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[No. 6.

SCARLATINA MALIGNA.

(By Dr. E. M. HODDER, TORONTO.)

Proceedings of the Medico-Chirurgical Society of Toronto.

Master S—, ætat. 3 years, light complexion and strumous habit, was attacked with fever, on the evening of 3d July, which continued during the greater part of the night; towards morning it subsided, the skin becoming moist, and the child lively. I saw him in the forenoon of the 4th July, he was free from fever, pulse natural; appetite not so good as usual, and tongue moist, but furred, and of a brownish white colour.

He was ordered a purgative of calomel and compound jalap powder every four hours, until the bowels were freely acted upon, and, should the fever return in the evening, an emetic of ipecac. pulv., to be given as soon as it made its appearance.

July 5th, 10 a.m.—The fever returned last evening, and continued throughout the night, terminating this morning in perspiration. The child is now lively, free from fever, pulse quicker than natural, does not complain of any pain, bowels freely acted upon by the powders, tongue still furred, but less so than yesterday, and moist. The emetic given yesterday at the commencement of the fever acted mildly, producing for a short time a little moisture. Supposing the case to be one of intermittent fever, which was then prevalent, I ordered hydr. c. creta, grs. iij disulph., quinaæ ½ gr. ter. in die., during the absence of fever.

July 6th, 10½ a.m.—On visiting the child this morning, I found his body covered with a rash, which had made its appearance the previous evening. He had been restless all night, with hot skin, the fever not leaving him at the usual time in the morning. On examining the fauces, the uvula, palate, and tonsils, were swollen and red, some difficulty in swallowing, pulse quick, tongue grey, with the papillæ red and elongated, skin hot and dry, and bowels open; ordered a mixture composed of antim. tart., liq. ammon. acet., and camph. mixt., every four hours; and the throat to be rubbed with liniment, ammon. et saponis.

July 7th.—He has passed a restless night, skin hot, pulse quick, throat more inflamed, with small sloughs on the tonsils, breath fetid, and tongue characteristic of

scarlatina. The parotid gland was somewhat painful and swollen. Medicine to be continued, throat to be sponged with acid gargle, and hot brine to be applied to the parotid gland.

July 8th.—Much the same in every respect as yesterday. Continuent. medicament.

July 9th, 11 a.m.—Constitutional symptoms much the same; the bowels not having been acted upon since the previous morning, he was given an aperient. The parotid gland was much increased in size, and more painful to the touch, breath very fetid; but in consequence of the irritability of his temper, his friends have great difficulty in using the acid gargle. Ordered hirudines vi. to the parotid, to be followed by a poultice. 8 p.m.—The redness and pain of the parotid much relieved by the leeches, and the swelling also appears less; bowels relieved by the aperient. Continue as before.

July 10th.—On visiting him this morning, I found a remarkable change had taken place, so much so, as to induce me to request that another medical man should be called in. Drs. King, Hamilton, and Paget were named, they were immediately sent for, and at noon we found our little patient in the following state:—The rash which had been up to this morning of a florid red, had now assumed a dusky colour, the tonsils were covered with dark sloughs, the fauces clogged with thick tenacious viscid secretion, materially increasing the difficulty of breathing and swallowing, fætor from the throat almost intolerable, great prostration, approach to coma, eyes suffused, pupils scarcely acting, pulse 150, small and weak, face pale, tongue dry and brown, teeth and lips covered with dark sordes, and the parotid gland very much increased in size, hard and unyielding. He was ordered ʒiij wine every two hours—a mixture composed of chlorate of potass and acid hydrochloric—capsicum gargle, and mustard plaster to parotid.

July 12th, 9 a.m.—Since the last report the child has gradually become worse and worse, sloughs extending, fætor much as before, pupils dilated and fixed, strabismus, pulse more frequent and feeble, tongue much swollen, dry, and glazed, feet, legs, and hands cold, rash disappeared, the wine has lost its effect; ordered a teaspoonful of brandy every hour, with beef tea. The mixture and gargle to be continued.

July 13th, 9 a.m.—The child has not lost ground, all the symptoms being much the same as yesterday, the pupils do not respond to light, strabismus continues, the parotid gland a little softer in one spot. Repeat the mustard plaster to the gland—continue the brandy and nourishment. 6 p.m.—All hope appears to have gone, the viscid secretion covering the fauces, and the acrimonious discharge from the nostrils threatening suffocation, power of swallowing gone, and the extremities cold. In this state he continued for some hours, (until about one a.m.) when after sponging away as much of the viscid secretion as possible, we succeeded in getting a spoonful or two of warm brandy and water down his throat, and which was repeated at every favourable opportunity. From this hour he began to rally; the sloughs separating, and the secretion becoming less, he was enabled to take nourishment and stimulants. Warm poultices were kept to the parotid; and on the morning of the 15th, fluctuation being perceptible, an opening was made, and a small quantity of pus evacuated.

July 16th, 9 a.m.—Going on well; the tumour pointed below where the former opening was made, and upon opening it a large quantity of healthy well formed matter escaped. Sloughs nearly separated.

July 17th, 9 a.m.—From this time his recovery was most rapid, not a single untoward symptom occurred.

When at our last meeting I proposed to read a paper this evening to the Society, it was my intention to have confined myself entirely to a few remarks on the treatment of some of the sequelæ of Scarlatina; but upon reflection on the case which I now offer, it presented so many practical and interesting points for discussion, and as the case was watched by several of my professional brethren, as well as myself, I trust I have not erred in submitting it for the consideration of the Society.

When the child was first taken ill, the fever put on the intermittent form so completely, as to induce me to consider it a case of ague, and I ordered him half a grain of quinine three times a day; he, however, took only one dose of this medicine, as the fever returned that evening, and on the following day the rash had made its appearance. For four days it ran its course as an ordinary case of Scarlatina Anginosa, but on the morning of the 6th day, (July 9th,) the parotid gland increased much in size, and had become much more painful; six leeches were applied, followed by poultices, and in the evening he appeared to be going on favourably, as the pain and swelling had somewhat abated. On my visiting him the following morning, I found an unfavourable change had taken place; I feared typhus was about to set in, as he appeared in a state approaching to stupor, and the tongue was rather dry. Under these circumstances, I

proposed calling in further medical assistance, which was at once yielded to; and at 12½ p.m., when the consultation took place, it was scarcely possible to conceive the rapid change which had taken place in the two preceding hours. The symptoms ran their course with unusual rapidity and severity, and on the evening of the 13th, we all left the house, without the slightest hope of ever seeing our little patient again alive. But it was otherwise decreed, for during the night a favourable change took place, and on the following morning we had the satisfaction of finding our patient in a more promising state than he had been since the typhoid symptoms first made their appearance.

How far this favourable change is due to the stimulants which were freely given, or to the disinfecting, and at the same time tonic power of the chlorine mixture which he had taken, must be a point for the discussion of the members of this Society; but I would beg to state that I have been in the habit of using that medicine for many years past, in all severe cases of Scarlatina, particularly of a typhoid type, and the result has always been most satisfactory. The mixture is composed of chlorate of potassa, ʒij; muriatic acid; distilled water, aa. ʒij.—To be kept in a cool and dark place. Dose for an adult from M xv to xx, in ʒi of fluid every four hours; the gargle is ¼ stronger. The quantity of wine and brandy which this child took from noon of the 10th, up to the same time on the 15th, was one and a half bottles of port wine, and half a bottle of brandy.

The sloughing which took place in the throat was very extensive, involving the openings of the eustachian tubes. The inflammation extended to the internal ear, and meatus externus, for upon his recovery he was found to be completely deaf with both his ears. About the 16th July he was attacked with otorrhœa, the discharge being purulent and very offensive. As it is a common sequel of Scarlatina, syringing the ears with tepid water was all that was done in the first instance, but upon finding the discharge still continuing as copious as before, the lapis divinus was used as a lotion.

The age and temperament of this little patient throw many difficulties in our way, particularly in forming a correct diagnosis of the extent of injury the ears have received. He does not seem to suffer the slightest pain, his general health is perfectly good, the discharge has now nearly ceased, and completely lost its offensive smell, yet he continues totally deaf. There was no doubt a discharge of pus or muco-pus into the throat from the eustachian tubes, as he appeared to be constantly attempting to swallow something, which he complained of as being very nasty.

We can easily imagine the inflammation which took

place in the parotid gland, extending to the ear of the same side, and producing complete disorganization of its structure; but it is more difficult to comprehend the cause of the deafness in the other ear, unless it be from a species of sympathy, of which Mr. Pilcher makes frequent mention in his work on the ear. He says, "It is interesting to remark the similarity of predisposition in structures formed at the same period of fetal life, or of childhood; as two corresponding teeth on opposite sides of the jaw will become carious nearly at the same period, in consequence of being alike affected during their formation. So it is often found that one ear being the subject of inflammation, the other, without evident cause, will become also attacked, and that sometimes the affections of these organs will alternate with each other. The fact is notorious, that persons deaf in one ear, are very liable to disease in the other; which unfortunate predisposition is not solely to be referred to the circumstance of the sound ear being unusually exposed to the exciting causes, but in part, and perhaps mainly, to the same peculiarity occurring in both organs during their formation, which peculiarity will become permanent. Anatomists are in the habit of considering and describing as malformations those deviations only which are palpable; but pathology seems to teach us that malformations exist in the minute organization of different tissues, upon which may depend the various peculiarities and predispositions to disease. These observations are not only applicable to the external ear only, but may include all the structures of the entire organ; and this is, doubtless, the reason why diseases producing deafness are not often confined to one ear, unless the exciting cause be quite accidental.

POISONING BY TINCTURE OF OPIUM IN AN INFANT—ADVANTAGE OF ARTIFICIAL RESPIRATION.

To the Editor of the British American Journal.

SIR,—The following case illustrates so strongly the advantage of artificial respiration, (however, as in this instance imperfectly performed,) in extreme cases of poisoning by opium, that I am induced to send it to you for publication in your valuable Journal.—I am, &c.

JAMES B. JOHNSTON, M.D.

Sherbrooke, July 22, 1845.

