as far as its neck, upon which traction was made, sufficient to expose it in its whole extent; it was pyriform in shape, white in colour, firm in feel, about the size of a small egg, and resembled exactly a fibrous polypus tightly embraced by the os uteri; a probe was passed round the neck of the tumour, to endeavour to discover its pedicle, and to give room, the cervix was divided, first on its anterior, and then on its posterior half, relieving the constriction; on again examining with the probe at the posterior incision, he found it slipped through a small opening, and could be passed upwards to any extent. He at once examined per anum, felt the probe through the coats of the rectum, and discovered the absence of the uterus, and that what he had considered a polypus was really an inverted uterus. Of course, all further operative interference was desisted from, and in a few days the patient went home with instructions to return in three or four months, in order that an attempt might be made to replace the uterus into its normal position. At the appointed time she returned wonderfully improved in health and appearance. She had menstruated regularly and in normal quantity since her former visit, the division of the cervix having apparently produced this result, by relieving the uterine congestion. An attempt was made to replace the inverted uterus, and as much force was used as he deemed prudent, but it failed, and as the patient's health was excellent, and she was perfectly satisfied with her condition, she was advised to return home, and to use mild astringent injections, and the cold sitzbath. This case was instructive, and shewed the necessity of examining per anum before operating upon fibrous uterine tumors; had he resorted to this in the first instance, it would have prevented his erroneous diagnosis, but the symptoms and appearances were so deceptive that he felt perfectly satisfied he had a fibrous polypus to deal with. Upon making special enquiry into the history of the case, the woman stated that her last labour was easy and natural, and that there was a natural delivery of the placenta, but that eight or nine days after her confinement, while reaching for a book, she felt something give way

in her inside; she had no further uncomfortable symptoms at the time, but it was doubtless then that the inversion took place; the monthly flow had been profuse since then; the duration of the periods was greatly increased, and the intervals diminished, so that she was flowing more than half her time, but the operation seemed to have restored the function to its normal condition both as to time and quantity.

Dr. GIRDWOOD said that in the temporary absence of Dr. Godfrey, he had been called to the patient and found her exhibiting an appearance of great depression and anxiety. Found, on enquiring, that the labour had been perfectly natural three days previously, and on examining discovered the tumour closely encircled by the os uteri. The nurse informed him that the tumour had appeared just after the patient had been sitting upon a bed pan; thought this should always be avoided after confinement by having recourse to a draw-sheet or some other similar appliance; would remark that the occurrence was really very rare, being said to occur only once in 80,000 cases.

Dr. FRASER said Dr. Parker of New York, an eminent surgeon, had recently excised the whole uterus in mistake for a polypus. So he considered Dr. Campbell very fortunate in discovering his error in diagnosis in time. In Dr. Parker's case, although both the ovaries had been removed, the patient did well. Polypoid tumors were a common cause of inversion. In Dr. Godfrey's case, as in Dr. Campbell's, it was due to a floxcid condition of the fibres of the uterus. He remarked that recently Dr. White of Buffalo, and Dr. Smith of New York, had both effected reduction of the uterus after many years standing, the former after 13 years and the latter after 16 years. In the last mentioned, the result was brought about by means of an air-cushion and the treatment occupied a space of eight days.

Dr. GODFREY said the hemorrhage in his case was not excessive but the open oozing veins of the interior of the uterus were very plainly seen. It was a novel sight and one not often witnessed.

Dr. FRASER said the late Dr. McCulloch of Montreal removed the uterus, and the patient did well.

Dr. REDDY remarked that in Dublin, the same operation had been performed successfully some ten or eleven times.

Dr. G. W. CAMPBELL mentioned an heroic method of treating this affection, viz., by making an incision into the lower part of the abdomen, through which a sharp probe was introduced so as to perforate the inverted uterus, a button was then placed on this and traction made upwards and the organ was brought to its natural position. The case recovered.

Dr. FENWICK said that in a case related by Dr. J. Gaillard Thomas, after all the usual means had failed an exploratory opening was made into the abdominal cavity, and an instrument like a glove stretcher was introduced to dilate the os; the organ was then reduced by upward pressure though the vagina, and the abdominal wound closed. The case ultimately did will.

