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Original Communications.

A NEW REMEDY FOR DYSENTERY.

BY WM. KERR, SURGEON, GALT.

(First published in the *Edinburgh Med. Journal*, June, 1865.)

Twelve years ago, an accidental circumstance led me to attempt an improvement in the treatment of dysentery. Commencing with camphor and henbane, added to opium, I experimented on every officinal narcotic, coming to the conclusion, that of these the most efficient combination was one of opium, henbane, hemlock, stramonium, and digitalis. I had cause to be better satisfied with this than with any previous combination; but from time to time failures or tardy success induced the conclusion that something was still wanting,—that something if to be found at all, was therefore to be discovered in plants not yet admitted into the Pharmacopœias. After a long search, *Cicuta maculata*, *Sium lineare*, and *Conio-selinum canadense*, indigenous to the swamps and woods of Canada, supplied the deficiency better than any others I happened to try. *Sium lineare* supplanted hemlock (*Conium maculatum*), on account of the combination containing the latter occasionally producing pain in the bowels and failing, while that with *Sium lineare* gave relief; and

dulcamara supplanted henbane, as experience showed it to be better adapted to act beneficially along with the other members of the combination. Its constituents, when the investigation was concluded were as follows:—four officinal, viz., opium, stramonium, dulcamara, digitalis; three non-officinal, Sium lineare, Cicuta maculata, Conioselinum, canadense. All are more or less narcotic; and digitalis, dulcamara, and Sium lineare are also diuretic. So many are necessary evidently from each possessing some peculiarity in the way in which it affects the system: the combined effect of these peculiarities being required to combat the disease.

Without opium the combination is slightly aperient, improves appetite, promotes sleep, and, according to experience gained in dysentery and other diseases, heals ulceration of the mucous membrane. In dysentery, opium is necessary apparently to check the frequent motions of the bowels, the strictly curative power depending chiefly, if not altogether, on the other ingredients. In infants generally, and also in a few adults, digitalis does not act favourably. In such instances I have substituted squills with great benefit. Adults generally require the combination with digitalis; of a very few infants the same may be said; and to many adults the combination with digitalis, or that with squills, may be given indifferently. Excepting opium and squills, the part employed is the leaf. Digitalis and squills are combined in the proportion of half a part each,—all the others in that of one part. For infants, opium is reduced to a half-part. The usual dose to adults is six and a half grains, digitalis or squills being each half a grain, and all the others one grain each.

Between five and six years were spent in determining the components. Beginning with three, I never afterwards, either in adding or subtracting, changed more than one plant, till I had as fully as lay in my power ascertained the result of each change. In this manner I have experimented on thirty-two plants or their products. I have pulled down the combination, and built it up again, and thus done my best to ascertain the necessity for each component. For upwards of seven years the combination has been used with very great success; but as my own experience may be suspected of being biassed, I shall confine myself to the reports of others.

Dr. Brown, of Berlin, Ont., had a very severe attack, of which he published an account in the *Montreal Medical Chronicle* for December, 1858.

Of this paper the following is a copy, slightly abridged:—"In August last I was seized with epidemic dysentery. The usual remedies were properly administered—opium, the quantity of which speedily rose to twenty-one and even twenty-four grains daily, together with mercury, acetate of lead, and ipecacuanha, but no amendment took place. I vomited incessantly, and, though tormented with thirst, could retain no fluid. In my case the effect of large doses of opium was prostrating and overpowering. I did not sleep, but could scarcely be said to be awake, except to the consciousness of severe pain, agonizing tenesmus, and frequent vomiting. I had been ten days ill, nature was sinking, collapse was to be feared, when Dr. Kerr visited me. He immediately gave three and a half grains, or half a grain of each of the seven ingredients." (The recipe is here given by Dr. B.)

"I was very restless from a sensation of sinking and severe pain. In half an hour, after dosing a few minutes, I became aware of a great change. I could lie quiet; the distressing tenesmus was less, pain in the body and limbs less severe, the sensation of sinking relieved, a glow of warmth was supplanting the cold of threatened collapse, and an inclination to sleep, not before experienced during my illness, was stealing over me. The first thought was amazement at the change, then a faint recollection of a new medicine crossed my mind, and I resigned myself to its influence. I was immediately asleep, and for an hour and a half had a comfortable and refreshing sleep, unaccompanied, comparatively speaking, with sensorial disturbance. When I awoke all the symptoms were relieved. Seven grains were given every six hours, but the quantity of digitalis being too great, this drug was reduced from a full to a half proportion, making each dose six and a-half grains, which were given every four hours.<sup>1</sup> I spent twenty-four hours almost wholly in sleep; calls to rise were still frequent, but the tenesmus was less severe, and, though I retched a few times, vomiting ceased. In a few days appetite began to return."

"During twelve years' practice, I never in the treatment of dysentery met with a narcotic to be compared with Dr. Kerr's combination, in relieving general irritability, pain, and, above all, nausea and vomiting. It produces a wonderful degree of comfort, unat-

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<sup>1</sup> Prior to this all the ingredients were equal.

tended by sensorial disturbance. From thirty minutes after the first dose was taken my suffering was comparatively nothing. Little hope was entertained of my recovery previous to the first dose, but became sanguine before I had taken the third."<sup>2</sup> Dr. Bingham, Dr. Brown's medical attendant, in a supplement, vouches for the accuracy of the narrative, and relates six confirmatory cases from his own experience.

Dr. Bingham, supplied with medicine by me, treated successfully the sporadic cases which occurred in the following years. In August, 1862, he, with Dr. Bell, by this time his partner, applied to me, making the following statement.—Dysentery had broken out epidemically in their locality, but not having any of my medicine, they had treated it with the usual remedies; a woman had died the preceding evening, her husband was dangerously ill, and other two were apparently dying. Furnished with a supply, they hastened to their patients. The husband just mentioned, though previously ill for five days, was relieved in less than an hour, and had a rapid recovery. One of those believed to be dying recovered readily, though upwards of seventy years of age, the other died, time to administer a single dose only being afforded. During the remainder of the epidemic there was not a death, though, judging from the severity of the attacks, six or seven would have proved fatal under ordinary treatment. In the autumn of 1863, dysentery was again epidemic at Ayr, Ont., where Drs. Bell and Bingham resided. Without delay they applied to me for medicine, and treated successfully every case; while the only other medical gentleman in the same village adhered to the ordinary treatment, and out of a smaller number of patients lost five by death.

Dr. Mackintosh, of Hamilton, Ont., has employed the combination in dysentery since 1861, and in all cases with success. From his notes I give the following account of the epidemic and generally severe character of the attacks:—

"1864, 15th July.—A child, four years of age, seized two days ago, bloody stools every half hour, accompanied with vomiting and severe pain. Applied hot fomentations, and gave three grains of the squill combination with opium every four hours. These were speedily followed by relief; the child had a pretty good night, and on the 19th is reported quite well.

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<sup>2</sup> The possibility of any future report from Dr. Brown was cut off by his accidental death a few months afterwards.

"17th July.—A girl in the same house, nine years of age, was seized during the night with severe dysentery. Applied hot fomentations, and gave five grains of the digitalis combination with opium every three hours. Immediate relief followed, and next day she was convalescent. Six doses in all were given.

"22nd July.—A boy, seven years of age, seized yesterday, and now severely affected. Gave three grains every three hours, and by evening he was much relieved. Nine doses completed the cure.

"6th August.—A man, aged thirty, attacked during the night with rigors and vomiting, followed by dysentery. In the morning seven grains were given every three hours. In two days he was quite well.

12th August.—A man, aged sixty-four; bloody motions every half-hour, with nausea. Same doses given as to last patient; next day almost well.

"15th August.—A woman, aged fifty-six, during the night was attacked with severe dysentery. Same doses given. By evening was much better; and by the third day complained merely of weakness.

17th August.—A woman, suddenly seized with very severe dysentery, visited shortly after; she was then cold and faint, and stools passed without control. Gave seven grains of the digitalis combination, with one-fourth of a gram of morphia (instead of opium), every two hours. After the third dose relief was so great that morphia was altogether omitted, but seven grains of the other combination were continued thrice a-day.

"19th August.—Almost well."

Dr. Philip, of Galt, late assistant-surgeon, H. M. 18th Regiment, has furnished me with the following statement: "Your remedy was administered by me in six severe, besides a number of slighter cases of dysentery during the autumn of 1862. Relief was uniformly obtained after one or two doses, and recovery completed within a few days. One of the cases was characterized by profuse sanguineous discharge, and, occurring in a delicate female, would probably have proved fatal but for the timely administration of this medicine. In contrasting the success of treatment in these instances with the fruitless and unfortunate attempts made by myself and others at relief in the severe dysentery of the Crimea, it is impossible not to be struck with the readiness and efficacy of this remedy. Every

known system of treatment, I believe, was tried there, and the medical history of the campaign shows with how little benefit. Many of the cases which in the Crimea ended fatally were not apparently of a more severe character than some of those which yielded rapidly to your medicine."

Dr. Merritt, who at the time the following occurred was chief of the Medical Department of the Confederate Army of the Mississippi, thus writes to me—"In August, 1863, when in charge of Camp Jackson, I came into possession of a quantity of your medicine for dysentery. The rapidity of relief and of cure was exceedingly striking. The men were on their feet in a few days, and in the worst cases I did not give more than eight doses of six grains each. My supply lasted ten days, and was administered to about sixty patients, only one of whom died. For some time before I obtained the medicine the deaths ranged from one to three daily, and as soon as it was all expended the mortality resumed the same rate."

A child of the Rev. Mr. Robb, Calabar, Western Africa, in the latter part of July, 1863, was seized with dysentery. At this time the favourite treatment at the mission was large doses of ipecacuanha; but the illness resisted every prescription of Dr. Hewan, the medical attendant. By the middle of August the child was so reduced, and death so impressed on the visage, that recovery was regarded by all to be hopeless. At this juncture the parents recollected a packet of the combination which I had given to them. After the second dose the child awoke from a refreshing sleep, easy and tranquil, and the medicine being continued, recovery went on rapidly, without a single untoward symptom. A second attack of dysentery, a few months afterwards, was stopped in a single day. A native African was cured of what threatened to be a severe illness by ten doses.

Fifteen medical men besides myself have used this combination in dysentery, it has been given in the warm region of California, amid the privations and discomforts of a camp in the hot summer of the Southern States, at sea on the Atlantic, in the tropical and pestilential climate of Calabar, and there is a remarkable uniformity in the testimony of all. Relief generally in an hour, restoration to health in a few days, and the great majority cured within a week. A few cases were a little tedious, and a still smaller number lingered for three or four weeks; none lapsed into chronic dysentery; and out of about *four to five hundred patients*, though several of the

attacks were very severe, as severe as some of the reporters had ever witnessed, *only four died*. One of these was a delicate child; the second, an infant on whom the medical attendant had previously exhausted all the ordinary medicines, and the third and fourth have not been specially reported to me. I have been told of some instances, and a few have occurred in my own practice, of that generally fatal variety of dysentery characterized by profuse bloody discharges, usually attended with severe pain, all of whom were cured without difficulty. The combination fails in chronic diarrhoea, possibly because this disease is usually unaccompanied by lesion of the mucous membrane. I have not seen or had reported to me any disagreeable effect from this remedy, though, judging from the character of its constituents, such is possible, were the doses unreasonably large. The medicinal power is certainly greatly increased by the combination, but not the *poisonous*. Relief speedy and great of pain, far sounder and more refreshing sleep than that from opium, and cessation of discharges, are the usual effects. The nearly uniform success has not given either my correspondents or myself opportunities of trying the treatment by large doses of ipecacuanha.

In the course of my experience, several persons afflicted with chronic dysentery have been restored to health, some by the combination containing opium, others by that without. Dr. Ogden, lecturer on Materia Medica, Toronto, tells me of a case of acute dysentery where, from idiosyncrasy, opium disagreed, but which was speedily cured by the combination, leaving out this drug.

Cases of cholera infantum have been reported to me by medical friends as treated successfully by the combination containing opium. Of summer cholera I select the following on account of its severity. A young man was seized during the night, and visited by Dr. Bingham in the morning. At this time he was violently cramped, skin cold and clammy, voice husky, and pulse feeble. Eight grains of the combination containing opium were given, from this time he vomited no more, a glow of warmth (as in Dr. Brown's case of dysentery) supplanted the cold of threatened collapse, and cramps rapidly abated in severity, though all day he had muscular twitchings. Four more doses completed the cure. Summer cholera has been for some years a rare disease, but all treated by my medical correspondents or myself have readily recovered.



(2nd paper, published in 1867.)

I may here mention, that I find I have not stated with sufficient clearness in my first paper that, in a very few adults, the digitalis combination altogether fails, and that with squills succeeds, and *vice versa* in infants.

Dr. Mackintosh, of Hamilton, Ont., sends me the following cases:—

“No. 1. 12th July. — An adult; mild form of dysentery, very speedily relieved, and in three days cured. He then went to another part of the country, and about a month afterwards had a severe attack of the same disease, which, notwithstanding the assiduous use of Dover's powder, and starch and laudanum enemata, did not entirely cease for three weeks.