On the 15th of June last, at 4 P.M., I was called to see an infant of seven weeks old, to whom had been given about four hours previously, a small quantity of tincture of opium, by mistake for tincture of castor. I found the child in a deep sleep, with somewhat stertorous breathing, the pupils of the eyes much contracted,

with spasmodic twitching of the mouth and extremities. It was not at this time certain that it had taken laudanum. A strong emetic of ipecac. was immediately given, which was swallowed with some difficulty; sinapisms were placed at the back of the neck, and over the stomach, a turpentine enema thrown up, to rouse the system; but though the quantity of ipecac. was increased at each successive dose, and the nostrils and fauces tickled with a feather dipped in *spt. am. arom.*, yet vomiting could not be induced. The spine was rubbed previously with a strong stimulating liniment, as also the chest, the feet placed in hot water, and afterwards covered with sinapisms, cold affusion to the head, and other means employed, but still without effect—the child could not be roused, or the stomach be made to act, the stupor increased, the pulse began to sink, the countenance became livid, and the extremities cold. In about an hour and a half from the time I first saw the child, while endeavouring to make it take some more of the emetic, it suddenly became convulsed, respiration ceased, and the pulsation of the heart could no longer be detected, it had apparently expired; at the end of at least a minute, when hopes of the life of the infant were just given over, it gasped faintly, I at once determined to try to maintain artificial respiration till the effect of the narcotic might be over. Having no proper means at hand for that purpose, such as an electro-magnetic battery, or the common double bellows, I was forced to trust to the very imperfect means of inflating the chest from my own lungs, which I did by previously taking a very full inspiration, holding the child's nostrils, and pressing back the larynx with one hand, while with the other expanded over the thorax and abdomen, alternately pressing upon each, at the same time that I inflated the child's lungs from my own, endeavouring to imitate the natural movements of respiration. After continuing this artificial process for perhaps ten minutes, the little infant made a deep inspiration or sigh; thus encouraged, the inflation was kept up at short intervals for perhaps five minutes more, when natural breathing gradually became re-established, the pulsation returned to the heart, and in a short time was perceptible at the wrist—the extremities which had become cold, now grew warm again—the child, though still in a state of profound coma, continued to breathe naturally, and the pupils, which, when animation was suspended, had dilated, now again became contracted.

This state continued for about an hour and a half, when the child again sank, ceased to breathe, and the action of the heart apparently was arrested once more; the artificial respiration was immediately resorted to, when after more than five minutes, the child again made a convulsive inspiration, which I assisted for some five mi-

nutes longer artificially, and was rewarded by seeing respiration and animation return. My little patient continued in this precarious state for some hours longer, during which his respiration and circulation failed twice again. On the third occasion the suspension of these functions was so long continued, that it was feared the vital spark had for ever fled; however, by unremitting efforts in maintaining artificial breathing, natural respiration at length returned. The last time that animation became suspended, was about half-past 10, P.M., being more than ten hours after the poison had been taken, and when it might be expected its effects would be nearly expended. During each period of asphyxia, the pupils invariably dilated, and contracted again when the breathing returned. About this time the head of the child became very hot, and the pulsation of the brain at the fontanelles very strong, for which I kept a cloth wet with ice water, constantly applied to the head, while the sinapisms to the back of the neck and feet were re-applied; the bowels now began to act very freely, most probably from the ipecac. taken previously. Small enemata of broth were thrown up every half hour to support the system, the power of deglutition being still lost. It was not until about three o'clock the following morning, being nearly fifteen hours from the time the laudanum was taken, that consciousness began to return, and the child to cry; at 4, A.M., the pupils became more natural, and he was able to nurse. From this time the child gradually recovered, without any bad symptom.

SICK REPORT

Of the Immigrants arrived at the Montreal Immigrant Sheds, for the years 1843 and 1844. By JAMES BOWIE, Emigrant Physician for the Port of Montreal:—

YEAR 1843.

DISEASES.	Admitted at Sheds Hospital	Admitted at Genl. Hospital	Total.	Died.
Atrophia,	5	—	5	3
Abscessus,	2	2	4	0
Ambustio,	5	1	6	0
Anasarca,	5	1	6	0
Aphtha,	6	—	6	0
Abortus,	1	—	1	0
Amenorrhœa,	2	4	6	0
Ascites,	—	1	1	1
Bronchitis,	—	3	3	0
Catarrhus,	43	—	43	0
Colica,	10	—	10	0
Cynanche Tonsillaris,	2	1	3	0
Contusio,	12	9	21	0
Cholera Com.,	2	—	2	0
Cynanche Trachialis,	1	—	1	0

DISEASES.	Admitted at Sheds Hospital	Admitted at Genl. Hospital	Total.	Died.
Diarrhea,	78	6	84	0
Dysentæria,	11	—	11	0
Dyspepsia,	—	2	2	0
Dysuria,	1	1	2	0
Erysipelas,	—	3	3	0
Febris Com. Con.,	15	54	69	0
Febris Typhoid,	—	6	6	3
Fractura,	6	4	10	0
Furunculus,	2	—	2	0
Gastritis,	1	—	1	0
Gonorrhœa,	2	—	2	0
Gelatio,	—	1	1	0
Herpes,	3	1	4	0
Hemorrhœis,	2	1	3	0
Hernia Humoralis,	1	—	1	0
Hysteria,	—	4	4	0
Hepatitis,	—	1	1	0
Icterus,	—	2	2	0
Lippitudo,	2	—	2	0
Ophthalmia,	16	2	18	0
Obstipatio,	39	—	39	0
Odontalgia,	4	—	4	0
Orchitis,	—	1	1	0
Psoriasis,	—	1	1	0
Phthisis,	—	2	2	1
Pyrosis,	7	—	7	0
Psora,	17	1	18	0
Parturitio,	3	—	3	0
Prolapsus Uteri,	—	1	1	0
Paralysis,	—	1	1	0
Phrenitis,	—	1	1	0
Peritonitis,	1	—	1	0
Pleuritis,	—	3	3	0
Pneumonia,	—	1	1	0
Rheumatismus,	14	14	28	0
Rubeola,	2	—	2	0
Scirrhus,	—	1	1	0
Scrofula,	2	—	2	0
Scarlatina,	—	2	2	0
Syphilis,	1	8	9	0
Senectus,	1	—	1	1
Tinea Capitis,	1	—	1	0
Ulcus,	24	10	34	0
Urticaria,	9	—	9	0
Variola,	4	3	7	1
Vulnus,	15	3	18	0
Vermes,	3	—	3	0
Total,	383	164	547	10

YEAR 1844.

Aphtha,	10	—	10	0
Abscessus,	3	1	4	0
Ambustio,	9	—	9	0
Anasarca,	7	—	7	0
Atrophia,	3	—	3	3
Bronchitis,	—	1	1	0
Catarrhus,	16	—	16	0
Colica,	18	—	18	0
Cynanche Tonsillaris,	3	—	3	0
Contusio,	9	3	12	0
Cholera Com.,	1	—	1	0
Convulsio,	5	—	5	0
Cholera,	—	1	1	0
Diarrhea,	77	3	80	0
Dysentæria,	32	—	32	2
Dyspepsia,	2	—	2	0
Delirium Tremens,	—	1	1	0
Erysipelas,	—	2	2	0
Febris Com. Con.,	26	26	52	0

DISEASES.	Admitted at Sheds Hospital	Admitted at Genl. Hospital	Total.	Died.
Feb. Typhoid,	—	2	2	0
Fractura,	3	3	6	0
Gastritis,	—	1	1	0
Herpes,	6	—	6	0
Hysteria,	—	1	1	0
Luzatio,	1	—	1	0
Mania,	—	1	1	0
Ophthalmia,	18	2	20	0
Obstipatio,	21	—	21	0
Odontalgia,	2	—	2	0
Pyrosis,	9	—	9	0
Psora,	25	3	28	0
Psoriasis,	—	1	1	0
Parturitio,	—	—	—	—
Peritonitis,	2	—	2	0
Pemphigus,	—	1	1	0
Pneumonia,	—	1	1	0
Rheumatismus,	7	3	10	0
Rupia,	—	2	2	0
Urticaria,	9	—	9	0
Ulcus,	28	3	31	0
Variola,	6	—	6	0
Vulnus,	8	—	8	0
Total,	357	64	421	5

Number of Men treated,	413
" Women treated,	332
" Children,	223
Total,	968
Deduct those admitted to General Hospital,	232
	736

Deaths 15, or 1 in 64, and a fraction.
Proportion of cases to the whole number of arrivals reported, 1 in 40, nearly.

REMARKS.

The number of immigrants arrived at the Port of Montreal, during the years 1843 and 1844, amounted to 39,222. In 1843 the number was 20,892, and in 1844, 18,330. Making the total of the arrival at Montreal for two years, 39,222.

In both years the number and character of the diseases treated at the Sheds Hospital were very similar. They were manifestly modified by the season of the year in which the Immigrants arrived. Among the early Spring arrivals, disease was comparatively rare; as the season advanced, and the temperature increased, a marked increase took place. Towards the close of the navigation, disease, though not so frequent as at Midsummer, prevailed more than in Spring, but of a different type; Pyrexial, and Rheumatic cases were then the prevailing complaints. In neither year, however, did they exhibit anything of a peculiar character. Apart from casualties as usual, the prevailing complaints were Diarrhea and Dysentery, with some cases of the common continued fever of the country.

The derangements of the chylo-poietic viscera, so common among new comers, assume a variety of forms. In some it is mild diarrhea, the evacuations being watery, feculent, or bilious, with inconsiderable gripings, and scarcely any diminution of appetite; in others, they are fœtid, small, and ineffective, with severe gripings, impaired appetite, thirst, langour, and considerable increase of heat, alternated with a cold, clammy state of the skin. Purgatives, of which calomel, rhubarb & oleumricini, sometimes alone, or combined with opium, dover's powder, &c., were found the most efficacious in overcoming the disease. In some debilitated systems, when the disease appeared to depend on relaxation, I have satisfactorily administered acetate of lead with opium. The utility of large doses of this salt in uterine, and other hemorrhages, is now very generally admitted by the profession. Upwards of 15 years ago, on the recommendation of the late Dr. Stevenson, (who, so far as I am aware, was the first to adopt the practice,) I gave it in scruple doses, with an effect that no other remedy appears capable of producing in hemorrhagic affections. It is, however, a good precaution to combine it with acetic acid, in order to neutralise any of the carbonate which might happen to be present, from which preparation the deleterious effects of lead on the system are to be attributed.

The cause of the prevalence of visceral disease among Immigrants, has been variously accounted for. A popular belief is, that the water of the St. Lawrence contains in solution calcarious matter, calculated to produce the disease in those unaccustomed to its use. How far this agent may act in modifying other causes, perhaps, merits a more careful examination than it has yet received. It is, however, a fact worthy of notice, that many (though, unfortunately, not all,) vessels, crowded with passengers, arrive, after tedious passages, in this country, with but little sickness on board. Nor in such cases does sickness generally appear immediately after their arrival. They arrive at Grosse Isle, Quebec, and even Montreal, in a healthy state; and should nothing occur to detain or disappoint them, they continue their route to Canada West, &c., with but few complaints. This is the usual course when nothing has occurred to lessen the excitement, or damp the hopes which prompted them to undertake the journey. It is when some unexpected obstacle presents itself, and detains them inactive and uncertain how to act—when excitement subsides and anxiety for the future produces depression of spirits, that we witness disease to any extent appear amongst them in various forms, most frequently, however, assuming a pyrexial, or dysenteric character.