Dr. HINGSTON would take exception to the supposition of the entrance of air. He would ask what evidence there was of this having taken place. Thinks the depression must have been from shock, and that if air had entered the veins that phlebitis would have followed.

Dr. GODFREY believed that in turning and some other operations in midwifery the sudden appearance of collapse was sometimes to be explained upon the supposition of the entrance of air into some of the large veins. If the very great collapse in this case was not due to this cause, he was at a loss to explain it. He had had a case of entire rupture of the uterus, and the child thrown into the abdomen, without having anything equal to the shock in this case.

Dr. G. W. CAMPBELL said it was, he believed, impossible for air to have entered the veins.

Dr. REDDY said air could not have been taken in without an immediate effect being observable, and that of a very serious kind. He had a year or two ago, a case of rupture, with but little pain, and the patient died in two hours and forty minutes.

Dr. CRAIK said if Dr. Godfrey was correct in his supposition, why does not air enter, when the placenta comes away in ordinary labour.

Dr. TRENHOLME mentioned a case, where he had thought it advisable to apply tincture of iodine to the interior of the uterus. On its application the shock was so intense, that it would be a long time before he would again venture on its employment. The patient was unable to leave his surgery for two hours.

Dr. FRASER remarked that the danger from the application of pernitrate of ferri was due to its action upon the blood, rendering embolism possible.

Dr. GODFREY said in many cases of turning he had seen very great prostration, without any internal hœmorrhage.

Dr. G. W. CAMPBELL said he had turned in fully fifty cases without the slightest trouble. He had several patients in whose labour he always turned from the difficulty of the head entering the superior strait.

The president (Dr. G. W. Campbell) stated that Dr. Thompson's paper was interesting, as illustrating inversion from another cause than that to which Dr. Godfrey's case was due. He considered the papers

that had been read exceedingly interesting, and that much information had been elicited from their discussion.

The thanks of the society were tendered to Drs. Godfrey and Thompson for their interesting papers.

Dr. HOWARD wished to exhibit a pair of kidneys, which had interested him very much, and had been sent him by Dr. Scott for the purpose of illustrating his lectures upon medicine. They belonged to a man aged 45, of intemperate habits, who had been admitted to hospital early in June last, in a state of marked cachexia, with a bed sore on the sacrum, frost-bitten feet, œdematous lower limbs, but no albumen in the urine. By the middle of July he had so much improved that he was about to leave the institution, when he was seized, for the first time, with an attack resembling asthma, which recurred for two or three consecutive nights. No disease of heart or lungs could be detected.

Dr. Roddick informs me that, towards the end of August, he was sent to attend the man, and found him suffering from cough, paroxysmal dyspnœa, œdema of face and legs; bronchitic râles were audible over the chest, and urine contained about one-tenth its volume of albumen. All these symptoms, except the cough, improved very much in September, but returned in greater degree in October, and ascites was added to anasarca. He was re-admitted to hospital on 20th October. During the short time he survived, he suffered from orthopnœa, general dropsy, noisy respiration, like that produced by laryngeal obstruction, mutism, incoherence, semi-coma, dysphagia, highly albuminous, scanty urine, and twelve hours before death, complete coma.

Dr. Roddick, and the clinical clerk, Mr. R. A. Stephenson, inform me that no tubercles existed in the lungs, nor any traces of syphilis upon the exterior of the cadaver.

The kidneys, as you see, are of unequal size.

The larger weighs barely $4\frac{1}{2}$ ℥; smooth; capsule thin, non-adherent; no granulations nor inequalities upon exterior, nor unequal distribution of the blood upon that surface; neither congested nor anæmic; very natural-looking.

Cut surface:—usual thickness of cortical substance; no visible streakings, nor pale lines indicative of exudation into tubules, nor any opaque specks over the entire section, except over a limited area of about three-fourths of an inch square, in the cortical substance. This diseased area is whiter than the rest, and presents numerous dead-white lines running from the periphery of the organ vertically towards the pyramids, and resembling the appearances observable in the "large white kidney" of pathologists.

The smaller kidney weighs 2 ℥ i ℥; external surface smooth; a cyst, about the size of a damson plum, occupies its external surface; contents of cyst had nearly all escaped when brought to me, except some chalky-looking pultaceous material which adhered to the lining of the cyst.