“Nos. 2, 3, 4, 5, and 6.—All in one family, between 22nd and 31st July.—No. 2. A delicate boy, 8 years of age, had been ill for nearly a week; strength much reduced; motions frequent and characteristic. Speedily relieved, and in about a week cured. Nos. 3 and 4. Aged 6 and 4 years. Seen in the incipient stage. They were speedily relieved, and a few doses restored them to health. No. 5. The father, aged 50. Taken ill on the 28th July, when he was obliged to leave his workshop. Motions frequent and characteristic. The acute symptoms were relieved by the 31st, but, from intemperate habits, the disease remained in a chronic state for about two weeks. No. 6. A daughter, aged 18, who resided out of Hamilton, paid the family a visit, and next day was seized with dysentery in her own house. Cured by six doses.

“No. 7.—26th.—A woman, aged 35. Two days ago illness commenced; symptoms somewhat severe. Medicine was given in the usual form, and by the 29th she was quite well.

“No. 8.—27th.—Child, aged 30 months; motions frequent, bloody and characteristic. 30th. Much relieved. In a few days cured.

“No. 9.—6th August.—An adult, ill for two days; symptoms somewhat severe. Relief speedy and effectual. 15th. Cured.

“No. 10.—7th.—A woman, aged 49. Has for years been ailing with ulcers of the mouth and tongue, and severe dyspeptic symptoms. Two days ago attacked by severe dysentery. 8th. All the symptoms less severe, last night slept well, a comfort she had not enjoyed for two nights previously. 13th. Cured. Latterly the

medicine was given without opium, and she now states that her old ailments are much lessened, and expresses her conviction that the continued use of the medicine will restore her to health. Have not since seen her.

"No. 11.—*9th*.—A child, aged two years. Has been ill all summer with diarrhœa, which has now become severe dysentery: he is very much reduced. Three grains of the squill combination to be given three times a-day. These mitigated all the symptoms, and at the end of a week he was so much improved that the medicine was discontinued. *28th Oct*. He is now a plump, healthy-looking child.

"No. 12.—*10th*.—A delicate woman, aged 27. Ill a day and a night. Relief speedy and permanent. *11th*. Cured.

"No. 13.—*14th*.—A woman, aged 38. For the last three or four days moderately ill, but much worse to-day. *17th*. Considers herself well. No relapse.

"No. 14.—A child, aged 14 months. Moderately severe attack. Cured in five days.

"No. 15.—*28th*.—A child, aged 2 years. Very much the same as No. 11. Almost every remedy had been tried by the family physician. In a week, under the squill combination, the evacuations became natural. *3rd Oct*. Well.

"No. 16.—*7th Sept*.—A boy, 3 years of age. Relief speedy and permanent. *15th*. Cured.

"No. 17.—*8th*.—A woman aged 28. Ill for about a week. Several domestic remedies had been tried, but without alleviating the symptoms. Three doses of the digitalis combination gave great relief, and procured sleep. *12th*. Cured.

"No. 18.—*14th*.—I never before saw a patient recover from so severe an attack as in the case I am now to relate. A man, aged 45, called at my house, stating that he had been ill for a day or two, and that he had got much worse this afternoon; he hoped, however, by warmth and rest in bed, together with domestic remedies, that by next morning he would be better, and therefore declined medicine. *15th*. At seven o'clock a.m. he sent for me, and on my arrival stated that he had been exceedingly ill all night, having been out of bed every ten minutes, and every motion accompanied with excruciating pain and tenesmus. I directed six and a half grains of the digitalis combination to be given every two hours. In less than two hours,

that is before the second dose was taken, pain was much diminished, although the frequency of the motions was still considerable. By the second day these were reduced to one every three or four hours, instead of every two. On the first night of my treatment, the patient slept well, but not on the second, and on the third, the motions having still a dysenteric character, and still occurring every three to four hours, he had delirium\* and illusions, resembling delirium tremens, but there was no tremor of the tongue or other part of the body; the pupils were uniform and rather dilated; the tongue somewhat furred and dry, and there was a tendency to cold sweats. On the whole, I am of opinion that this state was caused by the action of one or more components of the medicine, which was intermitted for a time; but it was three nights before sound sleep was obtained. The patient remembered his hallucinations, and at first could scarcely be persuaded that they were unreal. Dysentery in the present case assumed a chronic form, the only instance, in my experience, of this occurring with your medicine; and after a fair trial, I substituted a mixture of sulphates of quinine, copper, and morphia, with good effect.

"No. 19.—16th.—A child, 2 years of age. Chronic dysentery with vomiting, which last was removed by the first dose of the squill combination. The dysenteric symptoms gradually improved, and in a week he was well, and gaining flesh.

"No. 20.—18th.—A woman, aged 40. Moderately severe case. In five days cured by the digitalis combination.

"No. 21.—18th.—A woman, aged 37. Seventy of the symptoms very much the same as the last, but the cure was protracted to fourteen days by errors in diet.

"No. 22.—13th Oct.—A boy, aged 4 years. Ill for more than a week. Motions very frequent and bloody. Cured in ten days.

"No. 23.—15th.—A girl, aged 14. A severe case. All the symptoms were gradually relieved.

"During the epidemic a number of slighter cases occurred, which do not require special notice.

"I may state that all above two or three years were treated with the digitalis combination, except in one or two instances, where it produced a depressing effect on the pulse, and all below these ages

\* Digitalis was the probable cause of delirium, the squill combination ought to have been substituted.

with that with squills. To adults, the dose was usually six or seven grains three or four times a-day, according to the urgency of the symptoms; and in the greater number of instances, the total doses did not exceed six. In the cases under three years of age, the doses varied from one and a half to three grains (the quantity of opium in this being only half of that for adults). To the adult who became delirious, not less than six grains of digitalis, and twelve of the other ingredients, were given in the first twenty-four hours, and continued to be given at this rate for twelve hours longer, a quantity in the same space of time far exceeding any I have ever given.

"In all instances, and I can now speak from an experience of five autumns, the transition from what may have been excruciating suffering to comparative ease was speedy, and usually accomplished by one or two doses. Sleep, to which, from their distress, some of them had been strangers for several successive days and nights, came with relief to pain, and a tolerably sound night's sleep has often been pleasingly contrasted with a day of agony. In conclusion, with the single exception of the man who became delirious, the medicine produced no disagreeable effect in any instance, the patients being sensible only of relief. I have likewise to say that all have recovered."

Dr. Ogdén, Lecturer on *Materia Medica*, Toronto, writes.—  
"Last autumn, two or three of the most severe cases of dysentery not yielding to the ordinary treatment fast enough, if at all, I used your medicine with the utmost satisfaction to myself, and in one case, which two medical men had given up as hopeless, to the astonishment of some Boston practitioners who happened to witness it."

This season dysentery was not epidemic in Galt, but the following severe sporadic case occurred to Dr. Philip: "A mulatto, aged 54, a habitual drunkard, had suffered under this disease for a week, during which time he was altogether neglected. Dr. P found him dangerously ill; fever was high, severe tormina, and tenesmus, constant calls to rise, and every quarter of an hour motions consisting of mucus and large quantities of blood. Great relief after four doses; recovery gradual, though slow."

Dr. MacIntyre, of Hespeler, in this county, used the combination in dysentery in the autumns of 1864 and 1865. In the former of these years only a few cases, not of special importance, occurred; but in 1865 his locality was visited by a severe epidemic, other practitioners losing numerous patients. He made trials of

chlorodyne, which were successful in the slighter cases, but not in the severe, these readily yielded to my combination, which Dr. M. soon came to use exclusively, and out of about sixty cases, fifteen of which were severe, not one died. Among the worst was the following.—A man, of 65 years of age, had been ten days ill, attended by a medical gentleman, who trusted chiefly to opium and alum, the former being given to the extent of sixteen grains daily. There was, however, no relief, and the medical opinion being that death would occur in about twelve hours, Dr. M. was sent for. At this time the motions were frequent, and apparently of pure blood, pain was severe, accompanied by restlessness and much anxiety; he had scarcely slept since the illness commenced, weakness was so great that he could not be raised without danger of fainting, and the skin was cold and clammy, apparently justifying an unfavourable prognosis. Dr. M. gave eleven grains of the combination, containing one grain and three quarters of opium. In less than an hour the patient said that a great and beneficial change had come over him, anxiety, restlessness, and pain had much diminished, and he felt that recovery was not only possible, but probable. Eight hours elapsed before another dose was given, now followed by a long and sound sleep. He was able to go out of doors on the eighth day, nine doses in all having completed the cure. I may say, in a few words, that Dr. M.'s cases confirm what I have elsewhere stated respecting great and speedy relief of pain, procurement of sound and refreshing sleep instead of restlessness, and also of rapid recovery.

Dr. ORTON, of Fergus, towards the close of a severe epidemic, from which numerous deaths had occurred among his patients, having heard of Dr. MacIntyre's "marvellous success," applied to me, and subsequently treated five severe, and a somewhat greater number of slight cases. There were no more deaths, and in every instance recovery was speedy,—two or three doses being usually sufficient to produce complete cessation of pain and tenesmus, and procure quiet and refreshing sleep. In one case, the patient being 60 years of age, and several days ill, latterly with bloody mucous evacuations every half-hour, the first dose relieved him from all painful and uneasy symptoms, and procured a comfortable sleep, which he had not enjoyed for four or five nights previously. The fatality of the disease, thus stopped in Dr. Orton's practice, continued unabated in the hands of neighbouring practitioners.

Dr. Stillé, Otsego County, New York, applied to me in consequence of the prevalence of a severe epidemic of dysentery, accompanied by frequent bloody evacuations, great prostration of strength, and cold clammy perspiration, which had proved very fatal under all kinds of treatment." A month afterwards, he writes, "that he had used my medicine with great satisfaction, that he had given it in a considerable number of very bad cases, some even *in extremis*, and uniformly with success."

Dr. Eurrs, Union City, Michigan, says that "when he first obtained my medicine he had two patients with dysentery, brother and sister, aged respectively 12 and 13. They had been for several days under treatment, the evacuations (mucus mixed with considerable quantities of blood) were so frequent, and the tenesmus so severe, that they could with difficulty be retained in bed, at the same time they had violent fever. The severity of the symptoms, and the failure of other remedies, made *the prognosis very unfavourable*." Dr. Eurrs immediately gave each three and a half grains, and directed the dose to be repeated every four hours. At his next visit, twelve hours afterwards, he was "greatly surprised and pleased to find his little patients much relieved." The same remedy was continued at first every four, and by-and-by every six and eight hours. The girl in three, and the boy in four days were convalescent. Dr. Eurrs had no more cases, as the epidemic now ceased.

Dr. Bell, of Ayr, Ont., saw, in consultation with Drs. Rounds and Patten, of Drumbo, a woman who had been confined about a week previously, and who, about thirty-six hours before his visit, had been seized with severe dysentery. The evacuations were muco-sanguinolent, and occurred at such short intervals, that she could scarcely be retained in bed. Pain and tenesmus were intense, and vomiting added to the distress. The pulse was exceedingly frequent, and on account of weakness could scarcely be numbered. She had been treated with opium and calomel, without the slightest relief. Seven grains of the digitalis combination were immediately given, in an hour she was decidedly easier, and the pulse less frequent. She was cured in a few days by seven doses, or forty-nine grains in all. Another patient, a man, was seized with severe dysentery. On account of the loaded state of his tongue, calomel and castor-oil were given, but without relief to the dysenteric symptoms. He had frequent muco-sanguinolent evacuations, accompanied with severe

pain, tenesmus, and vomiting. The first dose, seven grains, speedily gave relief, and eight doses in all, or fifty-six grains, completed the cure.

Dr. Bingham, of Ayr, Ont., who has used the medicine for eight years, a longer period than any other practitioner, thus writes me.—“I lost many patients with dysentery before I became acquainted with your remedy, but from that time till last autumn I did not lose one. In this period there were several epidemics, and I treated many, not a few of whom laboured under the worst forms of the disease. In the early part of last season dysentery predominated, but as autumn advanced, the character of the epidemic changed to summer cholera. Under a calomel and opium treatment, in the hands of others, these cases were certainly formidable, yet, under your remedy, my patients got rapidly better, and were soon well. Out of about fifty or sixty having dysentery or summer cholera treated last season, two died, —one, an infant, had dysentery with convulsions, whom I first saw about twelve hours before death, the other, an old woman, with summer cholera, in whose case I abandoned your medicine, because it was rejected by vomiting. (It might have been given in an enema.) In conclusion, I am justified in saying that my confidence in your combination is unbounded, and, to me at least, severe epidemic dysentery has long ceased to be a name of terror.”

The successful treatment of so many severe cases of dysentery, and of several of summer cholera, suggests the applicability of the medicine to a more terrible malady,—Asiatic cholera. Having made this suggestion, I must leave its determination to those who have opportunities of treating that formidable disease.

BRAEHEAD HOUSE, GALT, ONTARIO.