A knowledge of these facts leads to the consideration of the question, and I think it an important one.—Is the cause which produces the variety of forms in which derangements of the digestive organs appear, and that which produces fever, the same—only modified in point of force, or some peculiar susceptibilities in the individuals exposed to its action? May dia- hea be regarded as the production of its feeblest, and malignant cholera that of its most concentrated state; and all the intervening varieties, such as dysenteries, bilious fevers, &c., only as links of the same chain, which connect those two diseases together? That this is the case, various circumstances tend to confirm. Many cases commence with diarrhea or dysentery, and if not checked, terminate in the common continued fever of the country. Asiatic cholera was invariably preceded by a diarrhea, which, in general, was under the control of proper treatment. But this is a subject which, perhaps, would more appropriately form the subject of a distinct communication.

It will be seen by the report for last year, that two deaths from dysentery occurred at the Sheds. Both subjects were old and debilitated; both arrived here with the disease in an advanced state, which was accompanied with fever, and they sank greatly emaciated.

Edematous swelling of the feet and legs is very common among Immigrants, otherwise apparently in good health. The cause probably is, unaccustomed inactivity, and standing bare foot on the damp decks of the vessels, almost constantly wet with salt water. It is in general easily removed by cold bathing, frictions, &c.

Owing to some peculiar diathesis, some young children appear to suffer severely from the voyage. They arrive emaciated, exhibiting all the symptoms of marasmus; several such cases have died annually at the Sheds, who, it was affirmed, enjoyed good health previous to leaving home.

Only one death occurred from Variola, during the period embraced by the report, although there were several cases of a severe confluent character. In consequence of the remarks published by Dr. Crawford, in the first number of the *Montreal Medical Gazette* for last year, "On the use of Tinct. of Iodine in Variola," I employed it as there directed, and so far as my experience goes, I am fully convinced of its utility as a local application. I have heard its *modus operandi* differently explained; I am not prepared to give a decided opinion how it acts; I am quite satisfied, however, that its effects are entirely local, confined to the part to which it is applied, and not constitutional on the principle of absorption.

The other forms of disease, such as Rubeola, Accidents, &c., presented nothing worthy of particular notice during the past two years; but from the great increase of Immigration this season, it is possible something worth noting may occur, which, should such be the case, I will not fail to communicate to you.

In conclusion, it is gratifying to be able to state, that during the last two years the mortality has been much less than what it usually was in any of the former years. The average mortality among the whole is only 1 in 64 and a fraction. There can be little doubt that among the causes which have contributed to this desirable consummation, are the improved sanitary regulations now in force, connected with the emigration department, to the juster views entertained of ventilation, and to a greater attention paid by the poor to habits of cleanliness, temperance, and other prolongers of life, together with the liberal provision made by government, of lodging, food, medical attendance, &c., for the destitute Immigrant on his arrival in this country.

St. Lawrence street, July, 1845.

Message from His Excellency the Governor General, with Reports on a Geological Survey of the Province of Canada, presented to the House on the 27th of Jan. 1845. By W. E. LOGAN, Esq., Provincial Geologist.

[Continued from page 126.]

The remainder of Mr. Logan's Report, descriptive of the structure of the area of that part of the Province west of Quebec, we proceed to lay before our readers. This description necessarily comprehends a much wider extent than the Province of Canada west of Quebec, inasmuch as that territory presents only a part of the phenomena that appertain to the system or systems of stratifications to be surveyed, and a scientific description must have respect to the natural, not to accidental geographical divisions. Minute observations continued for a century in a circumscribed field, could not furnish us with an account of its physical structure half so intelligible and satisfactory as a comprehensive view, such as this with which the Provincial Geologist has supplied his country, that combines with local facts and private observations all the evidence which the labours of others have accumulated on the identical subject or system. This is one of the advantages which arises from the appointment by the Government of a duly qualified and accredited agent to an office, in the discharge of which the present and future prosperity of the Province is involved.

There are few who have not a direct interest in the Survey which is now in progress. If its economical importance were appreciated, every advance made

would be matter of the deepest interest with the public. The cultivators of natural science will, we are assured, receive with pleasure the future details of the labours of the Provincial Geologist and his assistant in this department.

The next formation consists of calcareo-argillaceous shale of a bluish colour, abundantly fossiliferous, on which a few beds of silicio-argillaceous limestone, yielding a good water cement, constitutes a passage into a strong calcareous rock above. The lower part of this consists of a cemented mass of broken encrinital columns, often beautifully variegated with red, to which succeeds a thick-bedded sparry gray limestone, followed by one of a darker colour, upon which rests a brownish bituminous limestone, sparry below, and marked by the presence of the sulphurets of zinc and of lead above, and the whole is crowned by a set of slaty dark gray calcareous beds, with mammillated surfaces, separated by thin laminae of bituminous shale. It is over a slope and precipice which presents the whole thickness of this limestone, that the rapid and cataract of Niagara fall; and to the assemblage of rocks composing it, and the argillaceous strata below, the geologists of New York have in consequence given the appropriate name of the Niagara Group.

It is said to be in the north-western development of the limestone of this group that the great and valuable lead mines of Wisconsin exist. The group is strongly characterised by its fossils, which are abundant, various, and peculiar, consisting of trilobites, univalve and bivalve shells, encrinites and corals, and its total thickness, where it enters Canada, is not less than 250 feet.

We now come to a deposit which, in consequence of the valuable material it contains useful for agriculture and other purposes, and giving origin to the industrial application of capital, is one of the most important of the whole series. In the lower part it consists of variegated green spotted red shales, surmounted by greenish and drab coloured slaty limestone strata, alternating with red shales, which are followed by brownish calcareous and argillaceous shales, enclosing white and dark coloured masses of gypsum, of which there appears to be two ranges capable of being profitably worked, separated from one another by a band of porous limestone. Hopper-shaped cavities of various magnitudes, supposed to have once contained crystals of salt, exist in the gypsiferous part of the deposit, and the whole is capped by calcareous strata, fit for the purposes of hydraulic cement. This formation is the seat of a number of valuable brine springs, and in the county of Onondaga, in the State of New York, no less than 3,134,317 bushels of salt were profitably manufactured from them in 1841. The fossils of the formation are not numerous, and the thickness of the whole deposit, where most largely developed, is about 700 feet.

This deposit, so valuable for its gypsum, salt, and hydraulic lime, occupies a belt of country on the south side of Lake Ontario, running parallel with its shore, and with the subjacent formations, to the variegated red and green sandstone inclusive, passes into Canada across the Niagara river, and occupies nearly all that neck of land which separates Lake Ontario from Lake Erie. This whole assemblage of deposits skirts the shore of the former lake through Niagara County, and attaining the extremity of it, the strike, becoming deflected by the anticlinal axis which has been noticed as existing there, turns northward towards Cabot's Head, on Lake Huron. That promontory is probably formed of an increased development of the Niagara limestone. On the east side of it is the red and green sandstone, to the west will be the gypsiferous and saliferous rocks. These may be seen where they reach the banks of the Grand River, being there already worked for plaster, and it is not unlikely that as they approach the anticlinal arch, and gently bend over its back,

gradually losing a part of the slight inclination they possess, they will assume a wider spread and occupy a broader zone when they come out upon Lake Huron. Unless the district the formation underlies be deeply buried in alluvium, the mineral contents of the subsoil cannot fail to render it in time one of the most valuable parts of the Province.

In the general classification of the New York system of formations, the gypsiferous rocks are followed by five successive deposits of limestone, each of which is considered to be distinguished by its peculiar fossils. The Pennsylvanian geologists associate all these, and uniting them with the deposits below, the Niagara Group included, make one formation of the whole. The thickness of these five calcareous rocks is not clearly stated by the geologists of New York. They exist in the eastern part of the State, and thin out westwardly before reaching Canada, and it would probably be within the mark to state their average aggregate amount on the south side of Lake Ontario at 200 feet.

To these calcareous rocks succeed three deposits of a silicious character, being sandstones of various qualities, yielding building, flag, and fire stones. They are distinguished by their fossils; the first and last by bivalve and univalve shells, and the intermediate one by a *fucoide* (*fucoide cauda-galli*) which gives name to the rock. The group is known in the eastern parts only of New York, and, like the limestone immediately below, thins out before attaining the borders of Canada to the west. Though the lowest alone of these deposits is said to be 700 feet thick where known in Pennsylvania, it will probably be sufficient to put the whole down at an average of 100 feet in New York.

Resting on the sandstones in the eastern part of New York, and on the hydraulic limestone of the gypsiferous formation in the west, the next deposit in ascending order is calcareous. It consists of beds of limestone of a light gray colour, occasionally almost altogether composed of broken encrinital columns, having much the appearance of the beds at the base of the Niagara limestone, particularly when, as in it, the organic remains are of a reddish shade. It then yields a handsome variegated marble, and it generally affords good stone for building and for lime-burning. The strata are in many localities separated from one another by thin layers of green shale. Nodules of chert, or hornstone, are common, and towards the top in some places, beds of the silicious mineral alternate with those of limestone, forming a passage into the deposit above. The deposit is considered to possess distinguishing fossils, and I believe it is the lowest in which the remains of fish have been found. The thickness of the mass is twenty feet. In the Pennsylvanian Survey this deposit is united with the sandstones below and the limestone above, one formation being made of the whole. The limestone above is of a compact texture, and varies in colour from drab and light gray, through different shades of blue, to black. The hornstone forming a passage from the lower deposit, is frequently very largely developed in this, and sometimes usurps nearly the whole of the strata. The rock is well marked by its fossils, and its thickness is about 70 feet.

These united bands of limestone quit the State of New York at Black Rock, and strike into Canada at Waterloo, on the Niagara river, whence they run westward along the shore of Lake Erie for some distance. They appear to be recognised again in Ohio and Michigan, at the head of the lake, and they form a belt across the extremity of the southern peninsula of Michigan from Thunder Bay, on the Lake Huron side, to Petite Traverse Bay on the other. It is, in consequence, possible that they may have a wider spread in Canada than their united thickness, not reaching 100 feet, might lead us to expect; and it would seem they are probably the highest rocks whose equivalents underlie the whole of the three great coal fields in a still unbroken sheet, their outcrops from beneath each becoming confluent in the centre of the great fossiliferous trough that contains them all, around

a low, oval, dome-shaped area of inferior rocks, with a nucleus of about 4,000 square miles of the lowest limestone deposit, which is there exposed in the vicinity of Cincinnati. In Canada, however, it is likely that patches of the immediately succeeding deposits may be found in parts of the Western District.