Capsule non-adherent and of usual thinness, except over the cyst, to which it is closely united; exterior is of normal appearance in all other respects. On section, relative proportion of cortical and pyramidal substance normal, no wasting of one more than of the other, the organ merely appears small; no visible deposit or streaking on this surface. At one end of the organ, and occupying the cortical substance, is a cyst, filled with transparent serum and of the volume of a green pea.

No thickening of pelvis of either kidney, nor of that portion, about two inches long, of the ureters which has been removed with them.

These specimens have some interesting, and, to me, puzzling peculiarities. What is the nature of the alterations present? Are the kidneys affected with Bright's disease?

Opposed to that view is the great fact that that disease almost invariably—in my limited experience invariably—affects both kidneys at the same time and in about equal degree. In this case one kidney is twice as large and heavy as the other, and the smaller has two cysts in it, while the larger one has only a small patch of exudation in it.

2ndly. These kidneys have not the usual appearances of Bright's disease. Here the *smaller* kidney weighing 2 ℥, wants the thickened adherent capsule, the glandular or nodular exterior, and the atrophied cortical substance of the granular or fibroid kidney—the variety of Bright's disease of which it appears at first sight to be a specimen.

On the other hand, the larger kidney wants the characters of the "large white kidney"—the increase of volume and weight, the anæmia, the augmented thickness of cortical substance, and the lines of exudation into the tubules distributed uniformly throughout the cortical substance. The appreciable alteration in this kidney is confined to a very small area, indeed about three-quarters of an inch square, as already mentioned.

Nor have these kidneys the appearances of lardaceous or amyloid disease. Neither of them has the anæmic, nor the semi-translucent of appearance that disease.

The smaller kidney presents no unevenness nor signs of unequal distribution of the blood upon its external surface as obtain in the contracted stage of amyloid disease.

These kidneys do not exhibit the appearances characteristic calculous of nephritis. No calculi exist either in the substance or in the pelvis of the organs, nor any traces of pyelitis.

Nor do they present the characters of either tubercle or of scrofulous inflammation of the kidney.

I am not familiar with the appearances presented by syphilitic disease of the kidneys, but the alterations in the specimens on the table do not, in my opinion, conform to either circumscribed or diffuse syphilitic disease of those organs described by recent authorities; and no evidence of syphilis existed on the exterior of the cadaver.

It may be that we have in these morbid specimens an interesting and unusual variety of Bright's disease; 1st, in which the morbid process has advanced to a marked degree in one kidney, while the other has suffered very little.

2nd. In which the atrophic process has involved the cortical and pyramidal substance about equally, and in which, notwithstanding the loss of volume and weight, the kidney has preserved its natural smoothness, there being a complete absence of granulations, depressions, and puckerings of its external surface.

3rd. Further peculiarities are the very large cyst containing cretaceous looking material in the small kidney, and the isolated and very defined patch of disease, resembling that seen in "the large white kidney" of pathologists, present in the other one. The pathological specimens were examined by the members of the society with great interest.

Dr. FRANCIS W. CAMPBELL exhibited to the Society a boy nearly four years of age, suffering from caries of the cervical portion of the spinal column. So far as it was possible to ascertain, the disease, he believed, embraced the third, fourth, fifth, and sixth cervical vertebræ. When he first saw and examined the case, he thought that the axis was involved, but upon that point he was now somewhat in doubt. The child was unable to make any lateral motion of the head, which he kept perfectly steady, and somewhat thrown back; the sterno-mastoid muscles were very tense and prominent. The child complained of much pain in the neck; he slept but little, and his appetite was poor; at times he has had very violent attacks of dyspnœa, of several hours duration. There was not any history of a fall, and, as might be seen, the child was of a highly scrofulous diathesis. It was a year since his mother's attention had been directed to his neck, and, although seen by several medical men in New Haven, Connecticut, the disease had not been recognised till his arrival in Montreal. The treatment which he had adopted was keeping the child as much as possible in the recumbent posture, with lime and iron internally, and the application of soap and opium liniment to the neck, for the relief of pain.

Dr. G. W. CAMPBELL, after examining the case, said he believed that anchylosis was taking place.

Dr. SCOTT believed the case would in all probability prove fatal.