### MEDICAL QUACKERY.

BY D. CLARK, M.D., PRINCETON

The word hypocrisy means a man with a mask on his face. This disguise is of a negative as well as of a positive nature. It makes the wearer appear what he is not, and hides what he is. This masquerade is too common in every-day life, and has become the warp and woof of impulse and motive, in every grade of society.

and under all circumstances, until public faith in man's integrity has not that tonic it would be desirable to witness, and which may predominate in "the good time coming." Medical practice is not free from this tendency to deception, which may be classified into two species of the one genus of humbug and deceit. 1. Deception through ignorance. 2. Wilful delusion. The first of these was prevalent in former times, when astrology, alchemy, necromancy and witchcraft had full sway over the myriads of humanity. The relationship between the stars and human destiny (including diseases) were dogmata, to deny which included bitter persecutions, ostracism, and even martyrdom. The almanacs of A.D. 1873 perpetuate this superstition on their title-pages, in the picture of a nude, well-developed man, with the parietes of his bowels cut away, and all the signs of the Zodiac drawn in peculiar and particular relationship to different parts of his body. Lilly, "a medicine man" of 1647, says of these symbols, in conjunction with man, "There is nothing appertaining to the life of man in this world, which in one way or other hath not relations to the twelve houses of heaven, and as the twelve signs are appropriate to the particular members of man's body, so also do the twelve houses represent not onely, but several parts of man, but his actions, quality of life and living, and the curiosity and judgment of our forefathers in astrology were such as they have allotted to every house a particular signification, and so distinguished human accidents throughout the whole twelve houses."

This figure of humanity, and its various and grotesque surroundings of animate and inanimate creations, had its origin in Egypt, belonging to its ritual, as found in the papyri of the land of the Pyramids. Even the R, used in prescriptions to this hour, and written with a dash across one of its legs, being supposed to be the initial letter of "recipe," is only the astronomical sign of Jupiter— $\mathcal{J}$  slightly changed in shape. The lunatic is still thought to be periodically affected by the moon, and the word itself perpetuates the error. *The alchemists sought for many centuries to find out: "the elixir of life," or to discover "the philosopher's stone," in which was immortality, and in the meantime recommended the greatest abominations as remedies and cures for "all the diseases flesh is heir to"—from mummies' dust to dried toad—from pickled spider to the fluid extract of bug—and from snake poison to flavored pus. Paracelsus has left to posterity a valuable ointment with which to anoint, not*



the wound, but the instrument inflicting it - "Take of moss grown on the head of a thief who has been hanged and left in the air, of real mummy, of human blood still warm, each one ounce, of human suet two ounces, of linseed oil and turpentine three ounces. Mix well, and anoint the sword or other instrument with it" Kircher, of the last century, had an ingenious and novel, if not successful way, of reducing hernia. The kind of rupture was of secondary consideration. He applied a poultice of iron-filings outside, opposite the part affected, and gave to the afflicted, internally, ground or granulated magnetic iron, a scruple every two hours. The *modus operandi* was supposed to be, that when these metallic ingredients came near to each other, the magnetic metal drew the hernia inwards, while the other was applied so as to pull it vertically, or laterally, as might be deemed necessary, and thus a cure was effected. Sir Kenelm Digby, secretary to Charles I, tells us how much faith that gay king had in so-called "Sympathetic Powders," and how efficacious they were as cures and antidotes. These powders were not taken as medicine, nor applied to parts affected, but to the blood of wounds, or to the excretions of patients, and by a sort of spiritual reflex influence, the sick recovered. Lord Bacon, in his "Natural History," testifies to their power in this way, so that it seems great men have a weakness in hobby-riding, as well as many a poor son of Æsculapius. The potency of charms of all kinds—of the laying on of hands of the cure of eruptive fevers by wrappings of scarlet cloth of the cure of lung disease by eating the lungs of foxes and other long-winded animals of swallowing gold in its native state, and expecting this "aurum potable" to act as a prophylactic against evil spirits, of equal absurdities, whose name is legion, are all evidences of the credulity of the physicians and people of "one hundred years ago." Then, we had the poor victims of somnambulism, epilepsy, trance-waking and trance-sleeping, who thought themselves possessed of the devil were believed as being such by others—were anathematized and graciously put to death, after being put to the proof by medical and judicial tests—such as would put to the blush surgeons and chief justices of to-day, and make humanity shudder to contemplate in the blaze of knowledge of this wondrous age. Mesmer had much medical truth, as a substratum on which to build the efficacy of his rubbings, frictions and manipulations, and although mesmerism is surrounded,

even at the present time, by many absurdities. yet magnetic, galvanic or electric influence is potent for good or evil to humanity, and this subtle fluid (or rather, let me say, this something,) may not only be the connecting link between soul and body—the *tertium quid* of philosophers—but an all-pervading, interstitial substance, which is an indispensable condition of all existences, except the First Great Cause of all. Chemical affinity, cohesion, gravitation, cell-building and selection of plants, the assimilation of animals, brain molecular action consequent on thought, and the mighty influence which binds the planets as they roll “to the music of the spheres” in the King’s highway, with unerring exactitude, has many phases in its manifestations, but is, in itself, “one and indivisible.”

The intimate relationship existing between mind and body—between the ego and non-ego—in thought, volition, emotion, passion and desire depends, in their dual, or rather tri-existent relations, at least in our mundane state, on its magic power; yet this potency has, from early ages, been made the tool of charlatan, alchemist and slippery imposter. We know that light, heat, motion and electricity are correlative forces, the one producing the other, and only being changed in phenomena and intensity. I need not say that all these agencies are now, and will be to a greater extent in the future, most valuable auxiliaries in the practice of therapeutics. We know not what this multiform substance is, but we perceive its workings around us, and we conceive its active nature in sensations and cognitions, in every acknowledgment of perceptive consciousness. This field is only partially explored. In it is a “wilderness of harmony” which no human *voyageurs* have been able to reach with human intellect, and which must be reached before the healing art can rise to an inductive science. So far, ignorance has, by the wildest hypothesis, used its manifestations to delude the unwary, and to “play fantastic tricks” on the credulous and unguarded public; but the researches of giant minds are reaching beyond the confines of “this pent-up Utica, and some day the world will be startled at the strange news from this far country.

So far we have learned that all such agents are to be used with caution and prudence, seeing how little we know of their operations as curative instruments. The specialist may use them to astound his patients, or the ignorant may employ them, if he knows not what else to do, and feels that he must appear to endeavor to alleviate

the distressed; but our duty is to "read, learn, and inwardly digest" all the researches of men of science, until we find a more excellent way."

Allow me here to refer to the abominable and disreputable practice of parading our art or attainments before the public, or allowing it to be done with our consent, as in patent medicine advertising, or in the publishing of pamphlets and books full of self-praise.

"Every city, town and village swarms with ignorant pretenders to medical skill.

"It has become quite fashionable among the fraternity to get out a book having reference to special diseases.

"As many of the empirics who profess to write these books can scarcely write their own names--much less compose a grammatical or metaphysical article--they usually employ some literary scribbler to get up a volume to order.

"These works are of the most incongruous, immoral and wishy washy character, save when they are pirated bodily from the writings of some educated physician.

"Some of these individuals assume the names of distinguished men; others use the cures of reputable practitioners as their own. For instance, see how many use Lallemand's reports of cases, *verbatim et literatim*, as cures effected by themselves.

"The man who advertises as 'the Retired Clergyman' is no clergyman at all; the 'Fellow Sufferer' is an old dodge revived, the Humanitarian 'Association' is simply an individual who knows as much about medicine as he does about Sanscrit. All are uneducated charlatans, and those who are led to believe their assertions will be terribly deceived."

The press is a good medium for such a display, and to those who are in the habit of reading the newspapers from all parts of the Dominion, it is astounding to see how much of it is done, and how disgusting it appears to all but the hero of the hour, and should to him were he not pachydermatous.

Let me introduce an example. The editor of the Quoitville "Tooting Horn," had the pleasure of being present at a splendid surgical operation performed by Dr. Octavius Cæsar, on an afflicted patient, and which proved a complete success. The surgery consisted of the excision of a part of the normal but inconvenient

growth of the horn like envelope of the great toe. The learned scientific gentleman commenced by making an incision into the north-west angle of said outgrowth, "be the same more or less," and cutting in a crescentic direction across the obtusious and extrusive part. The amputated section being convexo-convex on its edges and sides. Strange to say, this operation was dexterously performed without the loss of a drop of blood. We cannot say which to admire most, the endurance of the patient across whose firmly compressed lips, no murmur of complaint, or exclamation of pain passed during the trying ordeal, or the skill of the surgeon in bringing such a dangerous and delicate operation to so successful an issue. The paring of a big toe nail is an historical event in the annals of surgery. Exchanges please copy and send their accounts to Box 1037, Quotsville for payment. Here is another *rara avis* of the same flock, with only the pin feathers on to unmask the real genus of a brood of cackling bipeds, prolific in incubation, in other yards besides that of Barnum. Magnum Bonum, Esq., M.D., of Demerara Collegiate Institute, and medical, astronomical, and hygienic *Receptaculum* for the training of graduates over the *Pons Asinorum* of science, art and medicine, respectfully begs to inform the public that he has commenced the practice of his profession in Hardscrabble. His previous experience in the multifarious departments of his profession for nearly have a century, his uniform success, his thorough acquaintance with all the systems of medicine in the world, his willingness to adopt either, or all, to suit his patients, his special and unique treatment of diseases in all parts of the human system, whether chronic or acute, being learned from the greatest medical Savans in Christendom, as well as from the aborigines, after a residence among them of ten years, his knowledge of all recent mechanical appliances, remedies and tests to hydra headed afflictions of humanity, his urbanity of manners, politeness, suavity, and gentleness produce salutary effects upon the most nervous females, and his ardent desire from the welling depths of his heart to benefit his fellow-men, independent of all pecuniary considerations has been the aim and object of his life. Medicine, advice, and attendance to the poor free. Special attention given to diseases of the *spleen*, now raging as an epidemic. The patronage of an intelligent public is respectfully solicited.

This may be said to be a burlesque on some ardent and erring

brother of a noble profession. To some extent it is so, but our press teems with such experiences of nauseating laudation. In Ontario to-day, can be found graduates of our medical schools, who say virtually to patients and their friends, in domestic clinics, that e.g., "milkleg is a disease, in which milk goes into the veins, and if they were opened, the lacteal fluid would pour out," or "that scorbutic glands contain cheese, from the patient drinking too much milk of a bad quality," or "that coagulated blood is part of the liver vomited, when ejected from the stomach" or "that the lungs are in a bad way, but the 'lights' are sound as a bell" or "that a black cat's skin with a 'white tip to its tail is a sure cure for divers inflammations, and is doing good, if it has a putrid smell, after lying against a hot skin for ten or twelve hours," or "that tying woolen strings around the thumbs and toes will stop post-parturient hæmorrhages." These, and dozens of other catch-penny phrases, and absurdities are current with the same earmark and brand of duplicity, cunning and quackery. I dare not say these utterances are those of ignorance, or hypocrisy, or deception, for these *magi* are legally qualified to instruct and enlighten, in the healing art, the *ignobile vulgus*, and are they not "all *honourable* men?" No polite name can be found to stigmatize my abhorrence, condemnation, and contempt of such jugglery, and unmitigated nonsense in the practice of our profession.

Another species of quackery is that of being *untruthful* to our patients. It is said that "speech is silver, but silence is gold." To magnify a disease to our patients, beyond what we know it to exist, in order to procure credit for miracles in almost restoring the dead, is falsehood. To hold *in terrorem* over the heads of the afflicted, diseases whose names are legion, when, it may be, we are either ignorant of what is the matter, or know that *one* disease is the central and exciting cause or occasion of myriad signs and symptoms, is not honest. To promise a complete panacea for all ills absolutely, except in regard to the few specifics of our *vade mecum*, is an *ignis fatuus*, which "leads to bewilder and dazzles to blind." To pronounce a case desperate from imperfect knowledge, or "malice aforethought," or as capital to speculate on, that if healed by the recuperative powers of nature, or in conjunction with appropriate remedies, in order that "all hail! great son of *Æsculapius*! may echo and re-echo over every hill, and in every valley of a country side, is cruelty to the sufferer, and arrant hum-

bug in the prognosticator. At the same time, let us be honest and faithful to the dying, not holding out any false hopes, until they launch away. We would ask it for ourselves, so let us not in that trying hour, withhold candour of speech from others, until those who look out of windows are darkened, the golden bowl is broken, and a spirit is surprised into eternity. Our aim should be to render a real and true confession in regard to the state of those whom Providence has doomed to die, and who read in every lineament of the physician's face, and in every accent which drops from his lips hope or despair. "While there is life there is hope," passes for an aphorism, but to many it is "a cunningly devised fable," and proves in too many instances a delusion and a snare. I am well aware that medical men are not perfect, but the golden rule is as applicable in our profession as in all other legitimate occupations. The public is far from being grateful to its best benefactors, but an approving conscience is never unkind. We are appealed to with great fervor when danger is near, and a strong affection is apparent when disease, or it may be death, is tugging at the heart-strings, but when rosy health returns, in many cases sarcasm, irony, and often bitter invective take the place of endearing epithets and words of eternal friendship, especially when bills are presented. *Enricus Cordus*, who died A. D. 1535, doubtless told his own experience, as well as that of his apostolic succession, in the healing art :

"Tres medicus facies hat et . unam quando ragatur,  
 Angelicam , mox est, cum juvat, ipse deus.  
 Post ubi curato, poscit sua premia, morbo,  
 Horridus apparet, terribilisque Sathan."