The lowest of these is a black bituminous shale, much resembling the one described as existing further down in the series. It is occasionally sufficiently charged with bitumen to yield a flame when put on fire, and this circumstance, added to its black colour, induced many vain expectations of coal, accompanied by useless and expensive researches for it in the deposit in New York previous to the institution of the State Survey. The thickness of this deposit is about 50 feet, and it passes into a dark shale of more slaty character, which, by a thin compact calcareous blue shale, is separated from a set of olive-coloured fissile shales, gradually passing into a stronger rock by an increase of arenaceous material. This again becomes a bluish gray calcareous shale at the top, and is followed by a thin band of encrinal limestone, to which succeeds a persistent grayish blue marly rock. The whole group of strata abound in septaria. Its fossils are numerous, various, and characteristic, and its thickness, which diminishes from east to west from 1,000 to 300 feet, may be stated at 500 feet. On the top of this group rests a partial bed of limestone, which also thins westwardly. Its greatest thickness on the south side of Lake Ontario is twenty feet, and it dwindles down to nothing approaching Lake Erie, but its fossils are considered characteristic. On the preceding limestone rests a deposit of deep black consistent fissile shales, of a uniform quality. It has some few fossils sufficiently characteristic, and its thickness, which varies from 150 to 25 feet, thinning westwardly like the immediately subjacent rocks, may be taken at an average of fifty feet.

The next formation in the series, consists of a group of rocks of a more or less arenaceous quality. The lowest of these is a greenish argillo-arenaceous shale, which is followed by a development of green and black arenaceous shales, interstratified with thin beds of sandstone, yielding excellent durable flags, and forming a passage into a mass of thick bedded sandstone above. Ripple-mark and the casts of shrinkage cracks are common on the surfaces of some of the strata, but the fossils of the group are scarce. Fucoids, indeed, are frequently met with, and one species is found penetrating the beds in a vertical position. Some characteristic shells occur in the lower shales, and some in the centre of the group. The total thickness of the formation is estimated at 1,000 feet.

To this succeeds a mass of gray, greenish gray, and olive flaggy sandstones, interstratified with black, olive and green argillaceous and arenaceous shales, accompanied by frequent beds so charged with organic remains as to acquire the quality of an impure limestone. Towards the top the sandstone occasionally presents the character of a conglomerate. The fossils are numerous and plants are among them. The plants are sometimes covered with a coating of crystallized coal, and many of the surfaces of the beds are so powdered with carbonized comminuted vegetable remains as to give to the strata very much the semblance of coal measures. Even practical miners might be deceived by the appearances; but no workable coal seams are found associated with the deposit, while its organic contents, agreeing with its stratigraphical position, point out that its age is anterior to the true carboniferous era. The thickness of the formation is estimated at 1500 feet.

The out-crops of these two important formations of sandstone, and of the group of shales below, entirely surround the three great nuclei of coal, with the exception of the north-western extremity of the Illinois deposit, where the whole thin away together before completing the circle. The flatness of the general trough, and the great thickness of the

sandstones, cause them to assume a very wide and conspicuous figure.

The next superimposed formation where it is fully developed consists of sandstones, argillaceous and arenaceous shales, impure arenaceous limestones and conglomerates.—The sandstones are sometimes fit for grindstones, and the general colour of the deposit is red, or some shade of red. In the eastern part of New York among the Catskill mountains, the thickness of the formation is said to be little under 2500 feet, but it thins down to the westward, and on the south of Lake Erie in Pennsylvania, it dies away altogether. Its ascertained organic remains are not numerous, but among them are some of the fishes appertaining to the old red sandstone of Europe, one of which is the *holoptychus nobilissimus*.

This rock is not known to crop out from beneath the coal-fields of Michigan and Illinois, nor from beneath any part of the north-western side of the third great carboniferous area. Its basset edge, however, constitutes a belt on the Atlantic side of this last coal-field from New York, through Pennsylvania, Maryland, and Virginia. But in Virginia there is interposed between it and a persistent conglomerate which is at the base of the workable coal-seams, a narrow band of limestone, contemporaneous with the carboniferous or mountain limestone of Europe. This is scarcely recognized in Pennsylvania, and not at all in New York; but it bounds the south-eastern rim of the coal measures in Tennessee and Kentucky. Under the coal-field of Illinois it becomes an important formation, constituting a broad ring completely round it, as it does a narrow one round that of Michigan. In Michigan, however, the conglomerate mentioned as elsewhere supporting the workable coal, does not exist; but it bounds the south-eastern half of the Illinois coal-field, and entirely encircles the great coal area to the east, its greatest development being on the south-eastern side in Pennsylvania.

In New York this conglomerate rests upon the red sandstone formation, and it is a strong and solid arenaceous rock, loaded with quartz pebbles. It has a few fossils, and towards the top, alternates in Pennsylvania with the workable coal-seams, and gradually passes into the general mass of coal measures above. Such is the general character of the various deposits which fill up the great trough under examination.

INFERIOR ROCKS.

Without determining whether the non-fossiliferous rocks upon which the organic series rests, be sedimentary at the summit and primary below, or whether they belong to the latter class only, the general figure they present on the map may be inferred from the fossiliferous contour already described. In so far as Canada is concerned they constitute the whole of the northern parts of the Province, stretching from one extremity to the other. They compose the north shores of the St. Lawrence and the Ottawa, with the exception of the narrow strip of fossiliferous deposits between Cape Tourment and Grenville. They form the northern and eastern shores of Lake Superior, and the northern coast of Lake Huron; and from between Matchadash Bay in the latter, and Allumet Island on the Ottawa, they run into a south-eastern spur which terminates in a huge mountainous peninsular mass, lying between Lake Champlain and Lake Ontario, and joined to the main primary body by the narrow Isthmus of the Thousand Islands.

These rocks consist of talcose and other slates, quartz-rock, gneiss, limestone, serpentine, granite, syenite and their subordinate masses. The limestones and serpentines yield marbles of various beautiful descriptions; the feldspathic rocks in their decomposition afford good porcelain clays; copper ores are found in several localities; veins of lead ore have been worked; plumbago is abundantly developed; chromate of iron is known to exist, and the whole system appears

to be associated with large and valuable supplies of the magnetic and specular oxides of the same metal.

The extraordinary abundance in which these two latter ores of iron are found, may render them of great importance in an economic point of view. In the Champlain district of the State of New York, they give employment to a considerable amount of capital, engaged in smelting operations, and the iron produced from them by means of charcoal is of a quality to compete with the best descriptions manufactured in Sweden and Russia. Professor Emmons, in his final Report on the Geology of New York, mentions the existence in that part of his district, bordering on Lake Champlain and the St. Lawrence, of upwards of seventy veins and beds of these ores, varying in thickness from two and five feet up to 160 feet, and of two in particular, of which one is 514 feet and the other 700 feet thick; and while it is impossible to put a sure limit to the depth to which these enormous masses may extend, their course on the surface has been traced to considerable distances. The 514 feet bed has been followed for two and a half miles, and the overwhelming amount of metal in it may be conceived when it is stated that in a mile every five feet in depth would yield about one million tons of pure iron. This bed is not yet brought into operation, but some estimate may be formed of a value, from the fact that four veins called the Arnold veins, which have an average aggregate thickness of about twenty-two feet, and are mined some of them at a depth of 260 feet, a distance of only one quarter of a mile, are leased at a rental of 6000 dollars per annum. Such extraordinary masses of iron ore, one would suppose, cannot fail to become of national importance, and when we consider that valuable deposits of the same mineral quality are already known in Canada, in the townships of Marmora, Madoc, Bedford, Bastard, Hull and other places, and reflect upon the great extent of the primary regions in so many parts of which the magnet is deflected from its meridian, most probably by the proximity of the magnetic oxide, it is not unreasonable to hope that a diligent search may disclose provincial beds of equal consequence.

It is at the summit of the rocks under description, in the peninsula lying between Lake Superior and Lake Michigan, in a great range of trap interposed between the transition series and a metamorphic group, which rests upon the granite, that Mr. Douglas Houghton, the State geologist of Michigan, has made the discovery of an important collection of copper ore veins, which are likely to become of considerable economic value, and it yet remains to be ascertained whether an analogous condition of circumstances may not extend to Canada.

TERTIARY AND ALLUVIAL DEPOSITS.

Over many parts of the great area which has been described, whether primary or transition, there is spread a more recent sedimentary deposit, which is still in a soft condition and consists of various beds of clay, sand, and gravel. These beds are characterized up to the heights of 500 feet above the level of the ocean, by the frequent presence of marine shells, of the same species as now inhabit the Gulf of St. Lawrence and the northern seas. Fifteen species have been found at Portneuf, near Quebec, at the height of 300 feet, and five of the same on the mountain of Montreal at about 460 feet above salt water level, while in various parts of the St. Lawrence and Champlain valleys, such remains are seen at more moderate elevations. The geographical distribution of these deposits, which are denominated tertiary of the post-pliocene or most recent age, has not yet been fully described, but the materials of economic value they possess are clays fit for the manufacture of common bricks and common earthenware, with sand for building and moulding.

Still more recent than the tertiary deposits is the alluvial drift, with which are associated boulders of igneous and other rocks, occasionally fit for mill-stones, with frequent extensive deposits of peat and fresh water shell marl, both well known

to intelligent agriculturists to be of very great importance as manures, when properly applied; and bog iron ore often met with in tracts sufficiently large and rich to give profitable employment to capital in the manufacture of iron of the best quality.

ANATOMY AND PHYSIOLOGY.

ACCOUNT OF A REMARKABLE FETAL MONSTER

BY DR. SPEEDY.

The author was called to attend a woman in consequence of prolapse of the funis. The pupil, who had been in attendance on the case, stated that the prolapsed cord pulsated strongly before Dr. Speedy's arrival; it was evident that the child had been alive, but, when the author came, the pulsation had ceased. As no bad symptoms presented themselves, he determined to leave the case to nature. A head presented, and after forty hours' labour the woman was delivered without any untoward accident; but the child was found to have two heads. Upon first looking at the birth, it appeared that the right hand was the one properly belonging to the child, and that the other was adventitious.—Upon dissection, however, this opinion proved to be erroneous.

The skeleton presented two heads, one a little higher than the other; these were supported on two vertebral columns gradually converging, but each, with its perfect complement of vertebral bones, becoming fused about the sacrum. There was a single pelvis, and two lower extremities, complete in every particular. The external ribs of each vertebral column were normal; the internal ribs, proceeding from the nearly parallel vertebral columns, met at an equal distance from both; and at their junctions produced a series of azygous prominences posteriorly, which collectively had the aspect of a third and intermediate spine; the external ribs arched forwards, to be united with the sternum; this bone was evidently formed by the fusion of two sterna in the median line. However, the aspect of the anterior part of the trunk presented a single thorax, although the ribs entering into its formation, were derived from two vertebral columns. On each side of this common thorax, there was a well formed shoulder and arm. Dissection thus revealed two fetuses nearly perfect down as far as the pelvis; but, upon looking at the cast of the recent children, no one would imagine that this was the case. The cast appeared to display a well-formed single child, with two upper and lower extremities; but with an additional head attached to it.