Dr. HOWARD exhibited a specimen of tuberculous disease of the larynx, obtained from the person of a young woman, who had died of pulmonary consumption. Numerous ulcers—some of them deep—are scattered over the mucous membrane of the left side of the vestibule, as far forwards as the base of the epiglottis, and upwards nearly to the edge of the ary-epiglottic folds. Similar ulcers stud the membrane covering the anterior surface of the arytenoid cartilages. An ulcer exists on the edge of one vocal cord, close to its anterior extremity; a very deep one perforates the membrane covering the thyroid cartilage, just at the attachment of the vocal cords; and several superficial abrasions, if not ulcerations, occupy the anterior portion of the sub-glottic space. The left ventricular band and the entrance to the corresponding ventricle are obscured by the swollen condition of the mucous membrane. Both lungs were stuffed with grey miliary tubercle and yellow opaque tubercle and caseous masses, with spots here and there of softening and disorganisation. The grey tubercle was very abundant, and presented a very fine example of that variety of morbid growth. The laryngeal symptoms had been distressing during life, and the voice reduced to a whisper.

The Society then adjourned.

CORRESPONDENCE.

THE TRINITY MEDICAL SCHOOL.

(To the Editors of the Canada Medical Journal)

GENTLEMEN,—I dare say many of your readers will be interested to learn that a medical school has been established in Toronto, in connection with the University of Trinity College. There is nothing remarkable, nor to be wondered at, that a college representing such an educated and cultivated class of the public, as the Episcopalians, should desire to provide for the professional education of their sons within their own institutions. But it has been announced that the University tests, which existed during the short-lived course of the Trinity Medical School many years ago, have been abolished, and both professor and student may belong to any denomination. In this abolition is to be seen the advancement of a more liberal spirit.

But what has caused no little comment in connection with the creation of this broader based Medical School, is the fact that the University established a Board of Examiners, and advertised that the examinations for the degrees of M. B. and M. D. would be held in the month of

April. The question arises from whence it is expected that candidates will be derived. Of course Trinity has no students of her own. Probably it would be only fair to the medical public that the University of Trinity College should announce which of the medical schools and colleges have become affiliated with her, or what school she will be pleased to recognise.

This unprecedented course of Trinity College has created more wonder from the fact that the Faculty has been appointed during the winter while the medical course of lectures in other schools was in operation. Finally it has caused astonishment that certain gentlemen connected with other medical schools, and in the discharge of their duties as lecturers and professors, should have allowed their names to appear as members of the faculty of the new school. It is to be hoped these gentlemen can explain their conduct, for the critical public is rather severe upon them at present, and will impute improper motives.

EX OPERE OPERATO.

Toronto, March 20th, 1871.

PERISCOPIC DEPARTMENT.

Surgery.

A SPECIFIC IN ERYSIPELAS.

In presenting a case of facial erysipelas before the University Hospital clinical service last week, Dr. J. E. Garretson remarked, that in his practice of the past five years he had met with no case of erysipelas which had not readily and instantly yielded to the local application of the muriated tincture of iron, tincture of cinchona and sulphate of quinine. The case before him, he remarked, while threatening and angry looking, would, he felt convinced, so surely succumb, that he should give the patient the prescription and send her to her home, not to return for three days. Without attempting to enter into any special discussion of the variety of causes thought to influence this condition, Dr. Garretson said he felt sure that this peculiar inflammation had a basial irritant as specific in its character as that of small pox, typhoid fever, or the ague, and that as, in this latter disease, we had found an antagonist in quinine, and that of typhoid fever not unlikely in hydrochloric acid, so in this morbid inflammation he trusted it was found in the combination alluded to; as, said the lecturer, every effect is from a cause so rational as to abort effects by removal of causes. He was not, he said, prepared to deny the existence of specifics! it was common sense, rather, to believe in them. Everything in physics exhibited and demonstrated the existence of an

tagonisms. He thought some of the members of the class would, most likely, live to see the day when the intelligence of this, or the coming century, might make even cancer a disease no longer to be dreaded. Without doubt this cachexia had a cause. Why should not continued investigations discover this cause? and if discovered, there was nothing at all improbable, certainly, in the supposition that it was capable of being antagonised. "Belladonna," he said, "would antagonise opium; yet it has been only a short time since we knew so important a fact; and hundreds, perhaps thousands, have died, simply because they had the misfortune to be born before the medical mind knew of such an antagonism."