("Three faces wears the doctor : when first sought,  
 An angel's—and a God's, the cure half wrought,  
 But, when that cure complete, he seeks his fee,  
 The devil then looks less terrible than he.")

Pope sang in the same strain, although he was not one of the brotherhood :

"God and the doctor we alike adore,  
 But only when in danger, not before,  
 The danger o'er, both are alike requited,  
 God is forgotten, and the doctor slighted."

Garth's cutting epigram may be hurled at our heads and hearts after we have saved from misery some shrivelled soul (giving the atrophied object the benefit of a doubt), and restored his carcass to health and strength, against the well-being of society —

" Like a port skulker, one physician plies,  
And all his art and all his skill he tries  
But two physicians, like a pair of oars,  
Conduct you faster to the Stygian shores "

At the same time it is well to be so painstaking, diligent, and cheerful in the practice of our profession, as to show that we love it for its own sake, in spite of all obloquy and undeserving reproach. An elongated vision—a profusion of tears and groans—an ominous shake of the head—a significant shrug of the shoulder—a recital of the signs and symptoms of others—"just like you, my dear sir, and they died"—are not assuring tokens to the nervous, nor fortifying to critical cases. Cheerfulness is a diffusible stimulant that will traverse nooks and crannies of soul, spirit and body, where remedial substance never reached, and a radiant countenance is a tonic to the weak, despondent, and helpless. In this conservative age of medicine, when sanitary regulations, dietetics, and expectancy so largely prevail in the practice of medicine and surgery, when the test-tube, the microscope, thermometer, and the sphygmograph, are so indispensable to diagnosis, doubtless soon to be followed by the wonders of the searching spectroscope, we often lose sight of the personal influence of the cheerful practitioner for weal, and the despondent, timid, vacillating, lugubrious attendant for woe. Faith in a doctor, no larger than a grain of mustard seed, will often, through psychological influence, work marvels in bracing up the system, through unbounded confidence and inspiring potent hope. The "blues" in physicians do seriously, in the aggregate, affect the statistics of mortality, but a glad countenance is a rich venison to the downcast and afflicted. I know physicians whose jolly, smiling, gladsome faces would do me more good than all the boluses of others, even if

" For physic and farces, their equal there scarce is .  
' Their farces are physic, their physic a farce is '

Finally, let us be kind to each other. If we cannot agree, let us maintain a strict neutrality, and may "our bugles sing truce."

We have too many enemies to wage war against in self-defence, "without the camp," instead of being like the historic Kilkenny cats found devouring one another. It is not an indispensable condition of our noble profession to indulge in heart-burnings, bickerings, envious, and jealousies; for, in the arena of conflict with disease and death, we have room enough in this great battle-field of life to test all our powers in honorable sympathetic rivalry "without tear and without reproach." These are my feeble sentiments, convictions and utterances, I hope sincerely given, for "I am in a place and position where I am demanded of conscience to speak the truth. the truth, therefore, speak I. impugn it who-so listeth."

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### THE ADMINISTRATION OF CHLOROFORM

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In a paper entitled "Resuscitation in Apparent Death from Chloroform," (contained in the June No. of the *Lancet*) it is remarked, "very many of the cases of accident from chloroform arise from the hap-hazard manner in which the anæsthetic is administered." During the past year, I have administered chloroform at least to fifty patients according to a method originated by Dr. A. M. Rosebrugh, sen. surgeon Toronto Eye Infirmary, and believing it to possess many advantages over and to be more safe than the usual methods, I propose to consider the effects of chloroform, and subjects connected with its administration, in order to estimate the affirmed advantages claimed for Dr. Rosebrugh's method. Chloroform gradually administered, at first like alcohol and most narcotics, stimulates, the pulse is quickened and more forcible, then the functions of the nervous centres are suspended, the brain loses the power of receiving sensations and exciting voluntary motion; and there is loss of perception, thought and consciousness. Soon the functions of the cerebro-spinal axis are abolished, the voluntary muscles are relaxed, and not capable of reflex action.

The Royal Med. and Chirurg. Society, by experiments upon animals, determined that "dilute chloroform vapour (5 per cent. or less) blown upon the fauces produced very little inconvenience, and



the animal continued to breathe in a natural manner, but if concentrated vapour be suddenly administered, a spasm of the fauces is induced: afterwards when the animal has inspired, the phenomena of asphyxia are for a time associated with those of chloroform poisoning.

It is believed that anaesthetics, as carbonic acid, ether and chloroform, act by suspending the due oxygenation of the blood.

In a case of fracture of the skull when chloroform produced its full effect of narcotism, the brain was seen to be remarkably pale, and whenever the anaesthetic influence began to subside, the surface of the brain became florid.

The pulse in complete anaesthesia is reduced to its normal frequency.

MODES OF DEATH.—According to Dr. Richardson, there are four modes of death. The first he calls *Synopal apnea* in which death is very rapid, commencing within the minute after the commencement of inhalation. Respiration is suspended, there is an accumulation of carbonic acid in the blood, irritation of the vagus and arrest (from the irritation) of the action of the heart.

2nd. Death from epileptiform syncope, or muscular excitability. It occurs during the frigid stage. All through the body there is evidence afforded, on the arterial side of the circulation, of intense arterial contraction.

3rd. Paralysis of the heart and muscular system, from the slow and continued action of the narcotic. Death is preceded by an intermittent pulse.

4th. Depression from chloroform and surgical shock, paralysing both the pneumogastric and sympathetic.

CAUSE OF DEATH.—Dr. Richardson says, "I infer that in every case of death from chloroform, the cause of death is excitation, either of the motor or of the controlling nervous mechanism of the heart. Dr. Sansom remarks, 'the danger of chloroform resides in the fact that in strong doses it is a direct cardiac depressant, and paralysis of the heart is the usual term of death from chloroform in man.' Lister maintains 'that chloroform kills only in one way, viz. by paralysing the muscles of respiration.'"

PER CENT OF FATAL CASES.—Mrs. Syme gave chloroform in 5000 cases without a death resulting, and Sir J. Simpson quite as frequently, with a like fortunate result. Dr. Snow used his inhaler

in 4000 cases, of which only one was fatal, and that seemed to be independent of the chloroform. Up to 1871 no case of death from chloroform had occurred during nine years, either in the Edinburgh or Glasgow Infirmary, two of the largest surgical Hospitals in Great Britain, and it is very interesting to note the conditions of the so successful practice related by Prof. Lister. In both these institutions a folded towel on which the anæsthetic liquid is poured, unmeasured and unstained, is still the only apparatus employed in the administration. preliminary examination of the heart is never thought of, and during the inhalation the pulse is entirely disregarded, but vigilant attention is kept upon the respiration, and in case of its obstruction, firm traction upon the tongue is promptly resorted to. In 17,000 administrations in the English hospitals there was only one death. As an unfortunate contrast with the above, I saw during the winter of 1871, three deaths during the administration of chloroform in "the London Hospital."

No death has occurred in a patient under 5 years of age, but the number of administrations under that age has undoubtedly been much less than above it.

**DANGER OF CHLOROFORM.** In 109 cases of death, the committee of Med. and Chirurg. Society report on the stage of anæsthesia at which death occurred. Commencing to inhale, 10. Before full effect of chloroform, 50. During full effect, 52.

Figures go to show that the fatality in females and the debilitated, is less than in males, and the strong.

The average amount of chloroform used in 37 fatal cases was seventeen drachms. In five cases the amount was half a drachm.

Dr. Snow from experiments upon animals, considered it dangerous for the human subject to breathe more than 5 per cent of the vapour of chloroform. Messrs. Lallemand Perrin and Duroy, and that though mammals can remain in an atmosphere of 4 per cent. for a considerable time, they die rapidly in an atmosphere of 8 per cent. It has been ascertained that from a handkerchief, one may breathe an atmosphere containing 12 per cent, which according to the above, would be very dangerous.

Dr. Anstie gives an account of 21 cases, in which he saw dangerous symptoms in the course of chloroform administration. In 358 it was given on lint. In 2200 an inhaler was employed. In

the former, one in 53 evinced signs of danger. In the latter where due dilution was provided for the proportion was only one to 440.

The chloroform Committee report—"Experiments upon the lower animals equally with observations on man, prove that there is but a narrow limit between that strength in which the vapour may be safely inhaled, and that which is likely to produce alarming symptoms if not death,"—and that it is as desirable to measure the strength of the vapour, as to weigh the dose of a medicine administered by the mouth. "In animals the symptoms have been induced safely, with a fully diluted vapour." A proportion of 5 per cent. of vapour is fatal to animal life. Dr Sanson, Dr. Anstie and the chloroform committee gave  $3\frac{1}{2}$  per cent. as the proportion, and  $4\frac{1}{2}$  as the maximum which can safely be respired.

That the system will bear a larger dose of chloroform if it be gradually given, seems evident from an experiment of M. Claude Bernard, since the effects of carbonic acid and chloroform are similar. A sparrow left in a bell glass, to breathe the same air over and over, will live for three hours, but, if at the close of the second hour, a fresh sparrow be introduced, it will expire immediately.

CONDITION OF PATIENT.—By some it is thought chloroform by promoting shock during operations is a source of safety in heart disease. In case of apparently well marked signs of fatty heart, perhaps it would be better not to administer chloroform except for the major operations in which case the freedom from shock might more than counterbalance the depressing effects of the narcotic. Dr. Squarey cites the case of a woman between 60 and 70, to whom chloroform was administered, her foot was removed, she died a few days after from the effects of the operation, the heart was found very fatty, the walls thinned, left pleura half full of pus, yet she took the chloroform well for half an hour.

Dr. Richardson says he knows "of only one condition of the body especially dangerous for chloroform, this is a weakened and dilated right side of the heart." Many deaths have occurred in hard drinkers which may be due to the fatty heart of the intemperate. "In uræmia and pyæmia, and in severe shock to the nervous system, it should be withheld" "and in hysteria more than usual care should be used."

Sansom considers acute hyperæmia of the lung,—the only diseased condition of the lung in which chloroform should not be given.

SIGNS OF DANGER.—Sansom divides them into four classes

I. Signs of sudden cessation of the heart's action. These are most frequent. The pulse suddenly stops, or it first flickers and then stops, or a sudden pallor of the face and lips is first observed. In these cases there is seen to be no embarrassment of respiration. It often continues after the pulse has ceased.

II. Signs of muscular excitement. Early in the inhalation, the patient has struggled and risen up, and has fallen back dead, or the muscular contortions occurred when there was complete insensibility. Lividity of the face is caused by the suspension of the action of the respiratory muscles.

III. Signs of embarrassed respiration. The respiration may be laborious, irregular or stertorous.

IV. Signs of simultaneous arrest of respiration and heart's action. An inspiration of a highly charged atmosphere has been taken and hence the sudden arrest of pulse and breathing. In the experience of Dr. Squarey the pulse does not give much sign of danger till after those given by the respiratory system, yet, he remarks, chloroform certainly does kill by paralyzing the heart, and the pulse should be watched.

Dilatation of the pupil which is said to be a sign of danger, is also the first sign of the patient's recovery from the influence of chloroform. *Fret. Lister* divides stertorous breathing into two kinds, palatine and laryngeal. Although the snoring produced by vibrations of the velum, frequently takes place without indicating danger, whenever there is any stertor, other signs of danger should be looked for.

METHODS OF ADMINISTERING.—Many of the inhalers used are faulty, in furnishing the same per centage of vapour at the commencement of, as during the subsequent administration. *Clover's* inhaler is free from the above objection, yielding any per cent of vapour required, but the size and expense of inhalers, and the generally considered safety of the ready method, of giving chloroform make it unlikely that inhalers will be used by any number of general practitioners. *Dr. Snow* assumed when chloroform is given from a folded cloth it is apt to be given in too concentrated a form to which

he attributed most of the deaths, whereas Prof. Lister thinks the argument a fallacy, and shows by his own experiments if ʒiiss. of chloroform by measure is poured on a cloth similar to that used in practice, at a temperature of 70° twenty-four grains are evaporated during the first half minute, giving 4.5 per cent. as the proportion of vapour to the inspired air. Now, supposing in practice, ʒiiss. is used during the early part of the half minute, more than 4.5 per cent. is evaporated, and if the quantity be soon repeated, it is possible that death may occur before the end of the half minute, since out of 109 deaths the chloroform committee report ten deaths at the commencement of inhalation. Yet in practice, Prof. Lister says, 'the precise quantity used is a matter of no consequence whatever, in which case the per cent of vapor must be above that considered safe.' We have seen that Drs. Snow and Sanson, the chloroform committee, &c., hold quite a different opinion. I have never seen chloroform given by drop in hospital practice, except in New York, and then the quantity was not measured by counting the drops per minute. In 1847 Sir J. Y. Simpson writes, 'The simple handkerchief is infinitely preferable to any instrument. I have lately seldom measured the quantity. We must judge of its effects more than its quantity.' In 1860, he writes, 'for some time past I have administered chloroform by a new method. One single layer of towel is laid over the patient's nose and mouth, and the chloroform is poured drop by drop. By the new method the patient is more rapidly anaesthetised, whilst a great saving is effected in the amount of drug employed. There is little or none of the drug lost, and it is inhaled mixed with a sufficient quantity of air, which is easily inspired through a single layer of ordinary napkin. It is noticeable that in 1860, Prof. Simpson thinks there should be a "sufficient quantity of air," and how can that be possibly secured without measuring the chloroform. Dr. Sanson lays down two principles in administration for securing the greatest safety.