Upon dissection there were found two perfect apparatuses of deglutition; two œsophagi; two stomachs, both opening into a single duodenum; and the rest of the intestinal canal was single: moreover there was a single liver, but its left lobe was as large as the right, if not larger. The urinary and genital apparatuses of this monster (a male) were single; the testes had descended into the scrotum. The right portion of the diaphragm was deficient, so that the peritoneum and pleura were in contact in that situation.—The contents of the thorax were very remarkable; there were four lungs, two on each side; two hearts fused with each other in the median line, with two systemic auricles between the ventricles: there were two aortæ and two pulmonary arteries; one aorta arched to the left, the other, and smaller one, to the right: each arch gave off a subclavian and carotids corresponding to the upper extremity and head belonging to each fetus; the arches of the two aortæ terminated in a single descending aorta. A ductus arteriosus sprang from each pulmonary artery, and joined the descending single trunk; the veins returning from the upper extremities and head, united to form a single descending cava. In fact, the anatomy of the viscera seemed to show a trans

position of the organs in one fœtus, which permitted an easy fusion of the median viscera from above downwards. In this monster, there was a single umbilical cord of rather a large size, containing one vein and two arteries, and proceeding from one placenta.—*Dublin Hospital Gazette*, March 15th, 1845.

ON CERTAIN DIFFERENCES IN THE COMPOSITION OF THE BLOOD IN THE MALE AND FEMALE.

MM. Becquerel and Rodier read a very elaborate memoir "on the Composition of the Blood in Health and in Disease," before the Royal Academy of Sciences, in the course of last November. As it must always be of the first importance to determine the normal condition of any of the fluids of the body, before we attempt to ascertain its morbid alterations, their remarks on the relative constitution of the blood in healthy adults of the two sexes may be deemed acceptable. The proportions given in the following table were determined by taking the average or medium figures obtained in a variety of experiments.

	Man.	Woman.
Water	779	791,1
Globules	141,1	17,2
Albumen	69,4	70,5
Fibrine	2,2	2,2
Extractive matters and free salts	6,3	7,4
Fatty matters	1,6	1,620
Seroline	0,020	0,020
Phosphorated fatty matter	0,488	0,464
Cholesterine	0,088	0,090
Soap	0,004	5,046
In 100 parts of calcined blood.		
Chloride of sodium	3,1	3,9
Soluble salts	2,5	2,9
Phosphates	0,334	0,351
Iron	0,565	9,541
Density of the defibrinated blood	1069,2	1057,5
of the serum	1028	1027,4

By comparing the two columns in this table, we find that certain very noticeable differences exist between the blood of the male and that of the female, in a state of health. The density of the defibrinated fluid is greater in the former, and consequently contains a larger quantity of soluble matters; the proportions of water too is decidedly less. The quantity of the colored globules is considerably greater in the blood of the male than in that of the female: this is perhaps the most important, and indeed it is the fundamental, difference in the blood of the two sexes. In the female, the *minimum* number was 113, the *maximum* was 137, and the *medium* 127; (?) whereas in the case of the male, the *minimum* was 131, the *maximum* 151, and the *medium* 141.* The proportion of the Fibrine, and also that of the Albumen, was found to be very nearly the same in both sexes. The proportion of the iron present in the blood is always commensurate with that of the red globules.

MM. Becquerel and Rodier are of opinion that the function of *menstruation* exercises a marked influence on the proportion of the red globules in the blood of the female. In the girl, before this function has properly commenced, the relative quantity is below the normal standard; when the secretion is fairly established, it (the quantity) rises up to 127 or even higher; and this state of things continues until about the critical period of life, when menstruation

* This proportion is considerably higher than that (viz. 127) assumed by Andral and other hematological enquirers, as the standard of health; while the proportion of the fibrine in our table is lower than that (3) in theirs.

ceases: then the proportion of the red globules falls considerably below this mark.

Pregnancy also has a very decided influence on the condition of the blood; the red globules and the Albumen became diminished, and the fibrine, phosphorated fatty matter, and the water slightly increased.—*Med. Chir. Rev. from Ency. des Sci. Med.*

PRACTICE OF MEDICINE AND PATHOLOGY.

Dyspnœa and palpitation dependant on yielding of the ribs; with observations on the diagnosis, nature, origin, and treatment of this affection, and remarks on the production of the impulse of the heart.

By DR. CORRIGAN, of Dublin.

Denis Sheil, aged 24, a house painter, was admitted into the Whitworth Hospital on the 1st February, 1845. He was then labouring under distressing *dyspnœa*, *orthopnœa* and *palpitation*. His face was pale, and lips bluish and congested. He was obliged to remain supported against a bed-rest. The least exertion brought on increased *palpitation* and *dyspnœa*. The heart's action was tumultuous and strong in the epigastric region, but the sounds were natural; the pulse 80, and very compressible.

On examination of the chest, the formation and mode of respiration are very peculiar. There is no curvature or malformation of the spine; the sternum slopes outwards as it descends, until the ensiform cartilage is so prominent as to project several inches beyond its natural level. In the clavicular region there is nothing remarkable, and the mammary region is only somewhat more prominent than natural, but in the infra-mammary region the appearance is singular. Each side of the chest under the mamma is sunk so much as to appear as if scooped or hollowed out, being concave instead of convex; and in each act of inspiration in these hollowed portions, instead of the sides of the chest distending as they naturally ought to do, they are drawn inwards so as in these parts to diminish instead of increase the capacity of the thorax. The chest sounds clear on percussion, and there are the ordinary physical signs of bronchitis of moderate intensity. On questioning Sheil, he says he had been a tolerably healthy child, but that he remembers those about him having remarked that he was chicken-breasted. For the last five years he has, however, suffered every winter more or less from attacks of *dyspnœa*, *palpitation*, and fits of spasmodic coughing. He was, however, he says, getting over this winter pretty well, until two or three days before admission, when he was seized with such a fit of *dyspnœa* that he felt as if he could not survive many hours.

Treatment.

A purgative enema was administered; he was cupped over the scapular regions to ʒviij , and an expectorant mixture given, consisting principally of

Trc. opii. camph.

A pill of mass pil. hyd., gr. iij.

Pulv. ipecac. gr. i.

was given every third hour, and for two days a liniment of croton oil applied over the chest. On the 13th he left the hospital quite relieved, perfectly free from *orthopnœa*, and with hardly any trace of *dyspnœa* or *palpitation*.

Observations.

This case is instructive in more points of view than one. It bore a strong resemblance to an attack of *dyspnœa* and *orthopnœa*, dependant on valvular disease of the heart, in the violent *palpitation*, tumultuous action of the organ, epigastric pulsation, and sudden onset, but the sounds of the heart, although tumultuous, were natural, and there was no jugular pulsation. The peculiar formation of the thorax in this case is well deserving of attention. In all other in-

stances, with the exception of curved spine, deviation from natural form and action of the ribs is the consequence of a diseased state either of the lungs or pleura, the ribs either distending or contracting in accordance with the action of parts within, on them; but in cases such as this before us, the converse holds, the affection of the ribs being primary, and the dyspnoea, palpitation, and impaired action of the lungs being consequent on the faulty development of the ribs. Such cases as this are not frequent in hospital practice; they are more common in private practice. They are imperfectly or not at all noticed in works on diseases of the lungs, and yet they deserve your attention, because by recognising their nature in the commencement, the malformation of the ribs can be prevented or remedied by care in the physical education of the child. Make an analysis of the formation of the chest and its movements—you might at first sight say the case might be emphysema of the lungs, but the elevated clavicle, the rounded scapular regions, the "bombée" form of upper sternal, and clavicular regions, and high respiration which invariably belong to this disease when it exists in early life before the costal cartilages have become ossified, are wanting. Instead of these, the scapular regions are flat and the clavicles are not raised; the upper sternal and clavicular regions are natural and the respiration, instead of being high, is deep and laboured.

But now follow on the examination of the chest—the lateral regions of the chest under the mammæ are hollowed or depressed so much as to give an appearance as if each side of the chest were scooped out, or as if some powerful compressing force had been exerted to drive in each side of the chest, and to protrude correspondingly the lowest portion of the sternum; but the singularity is much increased in the action of inspiration. Instead of these lateral portions of the chest dilating in correspondence with general distension of the other parts in the act of inspiration, the depressed ribs are drawn, or depressed so that in each act of inspiration the lateral concavities are actually rendered deeper, and this portion of the chest is contracted; again, in the act of expiration the depressed costal parietes expand, and return to their former size. Thus in inspiration the upper and lower portions of the chest move in exactly opposite ways; for while the upper sternal and clavicular regions move outwards, the infra-mammary regions move inwards, and vice versa in the act of expiration. You may ask here might not this lateral costal depression arise from inflammation of the pleura, and consequent contraction; but that this could not be the cause is evident from the depression being equal on both sides, and from the extreme mobility of the affected ribs, which you may observe is even greater than natural. In consequence of this yielding of the ribs, the diaphragm attached to them descends much lower than natural, and the heart is thrown more towards the mesial line, and descending with the diaphragm, is felt palpitating strongly in the epigastrium. In this case I have drawn your attention to the fact, that by bending your hand inwards under the ensiform cartilage, you can feel the heart swell upon the palm of the hand, and give an impulse downwards more distinct than that which you get from a healthy heart in the natural situation. To digress for a moment here, I may observe, that I think such a case as this distinctly proves that the impulse of the heart does not depend on the tilting up of its apex; if the apex tilted up, it would carry the right ventricle up with it. I believe what this case tells us, that the impulse of the heart depends on the same cause as the impulse and swelling of any muscle in action—viz., the increased and sudden thickening dependant on shortening of its fibres. You will recollect as bearing upon this view also, the case of Mulligan in the same ward, whose right gastrocnemius muscle continued regularly contracting at the rate of forty eight times per minute, uninterruptedly for several weeks while he was in hospital, and as he stated, had been thus contracting for several months before admis-