The following cases which, within two weeks back, had presented in his practice, were noted by Dr. G.:

Case 1.—Very old man; erysipelas of hand and arm attendant on an operation performed on one of the fingers three weeks before; parts heavily engorged and indurated, the finger sinking easily into the cushion-like mass. From fear, the patient had denied himself applying for assistance until the inflammation had been four days in progress. The whole arm presented the peculiar glisten, particularly that part just below the elbow, where an abscess was evidently forming. The combination, as usually prescribed, was directed. ℞. Tinct. ferri chlor., tinct. cinchonæ, f℥ ij. quiniæ sulph., gr. xxx, aquæ, f℥ iss. M. This was to be applied by means of a brush four times a day.

2nd day.—Blush all gone; opened the abscess; case well in a few days.

Case II.—Young professional gentleman; lacerated wound of ring finger; whole hand and lower portion of the forearm erysipelatous; fingers thrust widely apart by the swelling; back of hand a soft cushioning mass, few cases appear more threatening. No constitutional treatment; mixture applied as in the first instance, and hand enveloped in a poultice of flaxseed; next day the specific character of the inflammation had entirely disappeared. The treatment of this case was continued on general principles for five days, when the patient was in condition to be dismissed.

Case III.—Mill boy from the country; erysipelas of leg: three days in progress. The father of this lad presented him in great anxiety, having, during the summer of last year lost a son, with an erysipelas which commenced in a similar location. In the boy presented for treatment there was no wound or traumatic injury of the part affected. At 5 o'clock on one evening the mixture was applied, by the next, the case seemed and remained entirely cured.

Dr. Garretson said, if necessary, he could readily occupy the entire hour in an enumeration of cases, both of cutaneous and phlegmonous

varieties which had proven to him the good service capable of being performed by this application. He said he desired, however, not to be understood as advocating the combination as specific in an ordinary acceptation of the term; the intelligence of the class would well enough recognize that only one of many indications which might be present was proposed to be met; namely, the destruction of the specificity of the inflammation; this the lecturer likened to an injury which might be done by a musk-rat to a river bank, saying, that while the destruction of the rat would be specific treatment, there was yet a hole left to fill up.—*Medical Times.*

Materia Medica and Chemistry.

THE TREATMENT OF ULCERS AND OTHER GRANULATING SURFACES BY TRANSPLANTATION OF SKIN.

In the *Medical Times and Gazette*, October 29, may be found a paper on Skin-Grafting, by Mr. Dobson, of Bristol, and in the same issue, as well as in the *Lancet* for October 22, are recorded the results of this most important addition to modern surgery, as obtained in many of the London hospitals. This ingenious method for hastening the healing of ulcers which have resisted other methods of treatment was the invention of M. Reverdin, and it was first tried in London at St. George's Hospital last May by Mr. Pollock, since which time it has been widely adopted, and with unexceptionably favorable results when employed in suitable cases. The procedure is exceedingly simple, and may be thus described. Having waited until the wound or ulcer has assumed a healthy granulating appearance, a bit of the whole thickness of the skin, say the size of half a split pea, but without any of the subcutaneous cellular tissue, is pinched up from the inner side of the arm, and removed with a sharp scalpel or scissors curved on the flat. If the granulations are perfectly healthy and florid, the little bit is then pressed flat, with its under surface upon the granulations, and kept firmly applied by a strip of isinglass plaster passed across the ulcer. This form of plaster is useful in permitting the surgeon to see through it and watch the fate of the graft. Should the granulations be old and feeble, it will be better to follow the plan of Mr. Dobson, who divides on his thumb-nail the small bit of skin into five, seven, or nine pieces, as the case may be. He then makes a superficial incision into the granulations, waits until the slight bleeding has ceased, and inserts the grafts on the point of a needle. Care must be taken not to make too deep an insertion, or the graft may be entirely enveloped, and

will be longer in showing itself. The plaster may be left for five days or a week, by which time the graft will have become firmly attached to its new bed, and perhaps, if very small, imbedded and hidden among the granulations. It will soon, however, become again apparent, and then, with a lens, the characteristic blue line of growing cicatricial tissue will be discerned surrounding it.