I. The continuous inhalation of an atmosphere of known strength (of about  $3\frac{1}{2}$  per cent). This is the principle of definite dilution.

II. The administration of an extremely dilute atmosphere at first, and the progressive increase in its strength, never overpassing five per cent.

I believe Dr. Rosebrugh has secured by his new method of

administering chloroform, the maximum of safety, in accordance with the principles laid down by Dr. Sansom, by such a ready method, and possessing so many advantages that it seems to me to require only a trial, and I predict there would be a rare exception to its adoption even by the most conservative. Dr. Rosebrugh writes: "My method of administering chloroform is as follows.—The patient is placed on his back, and one thickness of a linen napkin is placed over the face. A  $\zeta$ ii. vial is filled with chloroform: an assistant observes the pulse, and holds the watch in such a position that the administrator may see the second hand. The napkin is raised about  $1\frac{1}{2}$  inches from the mouth, so that it does not touch the nose. The chloroform is now dropped upon the napkin over the mouth. One-third the maximum dose is given during the first minute; two-thirds the second, and the maximum quantity the third. The maximum dose should be continued from two to six minutes, till full narcotism is produced. The maximum quantity may be given occasionally, or one-half the quantity continuously. To adults I have found 30 drops per minute, in most cases, sufficient. For children 12 years of age 18 drops; 7 to 9 years 15 drops; 5 years 8 to 10 drops. To adults never more than 35 drops per minute. Dr. Rosebrugh estimates if a patient inspires the whole of the vapor of 33 drops of chloroform per minute, he will be inspiring  $4\frac{1}{2}$  per cent. If 20 per cent be wasted, the per cent inhaled would be reduced to  $3\frac{1}{2}$ , the safe proportion. The advantages of the method, judging from the number of cases I have seen, are, the small quantity of chloroform used,  $\zeta$ i. to  $\zeta$ ij. Even children seldom object to it when given as directed. Adults seldom cough or spit. There is rarely any violent muscular movement or struggling, and the weight of authority seems to show that it is more safe to measure the dose than to give it hap-hazard.

**RULES FOR ADMINISTRATION.**—If the patient has fatty heart, dilated right ventricle, hyperæmia of the lungs, or is intemperate, chloroform should be given perhaps for major operations only, and then with great care.

A glass of milk four hours before the administration would perhaps be the most suitable food. Half an ounce to an ounce of brandy or whiskey to a full adult, and a teaspoonful to a child should be given twenty minutes before the administration of chloroform. The patient should lie down, as the heart is depressed. If

the administrator has not an assistant to take the wrist pulse, he may keep a finger on the temporal artery. The respiration should be closely watched, and the face occasionally. When there is no reflex muscular action, which is best tested by the patient not winking when the eyeball is touched, the patient is prepared for the operation. Squarey says, "the insensibility of the pupil to light is a more reliable test. If there be signs of danger draw the tongue out forcibly with the artery forceps." Hoping the putting of the above facts and theories together may somewhat help to render the administration of chloroform more safe, this too lengthy article is brought to a close

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RETENTION OF URINE PRODUCING CLOSURE OF THE  
ORIFICES OF THE URETERS, TERMINATING  
FATALLY.

BY ALEX. BETHUNE, M.D., GLANFORD, MEM. MED. COUNCIL  
OF ONTARIO

On the 24th of April last, I was called to see M. P., a female child three weeks old. I found her suffering from general erythema, which in many parts of the body almost amounted to erysipelas. As the mother was subject to erysipelas, and as she had lost one child at the age of two weeks with that disease, I was afraid that this one would share the same fate. On enquiring into the history of the case, the mother informed me that the infant had the "red gum" at first, such as all her children had, and therefore she did not feel alarmed, until, instead of disappearing, as she expected it would, the eruption became rapidly worse, and retention of urine ensued. When I first saw the child there was slight fever, with occasional attacks of vomiting, but it nursed well, and did not seem in much pain.

I prescribed a weak solution of soda bicarb., to be given every three or four hours; and ordered it to be placed in a warm bath, at the same time showering it over the abdomen and private parts. This treatment had the desired effect, and I did not see the child again until the 28th, when I was called, and found it much in the same state as before. As there was still considerable erythema, which seemed worst about the private parts, the vulva and meatus urinarius being greatly swollen and inflamed, I repeated the soda

mixture, anointed the parts with unguent oxid., zinc. alb., and ordered a repetition of the bath, &c.

On the 30th I saw the child again, and found it much in the same state, with the exception of the erythema and swelling, which were much better. As the bladder had not been evacuated in six days, I introduced a small silver catheter, but as no urine came away, I withdrew it and found, much to my astonishment, that it was perfectly dry, not even tinged with moisture. There was no swelling over the region of the bladder, such as would have been expected in retention of urine, but a slight ridge was visible along the course of the ureters, and also a fullness over the kidneys. My diagnosis, from these symptoms, was that the orifices of the ureters, where they enter the bladder, were obstructed, most likely by agglutination of the muscular coats of the bladder, caused by pressure of the urine when it was so long retained, before my first visit.

I continued to attend the child, visiting it every second day, and introducing the catheter, with the same result, until its death, which occurred, with all the symptoms of uræmia, on the 22nd of May. At every visit the course of the ureters became more distinct, so that, at last, they seemed dilated to the size of a man's thumb, for nearly their whole length, until they merged in the pelves of the kidneys, which seemed swelled almost to bursting.

Circumstances prevented me from holding a *post mortem*, which would, no doubt, have been very interesting.

In reviewing the case it will be seen that there was first, the erythema which caused the swelling of the vulva and meatus urinarius, thereby producing retention of urine, which in its turn caused the closure of the uretral valves, if I may so style them, thereby causing dilatation of the ureters and kidneys, which terminated fatally.

In confirmation of my diagnosis, I refer to an article by Sir Henry Thompson, which appeared in the *British Medical Journal*, March 5th, 1873, and was re-published in the May No. of the CANADA LANCET. The extract reads thus—"Owing, then, to the pressure of some obstruction to the escape of urine from the bladder, that organ becomes dilated, the secreting substance itself is compressed against the capsule, and finally the whole organ may be distended into a sort of cyst. I have seen the ureters as large as the small intestine, and contain, with the pelves of the kidneys, thirty fluid ounces of urine."



As such cases are of rare occurrence, I am therefore induced to send you a report of this one, with the hope that it may be of interest to the readers of your journal.

### Correspondence.

(To the Editor of the *LANCET*.)

SIR, Among the subjects which engaged the attention of the Brant Medical Association, at its last meeting,—of which a brief report appears in this month's *LANCET*,—there is one at least which deserves to be brought more particularly under the notice of your readers. I refer to a certain combination of medicinal plants, spoken of by Dr. Kerr, of Galt, and others, as having been used in the treatment of dysentery and some other diseases.

A considerable number of practitioners in this part of the country, and some in other lands, have used this medicine, and have expressed their very high appreciation of it. Several physicians, within the circle of my own acquaintance, have been using it for some years past, with remarkably favourable results. I am confident those gentlemen will concur with me in the very high opinion I have been led to form of its value, in the treatment of some forms of disease, involving especially the mucous membranes, and ranking among the most important and frequently-occurring to be met with in this country. I conceive that Dr. Kerr, to whose patient investigation and painstaking course of therapeutic inquiry we are indebted for this valuable means of combating disease, has laid the Profession under no small or inconsiderable obligation. I have used this combination, in its several modifications, for about nine years, with every reasonable satisfaction. In dysentery especially, and in diarrhoea, it has proved itself invaluable; and in croup, in scarlatina, and even in variola, unmistakable benefit has been derived from its use. Such is its efficacy in dysentery, as ordinarily occurring in this neighbourhood, that our usual experience is, to order six or eight powders for the patient, and to hear no more of the case, until one chances to meet the *quondam* patient or some of his family afterwards, and then learns the favorable result, oftentimes so prompt as to render it unnecessary to use the whole number of doses sent. And we constantly find persons coming to us and asking for the

“green powders,” so obvious is the efficient action of the medicine to those who have seen it employed, especially in severe cases, which have previously baffled other and more familiar means of treatment.

I am permitted to state that Doctors Lawrence and Dickson, of this town, have both used Dr. Kerr’s digitalis and squill combinations for several years past, and are thoroughly satisfied of its results. Dr. Lawrence was for a time inclined to be sceptical,—attributing the results obtained entirely to the opium, usually combined with the medicine, in the treatment of dysentery and diarrhoea. But I am aware that, as he stated before the Association, his original distrust gradually gave way, as he continued to use the medicine. Cases have occurred to him, as to many of us, in which we failed to subdue the dysenteric symptoms, while giving the medicine combined with opium, as usual, but soon succeeded when the opium was left out. Indeed it is highly probable that the principal effect of the opium in this combination, is simply to lessen the frequency of the dejections.

Having learned that Dr. Kerr has consented to send some of his published papers for insertion in your next issue, I have not thought it necessary to refer at all to the several articles included in the combination, or to any details in regard to their administration. Nor shall I ask space in your excellent journal for reports of particular cases,—but simply offer my humble testimony, as one of a number of practitioners, who has used the medicine for a considerable length of time, and who has felt an ever-increasing confidence in its efficacy in appropriate cases.

Yours, &c.,

WM. CLARKE.

Paris, Ont., July 10th, 1873.

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To the Editor of the LANCET.

SIR,—The following unique case is worthy of record :—A few years ago a young man in this vicinity went out to hunt deer. He came to a chopping, and was mounting some tree tops to get a clearer view of the place. He was carelessly dragging his rifle after him, when it exploded. The ball passed through the limb of a tree about three inches thick, tore a portion of the integument off the inner side of the right thigh, passed through his trousers in three

places, and imbedded itself in the *glans penis*. I extracted the ball and patch covering it, and in a few weeks his recovery was complete. He is now married and the father of several children. I am not aware of cases having been recorded where the ball from any fire-arm lodged in this portion of the body, although the eccentric and remarkable course taken by these missiles when striking an animal body is well known to surgeons. Animal bodies seem to resist or deaden the force of bullets by simply yielding to a certain extent at the moment of contact.

JOHN H. GARNER, M.D.

Lucknow, July 5th, 1863.

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To the Editor of the LANCET.

SIR,—I have this day been called upon to attend a surgical case of peculiar difficulty, and beg to report its nature.

Mr. B., a farmer, living four miles from my office, attempted to lower himself from a mow *or loft*, in which he had assisted to store his hay. In doing so, he swung his body off the mow, and to break the fall held on to the edge (which was composed of upright boards with rough sawn ends, nailed to a cross-beam) by his right hand. A splinter on the edge of a board caught the whole weight of the body and impinged on the flexed hand, just over the carpo-radial articulation. The splinter was forced through the skin and the patient fell from the mow, and felt that a serious injury had been done. His co-labourer attempted to remove the splinter, and broke it off; and after a few more efforts at extraction, the patient came hurriedly into town to seek surgical assistance. About an hour after, he presented himself at my office. He was cold and partially collapsed, showing some serious form of injury. All he had to show was a small wound, about a quarter of an inch in length, in front of the carpo-radial articulation. He complained of excruciating pain and partial numbness of the two middle fingers.

I probed the wound and could find no foreign substance. I must say, I avoided the joint of the wrist in my deep and serious explorations as much as possible. I enlarged the opening through the dangerous area as carefully as possible, and still could find only tendons, &c. I was about giving up further explorations, but the "confidence of the patient that the *sliver was there*" induced me to

more earnest endeavours. I sent for my confrere, Dr. Battersby, to assist, and to administer chloroform, as the patient was becoming exhausted and exceedingly nervous. Dr. Battersby promptly came to my assistance,—it was now in the “dusk of evening.” He quite agreed with me that further explorations should be made. After chloroform was administered, I enlarged the opening still farther, and explored the whole of the carpus and palm as far as careful dissection would permit. No foreign substance could be found. I was about to abandon further attempts, when (as the patient was in a state of complete anæsthesia) I introduced my finger, and explored all parts of the posterior carpus; but on flexing the hand on the forearm, and exploring above, I detected a moveable body under the anterior ligament of the joint; by my nail it was moved to the original aperture, and by means of forceps I was enabled to extract, from the carpo-radial articulation, a mass of wood  $\frac{3}{8}$  of an inch long and  $\frac{1}{2}$  of an inch in diameter.