sion. The impulse from that muscle thus contracting was exactly analogous to that of the heart. Now suppose instead of the gastrocnemius being solid throughout, that it contained in its center a cavity similar to that of the heart, its fibres would still shorten, still thicken, and still give an impulse at the instant of contracting before its contraction had yet expelled the contained fluid. I believe there is no mystery beyond this in the impulse of the heart. To return, however, from our physiological digression, we can now, I think, understand how Sheil, with ribs thus malformed, is habitually asthmatic. Their deficient expansion diminishes materially in size the most important and effective portions of the lungs, the middle and inferior lobes, and seriously interferes with their action; and when, as on his present admission into hospital, bronchitis or catarrh sets in, corresponding oppression and dyspnoea supervene. This affection of the ribs has its origin invariably in infantile life, and it is at this period we should take care not to overlook it, for it is then we can successfully meet it. I cannot say how early it begins, but I have myself most often had it under my notice for the first time in children between one and two years old, and I have observed it since then at every age. I have seen very aggravated cases as late as nine or ten years old recover. I fear little can be done after this age. The child, I think, generally attracts attention when it begins to run about, the mother observing that it pants and puffs like an asthmatic person. The child cannot exercise and play like other children; and on stripping the child you will observe at once the peculiar formation of chest, and the opposite actions of upper and lower parts of chest, such as in Sheil's case. In the child in early age these opposite actions are greatly exaggerated, compared with what they appear afterwards; and in some cases in early life, from the smallness of the larynx not permitting the air to enter sufficiently rapidly to fill the chest, and from the great weakness of the ribs, the sides of the chest are seen at each act of inspiration as if the pressure of the atmosphere would almost squeeze the sides of the chest flat. The ribs resemble cords of slight whalebone, which being too weak to preserve their convexity in the act of inspiration, are flattened in, under the pressure of the atmosphere, and thus becoming more straight, and therefore elongated between the fixed points in the spine, and their attachments to the sides of the sternum, protrude the lower portion of the latter, until it assumes the projecting form seen in Sheil's case. There are few affections in which an error in treatment is more likely to be committed than in this now before us. I do not think a single case has come under my observation in which the child has not been taking ippecacuanha, squills, &c., for a long period, and cooped up under the idea that the lungs were delicate. It is hardly necessary to observe that the nature of the affection at once points out an opposite line of treatment; all nauseating and debilitating medicines must be avoided. The child should be brought out in the open air as much as possible, and a generous diet, with a full allowance of animal food given, and the child should be removed to the country if previously reared in a city. In fact bring the child's constitution and powers of growth up to the highest pitch of strength and health. The dress is a matter of very great importance. The most rigid care must be bestowed to guard against any portion of dress pressing on or interfering in the slightest degree with the full play of the child's lungs. If a girl, she must not be allowed to put on stays for several years; but while the thorax is thus left perfectly free, an abdominal belt, moderately tight, is always of service. Indeed the boy who is advanced enough to take part in the children's sports, soon finds out this himself. The abdominal belt, by confining the abdominal muscles, prevents the descent of the diaphragm, and consequent dragging down of the weak ribs: and by throwing the principal labour of respiration on the thoracic muscles and ribs, induces nature to strengthen those proportionably. Gymnas-

tics, when the child is from seven to ten years old, are of the most essential service. The improvement in the shape and play of the ribs is often very considerable indeed in the course of a few months. In such cases the only medicine I think necessary is iron as a general tonic, and perhaps one of the most agreeable formulæ for its administration is a solution of ζ iv. of the tartras ferri et potassæ in a bottle, or ζ xxiv. of Cape wine, (being less stimulating than Sherry,) of which from one to three or four table-spoonsful are to be given to the child every day, either plain or made into negus, at its lunch or dinner.—*Dublin Hospital Gazette.*

Observations on the treatment of Epilepsy by Digitalis—the form of its administration, &c.

By D. J. CORRIGAN, M. D.

Digitalis (toxicoglove) has been from time immemorial a quack remedy in the rural districts of Ireland for epilepsy. Its effects, as administered by the fairy women (as those professing to cure the disease are called) have been so violent, that the profession has shrunk from its administration, although success had in many instances followed on its exhibition. The following is the formula which is generally used.—Fresh leaves of digitalis, four ounces; beat into a pulp, and pour over it a pint of boiling beer; infuse for eight hours, and strain with expression. Of this give every third day four ounces, with fifteen grains of dried root of polypodium. In another formula, the dose is to be repeated every third hour until vomiting is produced. In 1828, Sir P. Crampton informed me that he had superintended its exhibition in four cases, and that in three of these it had been successful, but that he did not venture beyond the first dose, its effects were so violent. It caused violent and continuous vomiting like that of sea sickness, which continued incessantly for twenty-four hours, with irregularity and feebleness of pulse that remained for several weeks after.

In the year 1831, Dr. Sharkey, of Cork, in a paper in the *Lancet*, drew the attention of the profession to its good effects in the disease, given according to a similar formula. The effects of a single dose (four ounces) were vomiting, soreness of epigastrium, cold extremities, cramps, and great depression and irregularity of pulse, continuing for several days. I exhibited the remedy myself in the same form, and I am not surprised that the profession should shrink from employing it. The first dose produced the most violent vomiting, followed by cold sweat, feeble and irregular pulse, and these symptoms again by intense gastritis, accompanied with great sinking of the vital powers, and double vision, which continued for several days, sufficient to deter me from ever again venturing on its administration in such a dose. There are some circumstances connected with the effects of this large dose that may be worth noticing here; it was given at ten o'clock, A.M.; at twelve o'clock the pulse had fallen thirty beats, viz.—from eighty-six to fifty-six, and there was slight headache with very slight nausea; it was not until eight o'clock P. M. ten hours after the administration of the dose that the violent symptoms set in. It then occurred to me that as it is a remedy possessing a cumulating property, I might succeed in saturating, as it were, the nervous system with its sedative property, without the risk of inducing those frightful effects which follow on the sudden exhibition of the large dose, and I believe, I can now venture to say that this important point in practical medicine can be gained. After many trials of its preparations, I give the preference to the infusion digitalis of the *Dublin Pharmacopœia*; but I cannot too strongly insist on the necessity of the greatest attention being paid to see that the leaves are well prepared, and of the latest gathering; one of the cases narrated will exemplify the necessity of this caution. The mode of administration is to begin with ζ i. of the infusion every night at bed time, increas-

ing it after a week to ζ ijss, and after another week to ζ ij, beyond which it is rarely necessary to go, and continuing it until sickness of stomach and dilated pupils are observed, when the dose is to be diminished by ζ ss. or ζ i., until the maximum dose that can be borne without inconvenience is ascertained at which the administration is to be continued for two or three months. Given in this way its exhibition is attended with no inconvenience, beyond an occasional attack of slight sickness of stomach in the morning, or headache, &c., when the medicine is to be omitted, and a day or two are to be allowed to pass over before resuming its use. With the exception of these symptoms, there is no perceptible effect beyond slow action of the heart; and the patient during its use is able to follow his ordinary avocations.

Case 1.—Mr. M.—æ. 27, consulted me in March, 1841; he gave me the following history of his case. In the preceding August (1840), he suddenly alarmed the members of his family by exhibiting himself in the middle of the night in a state of violent mania which continued for some minutes. From that period up to the present time he has had repeated attacks at night, the longest interval having been once a period of five weeks. These attacks are thus described. His brother who sleeps in the room with him is roused by hearing him make a noise in his throat, and this is followed by a suffocative convulsion, in which he awakes in the greatest distress and suffering; he then falls into a fit of general convulsions, and on this ceasing he remains delirious and ungovernable for some minutes. His tongue to day bears the mark of having been bitten in an attack which he had last night. For a long time he only suffered from the attacks at night, but lately he became suddenly unconscious and fell from his desk in the office of a very important public establishment: and this circumstance has aggravated very much his anxiety about his illness; he knows of no cause whatever, to which he can attribute these attacks. His appetite is good, his bowels are regular, but his pulse is full and he has almost constant noise of head. He had been taking previously to my seeing him, nitrate of silver, ammoniac of copper, strychnine, &c., without any benefit; I directed cupping on the back of the neck and an issue afterwards in it, and prescribed for him half a grain of tartarized antimony every night.

He continued this medicine up to the 9th April; he has had only one slight attack but he says, he feels as if his mind were growing feeble. The tartrate of antimony was discontinued and he took every night a draught at bed time, of

Ol Terebinth, ζ i.

Ol Valerian, gutt. i.

May 2nd—There has been no attack since and his general health is improved; to discontinue all medicine except a lavement when required.

May 12th—He called on me to day with the bad news that the fits have returned; he has had two within the last ten days. The attacks now return as before, and although all the remedies which had previously seemed to benefit him were employed, and various others which it is unnecessary to recount, the disease appeared to be fixing itself more inveterately upon him: the attacks now coming on with great violence every four or five days, and leaving after them heaviness of head, confusion of intellect, and loss of memory. I now felt great anxiety indeed for him, as the loss of his post in a highly important public office seemed inevitable, entailing the destruction of his prospects in life. This was his state in August 1841, when I ordered him the *Infus. Digitalis* of the *Dublin Pharmacopœia* in the dose of a wine glass full every night at bed time to be increased if he could bear it; he increased the dose to ζ ij every night, and on the 15th August, he called on me with greatly im-

proved spirits; he has had but one slight attack within the last thirteen days.

Sept. 22nd—The attacks are now about one in every ten or eleven days but very slight and preceded often for a day by a frequent desire and inability to pass urine (he has had this symptom, however, occasionally before he commenced the use of the digitalis). The digitalis to be continued in the same dose.

Oct. 20th—The attacks are now so mild that they do not awake him, there being nothing more than a slight convulsive motion of the throat; he only learns of their occurrence from his brother, who occupies a bed in the same room with him. As the digitalis was not producing its specific effect, I ordered him to take ℥iv of the infusion for a dose; this produced no more visible effect than the former dose, when an accidental circumstance led him to obtain a repetition of the infusion from a different supply, which must have been much more carefully preserved, for in a few days he was obliged to discontinue its use, and then on returning to it, to reduce the dose to ℥ij as at first. In this dose, he continued its use for about three months, the attacks of epilepsy gradually became milder and milder, and at length ceased altogether; and I have had the gratification of seeing this gentleman very frequently, in good health and spirits, a period of nearly four years having now elapsed without a return of an epileptic attack.

Case 2—On Sept. 8, 1841, in consultation with my friend, Dr. Neligan, I saw Miss ——— etat 27; about four years since, without any apparent cause, she was seized while on horseback with stupor, and would have fallen from the saddle were she not supported; similar attacks frequently returned for the period of a year, and often without any apparent cause to give rise to them; she was then for some months free from them, but they again returned. In those attacks she was conscious, but her feelings during each attack although indescribable, were of the most painful kind. Some times she would fall, at other times not. After some time the hands and arms became rigid in the attacks; which at last settled down into true epileptic paroxysms, the limbs becoming convulsed with foaming at the mouth; the first attacks were preceded by warning symptoms of ringing in the ears, &c., but these have now ceased and she is now, without any premonitory signs, suddenly seized while walking, or dressing, with a fit, falls suddenly and is convulsed. The attacks have also lately become very frequent, she had one on the 25th August; another on the 1st, and again on the 2nd of this month. Her general health has been greatly improved by a trip to Harrogate; leucorrhœa to which she had been subject has ceased; and in the intervals of the attacks she is in the enjoyment of the most perfect health. We prescribed for her the infusion of digitalis in doses of ℥ij and ordered shower baths.