As regards the behaviour of these minute portions of skin in their novel situation, Mr. Dobson, speaking generally, says, "At about the second day the cuticle begins to separate; by the fourth day only a faint pale spot marks the insertion, or there may be no evidence of it left at all; by the sixth day a faintly vascular tuft of granulation appears. This becomes glazed, and in a few days more the usual covering of cicatrix is formed. The patch is usually circular, and presents slight ridges, and continues to increase in size circularly until it reaches its maximum of growth. I have never seen a patch larger than a florin, and I have now seen large numbers of them. I should say that their average growth will not exceed the size of a six-pence."

The size of the piece of skin grafted seems to be somewhat a matter of fancy. Mr. Dobson, for example, prefers to divide a bit not larger than half a split pea into from five to twelve pieces, and dot these over the surface of the granulations in such a manner and sufficiently close together as to speedily subdivide the original sore by their coalescence. At St. George's Hospital, Mr. Pollock uses minute portions, not exceeding millet-seeds in size. Mr. Mason, of the Westminster Hospital, prefers pieces of the size of a canary-seed. At the Charing Cross Hospital, Mr. Bellamy employs very small grafts. At the University College Hospital, Mr. Heath uses small bits, the largest being the size of a split pea; while Mr. Lawson has treated most successfully, at the Middlesex Hospital, two ulcers of the leg with grafts as large as sixpenny pieces.

As illustrations of this practice, we subjoin the following cases. The first eight are from the *Lancet*, and were under the care of Mr. Mason. The first case was that of a woman who for three years had an ulcer of the leg, measuring about four inches by three. Three pieces of skin of the size of a canary-seed were snipped from the front of the upper arm and simply placed on the ulcer, and retained in position by means of a strip of transparent plaster, and over this water-dressing and a bandage were applied. At the end of a month the ulcer had nearly healed, each of these pieces having in a fortnight attained the size of a fourpenny piece.

The second case was that of a man with a flabby-looking ulcer as large as the hand, situated in the groin. Four small pieces from the front of

the upper arm were grafted. Three failed to grow, and the fourth, after one month, was only of the size of a pea.

The third subject was a woman with an unhealthy ulcer of the leg, extending nearly all around the limb. Four pieces were grafted, and they all failed to grow.

The fourth, a woman with an ulcer of the leg of four years' standing and two by three inches in size. Two pieces of skin were grafted, and in three weeks measured each a quarter of an inch in diameter.

The fifth, a man of middle age, with an ulcer of the leg, four by three inches in size, of nearly four years' standing, which was sloughing at the time of admission. Charcoal and linseed poultices were first applied, and the wound soon showed fairly healthy granulations, on which four pieces were grafted, and on the strips being removed, four days later, they were all found to have adhered. When seen eleven days after the operation, they were spreading rapidly.

The sixth, a girl, aged twenty, with a flabby ulcer on the thigh, of eight months' standing. Two pieces were grafted, with good result. In the seventh and eighth cases there were smaller ulcers, in which one piece only was grafted. They rapidly recovered.

In the second and third instances the failures arose from the trial being made upon unhealthy ulcers. A graft may, moreover, fail from some want of delicacy or from carelessness in the manipulation; for it is just one of those procedures which, though simple and easy of execution, require care and attention to minute details.

A typical example of healing of a large indolent ulcer from a burn occurred in the practice of Mr. Dobson. A lad, aged fifteen years, had received a fearful gunpowder burn of the abdomen, which, after the greater portion of the resulting wound had cicatrized, left a granulating surface eight inches long by five wide, which had for nearly six months refused to heal. Altogether, seven pieces of skin were removed from the inner side of the arm, which by subdivision yielded about forty grafts, by far the greater number of which lived in their new home. They were inserted pretty closely together, and in twelve weeks cicatrization was complete. In the following case, from the *Medical Times and Gazette*, a large graft was used:

"A man, aged twenty-four years, had been suffering from ulcers on the legs for three years, the sores sometimes healing over, but they had never been so bad as at the date of admission. (Middlesex Hospital.) On September 22, upon one of these ulcers, which had now assumed the appearance of a healthy granulating sore, two and a half inches square, Mr. Lawson grafted a bit of skin nearly as large as a sixpence, taken

from the arm. During the first week the fate of the bit seemed uncertain, but by the seventh day it was clearly living, and more vascular-looking than before, and it thenceforward continued to spread rapidly. When we saw the man again, on October 18, the ulcer had completely healed, but the transplanted skin was readily discernible as a slightly-elevated island of natural-looking integument in the midst of a surface of glazed cicatricial tissue."