After rallying from the chloroform, I applied water dressings, and gave directions to keep them perseveringly applied with anodynes until I saw the patient on the morrow. I need not mention my apprehensions; every professional man will recognize them. The progress of the case will be mentioned in some future issue.

Yours, truly,

N. O. WALKER, M.D., M.R.C.S., Eng.

Port Dover, July 16th, 1873.

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## QUACKERY.

(To the Editor of the LANCET.)

DEAR SIR,—I send you an extract from a local paper of the 16th inst., as a sample of how they do it in this locality:

### IMPORTANT SURGICAL OPERATIONS BY DR. DOW.

A few days since Dr. Dow removed a large Tumor from the arm of Mrs. Moses Haris, of Blackville, Miramichi. The swelling extended from the elbow to the shoulder, and had been enlarging for some years past. Mrs. Harris said that it was too heavy for her to carry any longer. She is rapidly recovering.

HARE-LIP.—A child of Mr. Pearsons, living near Florenceville, Carleton County, was operated on for a deformity a few days ago. It was not considered a bad case. The little patient is nearly well.

Dr. Dow informs us that this was the one hundred and sixteenth time! that he has operated for said deformity.

ACCIDENTS.—John Flanagan, who had his leg so badly fractured, and knee dislocated, is doing very well. His health has not been good for some time past, his lungs being seriously affected. Dr. Dow thinks that there is still a chance of saving his leg.

A daughter of Mr. Egan, school teacher at Hamtown, had her arm badly broken last Saturday, by a fence falling while she was getting over it. The bones of the elbow were completely crushed, and she will probably have a stiff arm for life. Dr. Dow has the patient in charge.

The author of the above has flourished by this and similar means for the last twenty years in Fredericton.

Yours, &c.,

MEDICUS.

Fredericton, N. B., July 19th, 1873.

## MINUTES AND PROCEEDINGS OF THE MEDICAL COUNCIL OF ONTARIO.

### FIRST DAY'S PROCEEDINGS.

The Council met in the Court House, Toronto, on the 25th of June. Dr. Dewar in the chair. All the members were present except Dr. Morrison.

On motion, Dr. Wm. Chark was appointed President, and Dr. Muir (Eclectic) Vice-President.

Dr. Forrest Dewar, in leaving the chair, said that in retiring from the position as President of the College of Physicians and Surgeons there was one circumstance which he was sure each and every one of them would regret— the absence from their Board of an old and most esteemed member through death. He had no doubt that some testimonial would be drawn out by the Council expressing sympathy with the deceased's bereaved family. He regretted himself, owing to circumstances over which he had no control, that he could not pay that attention to the business of the Council that he should have done. He begged to thank the Vice-President of the Council for the active, hearty, and steady hard-working manner in which he assisted him when he was unable to carry out his work. He really believed the conferring of the Presidency of that Council upon him was an honor to which he was not entitled, and he could only say that he thought he would be better as a gladiator in the arena than as a judge in the circus.

Dr. Clarke, on taking the chair, referred to the importance of

this Council, which represented 1,600 medical men of the Province, and to his diffidence in accepting the position. He thanked them for electing him, and he would endeavour to do all in his power to draw them together and keep them so, for the benefit of the public as well as the profession.

Dr. Brouse moved that Drs. W. T. Aikins and Thos. Pyne, respectively Treasurer and Registrar, should be re-elected for the ensuing year.

Dr. Campbell moved in amendment that the Treasurer be instructed to hand over to the Registrar, when appointed, the moneys, papers, and other documents connected with the Council. He contended that they could not comply strictly with the existing Act without uniting the offices of the Treasurer and Registrar. It was not competent for them to have two persons performing the offices.

After some discussion Dr. Campbell put in the following charges condemnatory of Dr. Aikins' conduct, as treasurer of the Council.

"That inasmuch as Dr. Aikins, Treasurer of the College of Physicians and Surgeons of Ontario, in reporting as to the financial condition of the Council before a special committee of the Legislature of Ontario on the 26th of February last, asserted that he had, within a period of ten days, paid a claim of Messrs. Hunter, Rose & Co. for printing papers at the last election, and inasmuch as that firm declared that no payment of any kind had been made by Dr. Aikins, and threatened to institute proceedings for the recovery of the said amount alleged to have been paid by him, and that Dr. Aikins by such statement wilfully and fraudulently misled the Parliamentary Committee of the House of Assembly, and materially led to the defeat of the bill before the aforesaid committee of the Legislature, by which defeat, it is confidently believed, that a loss of six thousand dollars has been sustained by the Council, therefore be it *resolved* that the said Dr. Aikins has forfeited the confidence of the Council and is not a fit and proper person to hold so responsible a position as that of treasurer to the College, and that he be called upon to resign such office, and deliver up to the registrar without delay all moneys, receipts, papers, &c., pertaining to the affairs of the Council which he may have received in his capacity as treasurer."

Moved by Dr. Brouse, seconded by Dr. Grant,—"That the charges of Dr. Campbell be referred to a committee of five members of the Council, who shall investigate and report as speedily as possible, and that the said Committee be composed of Drs. Hyde, Hodder, Muir, Bethune, and Berryman."—*Carried.*

Dr. Dewar moved, seconded by Dr. Berryman, "That this Council, at this early period of its session, would beg to tender to the widow and family of the late Dr. Agnew its sincere and heartfelt

sympathy at his untimely death. The Council regrets the loss of one of such genial disposition, and energetic and zealous action in all matters connected with the working of this Council, and deem it their duty thus to record by this testimonial their sense of his worth and that the said resolution be forwarded in proper form to Mrs. Agnew."—*Carried.*

Dr. Campbell explained the action of the Legislature during the past session with regard to the Ontario Medical Act, and moved that the proposed Act to amend the Ontario Medical Act be taken as a report of the Committee appointed for the purpose of considering the subject by the Executive Committee and be referred to a Committee of the Whole on the following day.—*Carried.*

A full text of the Bill, as amended by the Council, will appear in our next issue.

On the motion of Dr. Berryman the following gentlemen were appointed a Committee for the appointment of the Standing Committees: Drs. Dewar, Brouse, Adams, Bogart, Edwards, and Daniel Clarke.

The following are the names of the gentleman on the standing committees:—Printing Committee—Drs. Campbell, Eastwood, Springer, Cornell. Finance Committee—Drs. Hyde, Vernon, Fields, Hillary, Coburn and McDonald. Rules and Regulations, Committee—Drs. Adam, Cornell and Berryman. Education Committee—Drs. Brouse, Grant, Aikins, Hodder, Berryman, Dewar, D. Clarke, Bogart, Edwards and Lavell. Registration Committee—Drs. Lawrence, Bethune, Hodder, Campbell, Bogart and Dewar.

On motion of Dr. Berryman, seconded by Dr. Aikins, two reports on the recent examinations were referred to the Committee on Education.

Dr. Campbell moved that the motion passed at the late annual meeting of the Council, with reference to Dr. Carson, disqualifying him from sitting on any committee, be expunged from the minutes.

After some discussion, it was moved by Dr. Brouse, as an amendment, that the Council proceed to the regular business.—*Carried.*

#### SECOND DAY'S PROCEEDINGS.

Dr. Brouse presented the report of the Committee of Education. The following is the report of the Committee as amended and adopted: "Your committee had under consideration the two communications from the Board of Examiners, and they arrived at the following conclusion: That at present it is not advisable to institute an extended competitive system of examination, that the examinations should be partly oral and partly written, that, if possible, the examining body should be reduced, in order to lessen the expenses

of the Council, but that under all circumstances a certain standard must be exacted. As far as possible the marks made over and above the required number should be recorded, in order to the forming to some extent of a comparative estimate of the excellence and proficiency attained under the prevailing system of medical education. In all cases, too, where more than ordinary ability is evinced, the examiners should have the power to accept the written answers of the candidates as being sufficient without subjecting them in addition to the usual oral examination. Sixty marks out of a probable hundred to be considered evidence of such proficiency.

"The following are the names of the examiners appointed for April, 1874.—Dr. Aikins, Surgery and Surgical Pathology, Dr. Hodder, Anatomy, Descriptive and Surgical, Dr. Lavell, Midwifery and Diseases of Women and Children, Dr. Berryman, Materia Medica; Dr. Wm. Clarke, Medical Diagnosis, Dr. Daniel Clarke, Chemistry; Dr. Dewar, Medicine and Medical Pathology; Dr. Edwards, Physiology, Dr. Macdonald, Medical Jurisprudence and Toxicology, Dr. Vernon, Sanitary Science; Dr. Bogart, Botany.

"Homœopathic Examiners—Drs. Vernon and Field. Eclectic Examiners—Drs. Cornell and Bogart.

"In the event of any of the examiners failing to attend, the President shall appoint one in his place, and shall also arrange the programme of examinations. Your committee further recommend, that in the event of any candidate signifying his intention to the Registrar to be examined and registered as a homœopathic or eclectic practitioner, due notice of such must be submitted to the registrar, so that the examination may be conducted by the respective parties appointed for that purpose, but prior to the acceptance of such notice from the candidate, the usual fees must be paid. In the event of any candidates presenting themselves for such examination, due notice to be given by the Registrar to the special examiner. All regulations of the Council, inconsistent with the above, to be repealed. Your committee further recommend that no change be made in the curriculum for '72-'73.'

The committee appointed to investigate the charges made by Dr. Campbell, against Dr. Aikins, reported the following resolution as the result of their deliberations:—

*Resolved*, That the gross charges that were made by Dr. Campbell as against Dr. Aikins, accusing him of having wilfully and fraudulently misled the Parliamentary Committee of the House of Local Legislation, and thereby having defrauded this Council of \$6,000, find that after proper and careful examination of the charges made by Dr. Campbell, they are proved to be entirely without foundation, and the Committee appointed to carry out the investigation are of opinion that such rash and reckless charges without mature evidence deserve the censure of this Council.



The report was adopted by a vote of 15 to 5.

The following is the report of the Committee on Finance as amended and adopted :

1. That they have examined the books of the Treasurer, together with the vouchers and cheques attached, and found them to correspond, leaving a balance in the hands of the Treasurer to the credit of the College of \$1,196 46.

2. We have pleasure in finding everything so thoroughly correct and satisfactory, and we feel it our duty to record the indebtedness of this Council to him for his many disinterested and unrequited services.

3. Your Committee have also examined the books of the Registrar, and found them correct, the books showing the amount received by the Registrar to be \$653 75, and the amount paid out \$633 80, leaving a balance in hand of \$19 95.

4. We find that Dr. Wood, the Matriculation Examiner at Kingston, is indebted to the College on account of matriculation fees the sum of \$108 00, which sum your Committee recommend the collection of.

5. Your Committee would recommend the payment of the accounts presented for printing, advertising, &c.

6. The account of Mr. Rolph, Engraver, amounting to \$74, as by agreement with Mr. Rolph, is recommended to be paid, as moneys accrue from the sale of diplomas.

7. The Committee are of the opinion that in the present state of the finances of the College the matriculation examiners fees should be reduced to \$2 per student.

8. Your Committee recommend that the examiners employed at the last examination be paid as follows :—The resident examiners, \$15 each, and the following named : Drs. Sullivan, Morrison, Muir and Field, \$20 each, travelling expenses exclusive.

9. Your Committee find that there will be a balance left to the credit of the College of about \$550, out of which they recommend payment to the members attending the present session of \$6 per day each, together with travelling expenses.

10. "Your Committee, in conclusion, would recommend that no accounts be paid on account of the College in future without the direct orders and sanction of the President, and that the Registrar hand over all moneys immediately on coming into his possession to the Treasurer."

Dr. D. Clarke moved, seconded by Dr. Hyde, that if sufficient funds come into the hands of the registrar, within one month of this date, \$20 shall be paid to the resident examiners, and \$30 to those from a distance, exclusive of mileage.—*Carried.*

## THIRD DAY'S PROCEEDINGS.

Dr. Aikins moved that Mr. Archibald McMurphy, M.A., Rector of Toronto High School, be appointed Matriculation Examiner in place of Dr. Wickson, resigned.—*Carried.*

The Amendments to the Ontario Medical Act were again brought up for consideration.

Dr. Lawrence moved, seconded by Dr. Hyde, that the report of the whole on the amendments to the Medical Bill be adopted, and that it be left to the Executive Committee to carry it out as a consolidated Medical Act, or otherwise as they may see best.—*Carried.*

Moved by Dr. Aikins, seconded by Dr. Lawrence,—That Drs. Berryman and McDonald be appointed to audit and investigate the books of the late Registrar, and report to the President.

Moved by Dr. Dewar and seconded by Dr. Lavell, that the following gentlemen be the Executive Committee for the present year—The President, Vice-President, Drs. Berryman, McDonald, D. Clark, Dewar, Coburn, Aikins, Adams, Hodder and Lavell, five members to form a quorum.

Dr. Campbell presented the following Report of the Committee on Registration :—

Your Committee beg leave to present the following report.—The Registrar submitted a statement showing that 89 students had been entered on the Register. The number of matriculants on the student's register is now 465. 57 names have been added to the number of registrations since last report. The names of 32 members have been removed by death since the period when the registration of medical practitioners commenced in this Province. Also 39 persons have availed themselves of the opportunity of obtaining the diplomas of membership recommended by the Registration Committee last year.