Sept. 17th—The draughts produced sickness, and occasionally vomiting in the mornings; when these symptoms occurred they were omitted for two nights and then resumed; they do not now cause the morning sickness, the appetite and general health continue good, and the only apparent effect of the draught is a lowering of the pulse which beats now about fifty. There has been only one slight attack which occurred the morning after the first of the draughts, and which proceeded no further than loss of power; the draughts to be continued. Dr. Neligan informed me, in October, that there had been no return of the attacks; the infusion of digitalis was continued in the same dose, and was occasionally followed by sickness in the morning very much resembling sea-sickness, but as before there was none felt during the night; the draughts were then discontinued to be again as before resumed. This case was then lost sight of, but the effects of the digitalis, even for the short period, were most satisfactory; previously to using it the attacks were very frequent, being often of daily

occurrence, while on commencing the remedy they almost immediately ceased, and did not return as long as the case was under our observation.

Case 3—The following case I give in the writers own words. He is a member of our profession. I append his name to his letter, not only from his permission to do so conveyed in this communication, but in consequence of his own personal request to me very lately, that I should do it, when publishing on the subject. I have had the pleasure of seeing him within the last month in good health and spirits.

Athboy, December 23, 1844.

DEAR SIR,—Having been lately a week from home, I did not receive your esteemed letter until yesterday morning; this circumstance must of course plead my apology for not having sooner replied to it. I subjoin a statement of my case, its onset, progress, and treatment, in the hope that if you publish any papers upon epilepsy, the history of my case may be interesting to the profession and beneficial to those who may be afflicted like me. May I add, that you are at perfect liberty to make what use you please of this communication, the authenticity of which you may, if you wish, confirm by the publication of my name.

Early in February last, (having previously enjoyed excellent health; only that I was subject now and then to headache, and a martyr to drowsiness,) I was, in about an hour after having retired to rest, suddenly attacked with violent and convulsive spasm of the lower jaw. I could not for the life of me either speak or move a hand. In about half a minute after the commencement of the attack, I felt as if my mouth was violently dragged, or rather *twisted*, back to my left ear; my whole body, head, and neck, principally, were then for about three minutes dreadfully convulsed, and I still recollect that I had consciousness enough to believe that I was certainly dying. I then fell into a state of complete insensibility. Fortunately, I was discovered in this state, when Mr. Wood of this town was sent for, who very judiciously raised my head and applied spt. ammoniæ arom. to my nostrils, by which means I was quickly restored to consciousness and complete recovery. In about three weeks after, I had a similar attack. I then thought it high time to have recourse to what I considered the best professional advice, and, as you may recollect, I applied to you, who ordered me to take every night pulv. digital. gr. i. proto carb. ferri c. sach. gr. x. In this course I persevered for twenty-two days, and as three weeks elapsed without an attack, I thought all was well, and discontinued the further use of the prescribed remedies; but to my disappointment another attack occurred just six weeks after the second. It should be supposed that I would then immediately resume the digitalis and iron, but I did not, and had melancholy cause to regret my negligence, for in about twelve days after, I had another attack, exceeding, *if possible*, the first in violence and duration. I then wrote to you, when you ordered that I should omit the iron, and take gr. iij. of the digitalis every night, and open a drain from the back of the head. I did so. In a fortnight after I had another attack, certainly not half so bad as the former ones. Here again I have to accuse myself of gross negligence, for I gave up the digitalis. I deservedly suffered, for in a fortnight after I had another severe fit. I then vowed that I would give the digitalis a fair trial, made up 40 papers, gr. iij. in each, taking one regularly every night. In three weeks time I felt the approach of an attack, ran up stairs expecting, as usual, a severe fit; here for the first time, to my great joy, I found, after having applied hartshorn to my nose, that all symptoms vanished, and I came down in about half a minute quite well. I continued taking the powders for six weeks; and the next fit, like its immediate predecessor, was very mild; no spasm occurring—no insensibility having followed. I just merely felt unable to speak for about ten

seconds. I then by your directions relinquished the powder, and took for six weeks longer infus. digitalis, ʒiiss every night. I never since have had a severe attack. In a word, as soon as I found the system was getting under the influence of the medicine, so soon did I evidently perceive that the disorder began to yield to it. For the last four months I have not had what may be properly called an attack; 'tis true I am still regularly every three weeks affected, but 'tis only for a minute, and so lightly that a bystander would not perceive I was unwell. I know not, of course, if it will please Providence that I remain as I am, but if I do I am convinced, unalterably convinced, that I owe my recovery, solely, entirely, and unquestionably, to the digitalis, the best preparation of which I believe to be the infusion. I also believe that its influence should be maintained upon the system for many months.

This, sir, is the statement of my case, drawn out in the hurry of the moment. You may perhaps censure its unprofessional execution, but you cannot question the truth of its every particular.

I am, dear Sir, Your grateful servant,

JAMES STEPHENSON.

Case 4—Eliza Lee, 131, South Brunswick Street, aged 12—a well looking child—was admitted into the Whitworth Hospital under Dr. Corrigan's care, for epilepsy, July 21, 1841. Her mother states that between three and four weeks ago she was suddenly seized with a pain or uneasiness, which she referred to the epigastrium; that thence it proceeded, as she herself described it, like a worm crawling up her throat; that it stopped there, as if it would choke her, till she swallowed a little salt and water, when she felt it go down again. She would then fall on the floor in a fit, which the mother describes as epileptic. Occasionally she would scream loudly, when she felt "the worm rising in her throat." These fits were very frequent; she generally had two every day; on one day she had four. Her mother says they were most distressing to look at. The day of her admission she took the infus. digitalis ʒi 4ta quaque hora (like Tierney). That day she had two fits, which were decidedly epileptic. The next day the digitalis had affected the system. She had slight nausea, vertigo, and dilated pupils. The medicine was omitted and she was kept quiet for a week. She then took the infusion again, ʒiiss every night at bedtime. She had no other fit while in the house, and left the hospital, August 25, 1841. The pupils had not yet regained their contractility.

Case 5—Patrick Daly, aged 17, admitted into No. 5 ward, Whitworth Hospital, October 16, 1841. Two months ago whilst walking in the street, and without any previous warning of any kind, was seized with an epileptic fit; by the fall his head was severely cut; one week afterwards he had a similar attack; since this time he has had altogether twelve or fourteen such fits. For several nights before admission, the fits occurred every night; and two days before admission, after a fit, he had loss of power over both lower limbs, and had to be carried to hospital, but there being no vacancy he was brought home again, and next morning this symptom no longer existed; he found his memory at this time to be much impaired; he has observed the fits to be induced by eating to excess of solid food; to this cause he attributes the fit which he had last night. For four or five years before the first epileptic seizure he was very subject to headaches and lightness of his head.

General health now very good; has had no headache for three months; bowels rather confined; has double converging strabismus which he says was produced suddenly when he was five years old by a fright. Pulse 74; appetite good; sleeps well, unless when disturbed by the fits; tongue moist and clean; last fit occurred on the 29th Oct. 1st Nov.—Ordered Infus Digitalis ʒij. o. n.

6th.—Has had no fit since; frequency of pulse considerably diminished; and pupils sluggish.

Discharged at his own request, 13th November, up to which time he has had no epileptic seizure from 29th October, during the entire of which time he persevered in the use of digitalis.

Case 6—George Walshe, aged 10, admitted 6th Nov. 1841. The following is all that can be obtained of the history of this case. Two years ago was first seized with fits, of a decidedly epileptic character; for about one week in each month ever since he has had from four to five seizures daily. Fits have been of variable duration, lasting from two to ten minutes, and as frequent at night as at day. On the day of his admission he had four attacks, and two on the following night; in each of these he frothed at the mouth; his eyes were wide open and fixed; the limbs being also violently agitated, he is aware when the fits are about to attack him, but he cannot describe his sensations. He has been always more or less subject to headaches. The disease is not hereditary in this instance. His appetite is good; tongue red and slightly furred.

15th November.—Ordered infusi digitalis ʒi. omni nocte. 19th.—Has no fit since: pupils sluggish: pulse 72.

26th.—No fit since. 29th.—No fit since: continued infusion digitalis.

December 3, do; December 6, do.

10th September, 1842.—He has been in hospital ever since last report, a period of ten months; has latterly taken his medicine irregularly: had a fit about the latter end of last April; it was attended with some fever and constipated bowels; since that he had no fit till about five weeks ago. The day of the night on which it occurred, he had been allowed out on pass, and had eaten a quantity of bacon and cabbage, a diet he was unaccustomed to.

11th September.—Was again attacked last night after a similar meal. It now became absolutely necessary to discharge him. Some friends of his came to reside near the hospital who insisted in having him out frequently, so that no regularity, either of medicine or diet, could be enforced. However, for ten months the curative effects of the digitalis were perfect.

Observations.

I claim no more in the relation of the above cases, than the addition to our curative means of a mode of administering a very powerful remedy in a form of easy management, not interfering with a patient's ordinary habits of occupation or exercise. It is also free from the very great objection resulting from the use of nitrate of silver, the staining of the skin for which even the cure of the disease (when it does occur—at best uncertain) hardly compensates. In what may be called hysteric epilepsy, that form occurring in females as hysteria, and stage by stage running into epilepsy, the digitalis is, I believe, less efficacious than in the pure disease.

There seems to be in idiopathic epilepsy two very distinct states of the brain, which it may be well to bear in mind. The first is, as far as we can discover, a state of heavy venous congestion, in which the attack appears to be the result of oppression of the brain from sluggish circulation. I saw some years ago a gentleman subject to the disease. He was pale, and leucophlegmatic, and bloated, and his circulation was remarkably slow, the pulse being only thirty-three. The first attack arose from a crush over the stomach, suffered in another boy's falling across him at play at school. He was found dead in a hall, into which it would appear he had turned from the street, on feeling an attack coming on. On post mortem examination, I found one of the superficial veins of the brain ruptured, a large quantity of blood effused upon the brain, and the venous trunks generally in a state of extreme turgescence. In cases of this class all sedentary occupations and amusements are to

be carefully avoided, as well as exposure to cold, without exercise, which tends to cause internal venous congestion, and sluggish capillary circulation. In the second form of which the first case may be taken as an example, the disease appears to be more an original disease of excitement of the nervous centre itself. In all cases perhaps it may be well to bear in mind these two different states, as the opposite dangers between which we are to guide our patient. In both classes, I believe early rising, long walking, and the most rigid abstinence from tea, coffee, and all stimulant and fermented liquors, form an essential part of the regimen to be observed. Another good rule is, that the patient should use only vegetables, milk, fish, and fowl, and should abstain from the use of butcher's meat, from beef, mutton, veal, and lamb. I have at least seen a case in which the happiest result followed the observance of this rule. I shall, however, proceed no further with general observations, contenting myself with merely contributing facts, which are sufficient, I think, to entitle the mode of treatment here described to be added to the list of means which we employ in combating this dreadful disease; and from my experience I would venture to say, that taking into account all the uncertainties and difficulties that embarrass its treatment, we shall be more successful with digitalis carefully prepared and given in the cumulating form, than with most other remedies.—*Dublin Hospital Gazette.*

SURGERY.