Midwifery.

BLOODLETTING IN OBSTETRIC PRACTICE.

BY FORDICE BARKER, M. D.

Recently, while attending a patient in confinement, he found indications for venesection; and, not having a lancet at hand, stepped into the nearest instrument-maker's to procure one. There was not a lancet to be found in the shop! The attendant apologized, said they had little call for that article, but they had some making, which would be ready in a few days. This was an amusing index of the change which had come over the practise of the profession in the last twenty or thirty years. Doubtless, our predecessors bled more times in a week than we in a year. In all his obstetrical practice, in consultation, for the last fifteen years, he could not recall a single instance where bloodletting had been even alluded to, except in a few cases of puerperal convulsions.

He had made a careful examination of the standard authorities in midwifery of thirty years ago, a long list of whom he cited. By one or all of them bloodletting was recommended for the following, among other conditions, in gestation, parturition, and the puerperal state:

In gestation; for uterine irritation, uterine plethora, erratic pains, cramps of the lower extremities, spasmodic cough, palpitation, pruritus, solitude, anxiety, drowsiness, anasarca, to prevent abortion, and to promote expulsion where abortion is inevitable. One woman was reported as having been bled eighty-six times in one pregnancy, and another eighty seven times!

In paturition: for false pains, where the patient is plethoric; for irregular uterine contractions with pains feeble: for extreme rigidity of the os, or of the perinæum; to prevent inflammation; to prevent, and to cure, convulsions.

In the puerperal state phlebotomy constituted the most essential part of the treatment for the arrest and cure of all the post-partum inflammations, metritis, peritonitis, etc.; and by many it was recommended in Phlegmasia dolens.

As some one of the above conditions was pretty sure to occur in the course of pregnancy, parturition, or the puerperal state, it came about that almost every patient was bled at least once, and often many times, with every child. No doubt we could, nearly all of us, recall the picture of some jolly old grandmother, proud of her eight or ten children, and of the blood she had shed for each of them.

But were our predecessors all wrong, and is the recent practice all right? For his own part, the speaker found that, as he gained wider experience, he was gradually coming to bleed more frequently. This change in his practice had not arisen from any belief in a change in the constitution of the patients. But he had, for a considerable time, had a growing impression that this resource had been too much neglected—an impression recently strengthened by the suggestions contained in the introductory address of Dr. Benjamin W. Richardson. That paper, which he was surprised to see commanding so little attention in his country, no man in active practise could read without being instructed.

The speaker proposed to consider bloodletting exclusively as a remedy in obstetric practice. It was in this that it was formerly resorted to most frequently, and carried to the farthest extreme; and it was this in which it was now perhaps most neglected. He would speak of it in the diseases of pregnancy, in the complications of labour, and in the affections of the puerperal state.

Vertigo, flushing of the face, etc., used to be regarded as evidences of cerebral congestion, and bloodletting as the main remedy. To Cazeaux belonged chiefly the merit of calling attention to the fact that the most frequent of those disorders formerly attributed to plethora were really due to impoverishment of the blood, although doubtless many had before noticed that hydræmia gives much the same symtoms as plethora. Andral, indeed, had pointed out that a too great and a too small number of corpuscles passing through the vessels of the brain produce effects very similar. Cazeaux's tonic treatment had become generally adopted; but one result of this might be that real plethora was sometimes overlooked. Some feeble women would have the constitution so changed in pregnancy as to gain strength and flesh, and might become truly plethoric; and this might interfere with the fœtal circulation and produce derangements in the maternal. That the cessation of the fœtal movements is sometimes due to this cause was shown by the return of those movements when the mother is subjected to a moderate loss of blood.

Even in hydræmia there might be a serous congestion, a too great quantity of blood, where benefit would be derived from venesection followed by a tonic regimen and good diet.