Dr. Dewar moved, and Dr. Hyde seconded, the following resolution—"That this Council beg to insist on the absolute necessity of economy with reference to the carrying on of the examinations."—*Carried.*

Dr. Berryman moved, seconded by Dr. Dewar, the following resolution—"That during the past year much labour has been entailed on the shoulders of the late Vice-President, Dr. Campbell, in organizing many details of the proposed amendment to our Medical Act, that the non-passage of such amendment was due to certain circumstances over which the Committee, along with Dr. Campbell, had no control, but still the thanks of this Council are due to Dr. Campbell for his many and assiduous labours."

Dr. Campbell wished to return his thanks for this unexpected kindness. He said he had endeavoured to work harmoniously with

every gentleman of the Council. He was foremost in trying to put down any feeling of an evil spirit, but the action he had taken had not the effect on his friends he expected. But he was about to sever every connection with the Council. This was the last time that any Homœopathists would ever sit within these walls, for it was intended to send in the resignation of all the Homœopathists in this Council to the Registrar; they had forever done with the Council. The reasons were, that after exerting himself as much as he could, and filling the office of Vice President energetically, he had not succeeded to the office of President, which he looked for as a matter of course. He was told indirectly that the reason of this was that it would be a monstrous thing to be said in the country that a homœopathist was at the head of the medical profession. He was also told by his friends outside that he would never get the other members of the Council to look on him with cordiality. He told them he was always met with courtesy and kindly feelings, and that any prejudice would soon wear off. But when he was told that in four years there had not been one homœopathist who presented himself for examination, he thought this was sufficient argument to go to the country and put an end to the Council, so far as the homœopathists were concerned.

The President said he could not allow it for a moment to go to the country that it was because he (Dr. Campbell) was a homœopathist he was refused the chair. (Members—No, nothing of the kind) He told Dr. Campbell that the reason why he was not chosen President was a personal consideration alone.

Dr. Grant remarked on the sudden resignation of Dr. Campbell. He considered no person should withdraw from the Medical Council on personal grounds, and because he was not elevated to any important position. If any member had the good of the Council at heart, he should still work as one of the body endeavouring to elevate the medical profession in the Province of Ontario (Hear.) The Legislature, when their Bill was presented, should be made aware of the important fact that Dr. Campbell withdrew from the Council on purely personal grounds, and such withdrawal should receive the consideration of the Legislature. (Hear.)

Some discussion ensued on the conduct of Dr. Campbell towards the Board of Examiners, and which the members present condemned in very severe terms.

The President drew the attention of the members of the Council to the matter of medical men being required to furnish particulars respecting the deaths of persons without any remuneration. He thought the Council should consider the matter.

After a vote of thanks to the Warden for the use of the hall, to the President and members of the press, the Council adjourned *sine die*.

## Selected Articles.

## OBSTETRICAL SOCIETY OF LONDON.

MEETING, MAY 7TH, 1873.

*Case of Extra-Uterine Pregnancy. Gastrotomy successfully performed.*

BY W. ROSS JORDAN.

The woman, æt. 29, was a patient in the Birmingham Hospital for Women. In April last she had inflammation of the bowels, which threatened her life. In July or August she first felt the child, and in September she expected and prepared for her confinement. From this time she for six weeks gradually became smaller in size, after which she fancied she was in labour, being in great pain for three or four days. After that she had frequent shivers and a cold sensation in the abdomen. On the 13th December a swelling in the abdomen not larger than in ordinary pregnancy at six months was discovered, fluctuating a little towards the left side, and on deeper examination a round mass like the placenta between the umbilicus and pubis and a harder projection to the upper and left border of the tumor. The cervix uteri was pushed up to the right side. The sound penetrating three and a-half inches pointed to the right groin and moved the round body felt in the abdominal examination. The recto-vaginal pouch was occupied by a hard rounded mass. On December 21st a puncture with the aspirator was decided upon, and a quantity of chocolate-colored fluid mixed with white flakes was drawn. Mr. Ross Jordan, from his examination on this occasion, came to the conclusion that the case was one of extra-uterine foetation. Two hours after, complete collapse came on, and hæmorrhage into the cyst or abdomen was suspected. Five hours after the use of the aspirator, an incision four inches long was made in the abdominal wall down to the peritoneum, when the cyst with the placenta under it presented. A clot of blood having been removed, the cyst, with a foot near the external opening, was drawn forward, but the wall of the cyst being thin, it ruptured, and through this opening the fetus was extracted. The placenta was left undisturbed, and the openings of the cyst and the abdominal wall were brought together by sutures of carbolized catgut, leaving an open wound about two and a-half inches long, which was covered with a layer of tenax, etc. The patient progressed favorably, and on the 1st and 2nd of January large fragments of placenta were discharged, and on the 10th of April she came to the hospital looking well with the wound quite closed.

*Note on the Diagnosis of Extra-Uterine Pregnancy.*

BY LAWSON TAIT, F.R.C.S.

The author thought that in these cases very little confidence should be placed in the statements of patients if they were not in harmony with physical signs. He had, in consequence of the history of her case given by a patient, been led to make an erroneous diagnosis, mistaking a multilocular ovarian tumor for a case of extra-uterine foetation. There were two circumstances which invariably accompanied extra-uterine gestation that has gone past the period. The first was due to the general excitement and congestion of the organs involved, specially to the enlargement of the uterus, and the second to the absorption of the liquor amnii after the death of the child. The conditions with which extra-uterine pregnancy may be confused before the death of the child, were displacement of the normally pregnant uterus during the early months, pregnancy complicated with fibro-myoma or cystic disease of the uterus, and more rarely pregnancy of one-half of a double uterus. After the death of the child, diagnosis was more difficult, the two points in the history already mentioned were most important, auscultatory signs were of no use. The other conditions with which it might be confused were pelvic hemocele, ovarian tumors, especially dermoid cysts, cancer, fibro-cystic disease of the uterus, hydatids of the uterus, and phantom pregnancy. The uterus in extra-uterine pregnancy was always intimately associated with the tumor, and generally in front of it moveable to a limited extent and enlarged. The most important point was that the cervix is always patulous. Under such circumstances, if a foetal heart were audible, the case was clear. If the case were seen after the death of the child, the tumor would be soft, and besides obscure blottement possibly a part of the child might be made out by internal or external examination. Of the three cases which the author had seen, two had been first pregnancies, and in neither had there been any troublesome pain, in the third there was great pain, but the patient was seen during the false labor.

*A Case of Gastrotomy for supposed Extra-Uterine Gestation.*

BY ALFRED MEADOWS, M.D.

The patient, æt. 58, was admitted to the Hospital for Women, and had passed through the climacteric period nine years ago. She had great pain in the abdomen, which was enlarged by the presence of a tumor. Sixteen years since she fancied herself pregnant, and in due time had pains like those she had felt in her first confinement, these however gradually declined, and no child was born, and since that time she had considered herself to be carrying a dead child. On admission the abdomen was found to be occupied by a large tumor about the size of the uterus at term, tender to the touch,

and apparently solid. The uterus was high up, and its cervix very small, the sound passed upwards and forwards two and a-half inches. The balance of opinion among the author's colleagues being that this was a case of extra-uterine gestation, it was determined to clear up all doubts upon the matter by making an exploratory incision five inches in length between the pubis and umbilicus. A white friable mass was then discovered, having all the characters of malignant disease, it broke down readily, and two ounces of a thick brownish fluid escaped. Finding it impossible to remove the mass, the abdominal wound was closed. Fifty-three hours after the operation the patient died, and, upon opening the abdomen, the mass of malignant disease was found to be in the omentum, which overlapped the tumor and was about an inch in thickness. The tumor itself, which was adherent in every direction, proved to be a large fibro-cystic tumor of the uterus. The author cited this case to show the difficulty of diagnosing abdominal tumors. Even with the aid of an exploratory incision a correct diagnosis of the character of the tumor had not been arrived at previous to death. He believed it to be the moral duty of every one to record his failures as well as his successes.—*Obstetrical Journal*.

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#### ACTION OF THE VAGUS ON THE HEART.

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Schiff's old view that the vagus is really the motor, and not the inhibitory, nerve of the heart has lately received some corroboration from some experiments performed by A. Mosso, and recorded in a late number of the Italian journal, *Lo Sperimentale*. Mosso's experiments were peculiar in the circumstance that he employed chemical stimuli to excite the nerve. The animals were dogs, and the cardiac beats were made independent of blood-pressure by the subcutaneous injection of atropine. The vagi and recurrent nerves were excited by the careful application of a drop of caustic solution of potash. The conclusions arrived at by M. Mosso were that the excitation of the *nervi vagi* increases the frequency of the pulse, in consequence of the irritation of the excito-motor fibres running in the trunk of the vagus. If the sheath of the vago-sympathetic nerve be opened, and the sympathetic be separated from the vagus, chemical excitation of the latter constantly produces an increase of the pulse frequency, whilst excitation of the sympathetic is without perceptible effect on the rhythm of the heart. Mechanical irritation of the inferior laryngeal nerves by simple section is sufficient to increase the pulse frequency, and this quite independently of any exaltation of the blood pressure.—*Lancet*.

### "CATCHING COLD."

In this changeable climate of ours, hardly a week passes without ourselves or some of our acquaintances catching cold. Our opportunities of studying the pathology of colds are thus only too numerous, and yet we know so little about it, that he must either be a very wise or a very rash man who will undertake to say why exposure to an east wind will give coryza to one man, sore throat to a second, bronchitis to a third, and so on. Almost all that can be stated about the matter with any degree of certainty is, that the diseases just mentioned, as well as a good many others which are all popularly ascribed to cold, are liable to come on after the whole body, or parts of it, such as the feet, have been quickly cooled below the normal, or, in other words, have been chilled. There are always two factors concerned in the cooling either of the body or of its parts. One of these is the nature of the external medium, such as air or water, which is in contact with the body, and the other is the condition of the blood-vessels, by which the warm blood is brought from the interior of the body to the surface, and thus exposed to the influence of cold. Dry air has so little power to abstract heat, that Arctic travellers can go about comfortably without a great coat when the thermometer is standing fifty degrees below zero, provided that the air be still. A very little wind is sufficient to prevent them from doing this, however, for the constant impact of fresh particles of cold air on the surface of the body soon carries off its heat. The presence of moisture in the air greatly increases its power of abstracting heat, and when wind and moisture are combined, the chilling effect reaches its maximum. We may be able to face a cold dry wind without feeling any inconvenience, but if the wind be moist, or, still worse, if our clothes be wet, we shall feel chilled completely through, shiver, and probably catch a severe cold. Heat has been constantly and rapidly abstracted from our bodies, and the blood which brings warmth to the surface has itself been at length cooled. No one is astonished at catching cold under such circumstances, but we are often astonished that we should do so during warm weather, and with hardly any apparent cause. Experience has shown us, in fact, that it is not so much the absolute lowness of temperature which gives rise to colds as sudden changes from a higher to a lower. The reason of this remained unknown till the recent researches of Professor Rosenthal cleared up the mystery. It is well known that when cold is applied to the surface of a healthy animal, the cutaneous vessels contract. They thus prevent the blood from circulating in the skin, and by confining it to the interior of the body, prevent its cooling, and preserve the temperature of the vital organs, unless the application of cold be continued for a considerable time. This is not the case, however, when the animal has been previously exposed to warmth some time before. The cutaneous vessels become para-

lysed by the heat, and remain dilated even after the cold has been applied. The blood is thus exposed over a large surface, and becomes rapidly cooled, even although the temperature of the surrounding medium is not very low. In Rosenthal's experiments, animals were kept for a little while at a temperature from about 97 deg. to 104 deg. Fahr. The temperature of the animals themselves quickly rose during their confinement to 111 deg. or 113 deg. Fahr. After their removal, it not only sank to the normal, but even below it, so that an animal which was from 107.6 deg. to 111 deg. in the warming apparatus fell to 96.8 deg., and remained at that for several days, although the room in which it was kept was moderately warm. Confinement in a choky office, hot theatre, crowded ball-room, will have a similar effect on man, and in the latter case it will be increased by the exercise of dancing. From such places people pass out into the cool open air, or will sometimes even purposely station themselves in a draught. The blood which is coursing not only over the flushed face, but through the dilated vessels of every part of the surface, is rapidly cooled below the normal, and, on its return to the internal organs, cools them much more quickly than it could have done had the person simply been exposed to cold without dilatation of the vessels by previous warmth. Rosenthal lays much stress, and we think rightly, on the great effect of sudden *cooling* in bringing on a cold, the sudden change in the temperature of the blood producing an irritating effect, and inducing inflammation in any weak organ in a way that a gradual alteration would not do. It would seem, however, that the alteration must be from a temperature above to one below the normal temperature of the blood, and not a mere reduction from one considerably above the normal to one at or near it. When much heated, we may stand for a short time in a cool atmosphere with impunity; but if we stand long enough to carry the cooling process too far and produce a shiver, we run a great risk of catching cold. The fact that it is more dangerous to sit for a long than a short time in wet clothes, appears to indicate that a considerable and more gradual cooling, such as may then occur, will produce similar effects to a slight cooling suddenly effected by exposure to a cold draught after being in a warm room. The effect of a chill in causing inflammations may be partly due to the effect of cold on the tissues themselves, and partly to the hyperæmia which will occur in some parts when the blood is driven out of others by the contraction of their vessels. Rosenthal is inclined to ascribe the chief power to the former of these causes. Everybody knows the beneficial effect of cold baths, cold sponging, etc., in "hardening" persons, as it is termed, so that those who employ them are able to face almost any weather, and to endure sudden changes of temperature without injury; while those who coddle themselves and stop up every crevice lest a breath of air should blow upon them, are constantly suffering from colds. Rosenthal considers that this is due to the frequent



application of cold water or cool air increasing the tone of the cutaneous vessels, so that they do not become so much relaxed by heat as to be unable to contract with sufficient force when necessary. The power of regulating the temperature is thus preserved, and the person prevented from catching cold.—*Brit. Med. Journal.*

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### THE LADY MEDICAL STUDENTS.