Uterine and renal congestions—the former seen much oftener in feeble women—almost always made their appearance at the menstrual periods, when the woman would complain of tension and swelling of the abdomen, and of weight in the pelvis. If proper measures were not employed to reduce the congestion of the uterus, there might be a little flow of blood from it and some danger of abortion. This was commonly accompanied by marked vesical irritation. If these symptoms did not readily disappear, the speaker believed bleeding to be the best treatment, following it by chlorate of potassa and iron.

Or renal congestion he would only say that it is but recently we have learned that in some cases of cerebral congestion the primary hyperæmia is to be found in the kidneys. This was seen especially in the albuminuria of pregnancy. For a few years past he had succeeded in warding off the convulsions due to this cause by slight venesections, with a certainty such as he had never before gained by other means. He related a recent case of sudden and severe convulsions, in which he had taken thirty ounces of blood, besides inducing active purgation by elaterium. The woman had a few more convulsions, but completely recovered in a few days. On the same day with this case, he had seen, in consultation, a primipara in uræmic coma a few hours after delivery. Two or three days before, she had begun to complain of a fixed pain at the fundus uteri, which was unaccompanied by contractions, and which did not yield. The labour was rather tedious; the forceps were employed, and a dead child was delivered. The placenta came away readily, and on its uterine surface was found an organized clot as large as a man's hand. The patient died in three hours after he saw her. But little urine could be drawn from the bladder, and that was highly albuminous. It would seem as if nature had tried to relieve the renal congestion, and to relieve it by bleeding.

It was a great mistake to suppose that bloodletting should never be resorted to except in the sthenic condition. Some of the most decided benefits he had seen derived from it had been in cases of patients extremely anæmic. As an instance, he was called to a chlorotic woman in the last days of gestation; found the heart's action laboured and tumultuous, the face covered with perspiration, and every symtoms of the greatest distress. As speedily as possible he was opening a vein, when the gruff, hearty voice of old Dr. Francis greeted him with, "Well done, good and faithful servant." The abstraction of sixteen ounces of blood relieved the pulmonary œdema and the distention of the right heart, and doubtless saved the woman's life. Two days later the woman was delivered of a dead hydrocephalic child, after discharging an immense quantity of water. "She must have discharged a tub-full, sir," said Dr. Francis.

In parturition there was now little occasion for the use of bleeding to overcome causes of delay. In the warm douche, belladonna, and chloroform, we had better means of softening the os. Its chief use now, at this period, was to prevent threatened convulsions or apoplexy, by relieving spinal or cerebral congestion. This it would do where the tendency to convulsions was owing to over-stimulation of the nervous system from excess of blood, or to pressure from the same cause. Again, when the danger was dependent on uræmia, this measure was of cardinal importance. The speaker fully concurred with Dr. Richardson, that in cases of uræmic poisoning, where the urine is almost suppressed, where the convulsions are strong, and the coma is deep, there is no remedy so sure as the lancet. To bleed is to remove tension from the brain, to remove congestion from the lung and make free the breathing, to remove congestion from the kidney and restore its functional activity. Moreover, it should be considered that we are at the same time removing with the blood the poisonous material with which it is charged. Of two animals, each with the function of one kidney suppressed, one will live if, when uræmic convulsions appear, blood be drawn; the other, let alone, will die. —*Philadelphia Medical Times.*

Canada Medical Journal.

THE CANADIAN MEDICAL ASSOCIATION.

We have been given to understand that the draft of the proposed Dominion Medical Bill, as submitted at the last meeting of the Canadian Medical Association at Ottawa, together with the amendments caused by the Association, have been printed. They will at once be distributed by the Secretary as thoroughly as possible, to the members of the Profession throughout the Dominion. We bespeak for it a careful and candid examination, so that when the Association meets in September next at Quebec there will be a universal demand from every Province for its adoption. If we as a profession desire to assume our proper position, it can only be by united effort, and the burying of sectional jealousy. Let this be done, and we believe a bright future awaits us.

We are glad to learn from many quarters that our reports of the meetings of the Medico Chirurgical Society of Montreal have been read with much interest by our subscribers. Thus far this Society has been successful beyond the most sanguine expectations of its promoters