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Judgment has proved adverse to the lady students at Edinburgh on their appeal to the Court of Session. The tribunal was a very competent one, and the arguments *pro* and *con.* were reviewed with clearness and impartiality. Three of the judges hold, or have held, high offices in the Universities of Scotland, while seven others have taken an active part in academical administration. Our readers will remember that some three years ago the University Court issued regulations under which ladies might be admitted as medical students. Accordingly Miss Jex Blake and six others matriculated after the usual examination; were enrolled as students; and attended the classes which qualify for the first course. A number of the professors, however, in their professional capacity, and as members of the *Senatus Academicus*, declined to teach the ladies any further, or to admit them to graduation. After a good deal of platf m and newspaper controversy, the ladies called upon the Chancellor and *Senatus* to defend their procedure before Lord Ordinary Gifford. His lordship pronounced in favour of the appellants; but his decision has been reversed by the second division, after consulting the other judges. Out of the twelve judges, five were in the appellants' favor—a fact which, it is said, will tempt the ladies to appeal to the House of Lords. It seems difficult, however to get rid of the argument that the original constitution of the university did not contemplate the admission of ladies, either to studentship or to graduation. The remedy open to the ladies is surely a sufficiently obvious one. Let them devote the ample funds they have at their disposal, not to fruitless and vexatious litigation, but to the founding of a college of their own, where they may prosecute their medical studies, and qualify for such practice in the disease of women and children as they may prove fit for. Society will respect them the more, and even recognize their claims as qualified nurses and accoucheuses the sooner, if they retire from a useless and not very feminine contest, and seek the attainment of their ambition by means at once legitimate and easy.—*Lancet.*

# The Canada Lancet,

A Monthly Journal of Medical and Surgical Science,

Issued Promptly on the First of each Month.

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TORONTO, AUGUST 1, 1873.

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## THREATENED DISRUPTION OF THE COUNCIL.

At the close of the last meeting of the Council of the College of Physicians and Surgeons of Ontario, the Homœopaths signified their intention of withdrawing from the Council, giving as one of their reasons the fact that Dr. Campbell—who was Vice-President last year—was not appointed President this year, another reason being, that although the Council had been in operation four years, no students of their persuasion had presented themselves for examination. In regard to the latter objection, either of two things must have been the cause, *viz.*, that there is no longer any demand for practitioners of their school of faith, or else their students are averse to the high standard of qualification required by the Council; for even Dr. Campbell will not say that, by any possible means, injustice could have been done them by the examiners at the Board. In reference to the former, we incline strongly to the belief that personal feeling was the chief obstacle in the way of Dr. Campbell's promotion to the presidentship of the Council. We are not aware that the Homœopaths have as yet officially sent in their resignation, and we think it quite probable they will not do so until they have brought their alleged grievances before the Legislature, and have received a favorably reply from that august body. Be this as it may, no one who understands the working of the Act and who has the interest

of the profession at heart, but will regret that such action should be contemplated.

Whatever faults Dr. Campbell—the leader of this body—may have, or whatever of personal feeling he may have aroused against himself and his promotion to the office of President, no one who knows the circumstances will deny that he worked earnestly and faithfully in the interests of the Council and the profession, and we regret to see him now contemplating the pulling down of a structure that he himself has worked so hard to build up, and especially on a pretext so frivolous as the one alleged.

All must admit that the Council have a perfect right to select whom they please to preside over their deliberations. During the greater part of the year just past, Dr. Campbell was acting as President of the Council, owing to the unfortunate illness of the President; and while we have no particular fault to find, we believe that many of his acts, while in that position, were such as to estrange some of his best friends from him. He was also unfortunate enough, while acting as the Chairman of the Board of Examiners, to place himself in direct antagonism to the majority of the members of that Board, and their influence was no doubt used against his candidature for the presidency; so that if Dr. Campbell was not made President of the Council, he has himself in great part to blame. We do not deny that some, both inside and outside the Council, may have felt that it would be inconsistent to have a Homœopathist as President; but the majority of the members of the Council distinctly disclaimed any such feeling. In a mixed body like the present Council, there could have been nothing wrong or inconsistent in selecting the President from either wing of the profession, and were it not for the strong personal feeling that existed, Dr. Campbell would have been selected, and judged by the labors he has done in the interests of the Council, no one was more deserving of the honor.

And now that the Homœopathists, under the leadership of Dr. Campbell, have undertaken to organize for the purpose of upsetting the Bill and establishing a separate Board for themselves, we feel disposed to let them go. We do not mean by this that they are to return to the old licensing board, we never wish to see that revived; but we think that, owing to the different sectional interests, the Council might, without injury, be split up into sections; each section have control of the *final examination* and licensing of its own students.

Come what may, we must insist upon a uniform standard of matriculation for all; also a uniform curriculum and examination in all branches common to the various schools, on such subjects as anatomy, physiology, chemistry, diagnosis and pathology, medical jurisprudence and toxicology, sanitary science and botany. The students may then be passed to either section, to be dealt with as such body may deem proper. We believe this is the only plan which will give satisfaction; each section of the profession will then have full control of the final education and registration of its own students; but the same matriculation and primary examination on the above subjects should be undergone by all, and the latter may be passed at the end of the second year.

There can be no desire on the part of the general profession, even if they had the power to do so, to force any of the sects to continue as they are; at the same time we hope we may never return to the state of affairs that existed prior to the passing of the Ontario Medical Act. We have just one remark more to make, and that is in reference to the appointment of the examiners for the ensuing year. According to the spirit of the Act, we do not think that the members of the Council should have constituted themselves examiners. The examiners are the servants of the Council, and as such should have been chosen outside of that body. It gives it too much the appearance of a close corporation, and is not calculated to inspire that confidence, which should ever exist between the profession and the Council.

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#### ADULTERATION OF PEPSIN.

This agent, which is so invaluable to the physician in the treatment of many forms of dyspepsia and indigestion, from its expensiveness has been almost beyond the reach of many patients. A cheap article, under the name of Houghton's pepsin, has been in the market for several years, and has no doubt been used pretty extensively in many parts of the country. The genuineness of this preparation has been suspected for some time past, although no one has gone to the trouble of making a careful analysis of it. It has been remarked by many, that it possessed a very bitter taste, and did not seem to have any decided effect in aiding the digestive process, further than that

produced by any ordinary tonic. This led Mr. A. E. Ebert, of Chicago, to make an analysis of a sample of the article; and although he did not succeed in proving its presence, he expressed his firm opinion at the meeting of the American Pharmaceutical Association at Baltimore, that the bitterness was due to strychnine. Since then, R. Rother, in the *Chicago Pharmacist*, describes the method adopted by him for testing its presence. He says if the bichromate of potash and sulphuric acid test, which is so extremely delicate for pure strychnine, is applied to a mixture of strychnine containing sugar, the reaction is prevented or obscured by the reduction of the chromic acid to the state of a sesquioxide. But if the mixture contains uncombined strychnine, chloroform will extract it,—though not if it exists in the condition of a salt. The suspected pepsin is therefore treated with a few drops of ammonia, and then with chloroform, filtered and evaporated, and the residue tested with sulphuric acid and bichromate of potash, when the beautiful violet color, characteristic of this test, is produced. Owing to the ready adulteration of this medicinal agent, great care is necessary in its selection, and it has been recommended that pharmacutists should, when practicable, prepare it themselves. By the process given by Mr. Scheffer, of Louisville, Ky., it may be easily and expeditiously obtained, and at a very moderate price. This consists in precipitating it from its acidulated aqueous solution by saturation with chloride of sodium.

The stomachs of pigs are the best sources of pepsin, the yield from which is said to be enormous if the proper means are employed to secure it. The stomachs should be quite fresh and well cleaned. They are then cut into thin shreds by means of scissors, macerated for two days in a large volume of acidulated water, of the strength of half an ounce of muriatic acid to one gallon of water. This quantity is sufficient for one stomach. The acid liquid is then poured off and the stomachs are again macerated for two days longer, with a similar quantity of acidulated water; and this operation may be repeated three or four times with profit. The liquid obtained from the several macerations is treated with about one-fourth its weight of chloride of sodium, and the precipitated pepsin, which accumulates in flakes on the surface of the liquid, is skimmed off, strained, and pressed. The moist pepsin is then mixed with a weighed quantity of milk sugar, and dried. It is then weighed, and enough milk sugar added to make the final weight of the mixture

equal to ten times the weight of the real pepsin. Cold weather is the most suitable time for manufacturing pepsin, as the stomachs will remain fresh a much longer time than in warm weather. The yield of pepsin from six stomachs is about four ounces, and when the milk sugar is added it will make about forty ounces. Thus it will be seen that the outlay incurred is very little, and the remuneration, aside from the fact of having a genuine article, is sufficient to reward the labours of the chemist abundantly.

Several attempts have been made to procure liquid pepsin in a concentrated form, having the same strength as the saccharated. For this purpose the moist pepsin is dried and then mixed with sufficient muriatic acid and glycerine to make the liquid weigh ten times as much as the original pepsin; but the results were not satisfactory. The acid and glycerine were added to the pepsin without drying, and the strength proportioned as before as nearly as possible, but it was found that neither of the above would dissolve albumen, the ordinary test of the value of pepsin, and the mixture did not form a clear solution. It was found, however, that if the liquid was increased to forty times the weight of the pepsin, a perfect solution could be obtained possessing the active properties of pepsin; but was only one-fourth the strength of the saccharated powder.

The interesting and important investigations of Mr. Scheffer will develop a new era in the manufacturing interest of pepsin, and sweep from the market all base and worthless imitations, both by virtue of the genuineness and cheapness of the article produced. We particularly recommend this subject to the attention of our pharmaceutical friends.

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## THE APPROACH OF CHOLERA

Notwithstanding the uneasiness which has been felt in view of the probable approach of cholera, very little actual preparation, by way of cleaning the lanes and streets of our cities, has been done by the authorities to ward off the disease. Several cases have been reported in some of the cities of the Southern States of America, but no detailed statements of its ravages have reached us. It is also quite probable that many of the so-called cholera cases were nothing more than aggravated cases of diarrhœa in debilitated or

intemperate patients. The disease has shown itself in some of the cities of continental Europe, but it does not appear to travel with its usual rapidity,—a few cases have occurred at Dantzic, Vienna, and in the north-western part of Italy. In the latter place, twenty-four cases are reported, of which about half the number died. The Italian Government has adopted the most energetic measures to prevent its spread. On the whole, the disease has not shown signs of wide migration anywhere in Europe; but it is nevertheless the duty of the authorities to be watchful and prepared. The adoption of the most approved precautions against its attack is the bounden duty not only of the public, but also of each individual.

Cholera is not generally looked upon by the profession as a very contagious malady,—so that under reasonable care it is not likely to attack even those who act as nurses or are in close attendance on the sick. Prompt disinfection, and the neutralization or destruction of all matters which contain any of the discharges of choleraic patients, are imperatively necessary. The water supply should be carefully examined wherever the slightest suspicion as to its purity exists. House refuse and other filth which may have accumulated about the premises should either be removed at once or thoroughly disinfected; the rooms whitewashed with fresh lime; all foul and rotten drains, especially those near or beneath the premises, should be attended to; and the soil beneath basement floors examined, and, if necessary, thoroughly disinfected by means of lime or a layer of charcoal. Regularity of diet and rest, temperance in eating and drinking, are among the most important precautions, and should be strongly inculcated. All these precautions may be unnecessary so far as cholera is concerned, and we sincerely hope they may; but the good effects of such a *regime* cannot fail to be of invaluable service in anticipating and arresting the spread of other epidemics many of which are nearly as fearful in their ravages as cholera.

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APPOINTMENT OF EXAMINERS.—The following gentlemen have been appointed examiners in medicine by the Senate of Toronto University:—Physiology and Comparative Anatomy, G. Wright, M. B.; Surgery and Anatomy, J. E. Graham, M.D.; Medicine and Therapeutics, J. W. McLaughlin, M. B.; Midwifery and Medical Jurisprudence, T. White, M.D.; Chemistry, W. H. Ellis, M.A., M.D.