ON THE REMOVAL OF CAULIFLOWER EXCRESCENCE.

By W. F. MONTGOMERY, A.M., M.D., Professor of Midwifery, &c., Dublin.

[In October, 1842, Dr. Anderson, of Glasgow, published in the London and Edinburgh Monthly Medical Journal, "the results of some very accurately conducted investigations, by the microscope and otherwise, into the anatomical structure of the cauliflower excrescence of the os uteri." The patient whose disease afforded the object of Dr. Anderson's paper, came under the care of Dr. Montgomery, in 1843, when the disease had again acquired considerable size and effected deplorable inroads on her constitution.]

On examination, says Dr. M. I found the vagina nearly filled with a rather firm, rough, lobulated tumour, around which I could readily pass my finger, but I could not find the os uteri, from the margin of which the tumour appeared to spring, as well as from the contiguous portion of the vagina; the tumour bled readily on being touched, and was much more solid in some parts than in others.

By the speculum, the tumour was readily brought into view, and after wiping off its surface, a layer of coagulated blood with which it was covered, it appeared of a dull, dirty, whitish, or light drab colour; its surface uneven, and studded with a number of small tubercles, like the head of a cauliflower. This patient had been previously operated on in November, 1842, when the tumour then existing was removed by a ligature, in doing which, portions of it were broken off, which afforded Dr. Anderson the opportunity of making the microscopical investigation into the structure of this fungus growth, already alluded to; but it soon grew again, and in the intervening four months had acquired a considerable size.

Saturday, March, 4th. I included the whole of the tumour in a ligature, which I placed as high up as possible; its application gave no pain, and very little discharge occurred. After applying the ligature, I drew it up one inch, and ordered the patient an opiate.

The ligature was tightened every day, and doing so was followed by sharp abdominal pain without any accompanying tenderness, or acceleration of the pulse; indeed pressure over the pubes gave her so much relief, that she constantly kept her hand firmly pressed over that part. Anodyne fomentations with draughts containing acetum opii, relieved her pain; the pulse never rose above 50, and she was quite free, throughout, from any constitutional disturbance.

On Sunday the 12th, I found that I could not draw the ligature any further, it had evidently come home to the top of the canula, and yet, neither it nor the remains of the tumour would come away; and being unwilling to allow the latter to remain any longer, I introduced a curved scissors, and removed the greater part of it.

Thursday, 16th. I exposed the upper part of the vagina by the speculum, and seized the remaining portion of the root of the tumour with a dressing forceps, when it came away completely, leaving the surface behind it clean and healthy looking; it sprung from a space about the diameter of a half-penny, engaging the margins of the os uteri, and the vaginal mucous membrane, towards the left side.

On examining carefully the substance now brought away, I found that I had removed, not only the morbid growth, which was now reduced to a mere bundle of ragged filaments, but also the parts from which it sprung, namely the os uteri, and a portion of the vagina. The bloody and serous discharges, and the peculiar abdominal pain, now ceased altogether, and a discharge of healthy pus took place from the exposed surface: this, after a few days, threw up exuberent granulations, which I touched with the nitrate of silver, and a clean and healthy cicatrization was completed in three weeks from the time of the removal of the parts.—On the 7th April she menstruated naturally, and on the 17th April, I examined her with the finger and with the speculum, and found her free from any remains of the disease.

I have since seen and examined this woman several times, the last occasion having been on this day, (November 28th). She has menstruated regularly and fully during the whole interval of time amounting now to nearly twenty-one months.

Her general health is perfectly good; she is improved in aspect, and increased in flesh; she complains of nothing except some pain in her back, especially at the time of menstruation, which still continues regular.

There is no projection of the cervix uteri into the vagina, and the os uteri has entirely lost the defined margins which are natural to that part in general; it is very much closed, and gives to the finger the feel of a small puckered cicatrix; but all the parts are quite healthy and sound.

[Dr. Montgomery thinks that the operation by ligature will be more successful when the tumour has acquired a large size, on account of its origin or neck being narrower than the mass, somewhat resembling a polypus—consequently a ligature may be much more easily fixed and retained, and more likely to be applied at the base. Moreover, it is more likely when the tumour is large, that the neck of the womb from which it arises, will be more elongated, and may thus be ligatured with ease. Even although a radical cure may not be accomplished, yet the ligature is strongly recommended, as at any rate a large mass of disease is for the time got rid of, and the health of the patient will often be considerably improved. The only objections are the danger of hæmorrhage, and great constitutional disturbance, by including a portion of the uterine substance in the ligature. Even if hæmorrhage did occur, which is very seldom the case, it might be arrested by the ordinary means, and the risk of including a portion of the womb must be encountered, although this may not be so dangerous as many suppose. After the extirpation of the tumour, Dr. Montgomery recommends—]

That the surface from which it has been removed should be freely touched with some active caustic, such as the strong nitric acid, fluid nitrate of mercury, nitrate of copper, or perhaps with the actual cautery, which Dr. Johnson states proved eminently useful in a case lately under his care.

Dr. M. observes, that one of the most distinctive characters of this growth, when brought under inspection, during life, is the *semi-transparency* of many of the superficial granules, which present to the eye very much the same appearance as the vesicles occasionally visible on the surface of the ovary.—*Dublin Journal of Medical Science, Jan. 1845.*

SUCCESSFUL APPLICATION OF THE MATICO LEAF IN A CASE OF OBSTINATE HEMORRHAGE.

To the Editor of the Dublin Hospital Gazette.

STR.—As I believe matico has been very little resorted to in this country for arresting hæmorrhage, perhaps the following instance, in which it was successfully applied, may prove interesting to your readers.

A little boy, between four and five years old, was brought to me about a year and a half ago, in consequence of a bleeding from the tongue, which had continued for two days in spite of the application of lunar caustic, and pressure, by the gentleman to whom the child had first been brought. It appeared that he had fallen down and bit his tongue at the point, where a small and constant oozing of thin blood now took place from a little irregular opening. The child was quite blanched and beginning to get weak, and his mother was in the greatest state of alarm, and not without reason, as his brother had bled to death from a slight injury to the nose, in spite of the best medical assistance; and this child had formerly nearly bled to death from some slight wound about the mouth—the lip, I believe.

In such a soft, unresisting, moveable organ as the tongue, subjected to constant heat, moisture, and suction, the arrest of the hemorrhage offered no small difficulties. I first tried the actual cautery, the prong of a large steel fork was applied to the bleeding point, quite red hot. This only caused a momentary stoppage. I then passed a small sewing needle with a double ligature behind the spot, and tied on each side of it. This was successful for a time; but in an hour or two the child was brought back bleeding as fast as ever. I recommended the mother to make the child keep a piece of alum in his mouth, continually sucking it. Fortunately he did not object to this, as he was beginning to partake of the alarm in which he saw every body around him, and after an hour or two it effectually arrested the hemorrhage. The child was a long time regaining its strength, or any approach to a natural colour.

On Tuesday last, the 27th instant, he was brought to me, by his nurse, having, strange to say, again bit his tongue at the tip on Saturday, since when, a continued oozing of blood had gone on in spite of the application of the nitrate of silver, and of his sucking alum as he had formerly done with such success. He was, as on a former occasion, perfectly blanched, and the blood which oozed out from a raised point at the tip of the tongue, was thin and watery.

I tried pressure with my fingers, with a small piece of fuzzy lint; but the blood soon soaked through the lint. I then took a very small piece of the matico leaf which I happened to have by me, and applied the lower surface over the bleeding point, and kept it there as long as the child would keep the tongue quiet, which was not half a minute. I was delighted to find the blood had ceased to flow, and that contrary to my expectations, the small spangle of matico leaf adhered to the tongue. I kept the little boy in my study some time; but the hemorrhage did not return nor did the leaf come off. As I know, however, this would sooner or later surely take place, I desired the nurse to re-apply a piece of the same size and in the same manner as she had seen me do.

The next day she brought him to me well. The first piece of matico had fallen off in less than half an hour; but there was then scarcely any appearance of bleeding. She applied a second piece, and the hemorrhage was completely arrested.

I remain Sir, your obedient Servant,

JOHN HAMILTON.

37 Westland Row, June 2, 1845.

TREATMENT OF ANEURISM BY COMPRESSION,

By DR. BELLINGHAM.

[Dr. Bellingham, one of the Surgeons of St. Vincent's Hospital, when he first brought this subject before the Surgical Society of Ireland, had only met with three cases in which compression had been employed; that number had now increased to twelve. Of these eight were treated in Dublin, and in all, the cure has been permanent. With regard to this mode of treatment, he says:—]

The principal improvement which has taken place in the treatment of aneurism by compression, consists in the mode of applying the pressure; that is, instead of employing a single instrument, we employ two or three if necessary; these are placed upon the artery leading to the aneurismal sac, and when the pressure of one becomes painful, it is relaxed, the other having been previously tightened, and by thus alternating the pressure, we can keep up continued compression for any length of time. By this means the principal ob-

stacle in the way of the employment of pressure has been removed; the patient can apply it with comparatively little inconvenience to himself; time will not be lost owing to the parts becoming painful or excoriated, from the pressure of the pad of the instrument; and as the pressure need not be interrupted for any length of time, the duration of the treatment will be necessarily considerably abridged.

Some of the success of the improved method of applying pressure must, however, be referred to the improvement of the instrument used. That which I employed (made by Mr. Millikin, of Grafton street), is a modification of a carpenter's clamp, which was invented by a patient under Dr. Harrison's care for popliteal aneurism, whom I had the opportunity of seeing several times both while under treatment and after a cure had been effected. It consists of an arc of steel covered with leather, at one extremity of which is an oblong padded splint, the other extremity terminates in a nut, containing a quick screw, to which a pad similar to that of the tourniquet is attached. The principle of this instrument is exceedingly simple, so much so, that the patient can regulate its application himself, and it can be made of every size, so as to compress any vessel within the reach of compression. It appears to be a much superior instrument to that which was employed in the cases treated in the London hospitals, the application of which cannot be maintained for any length of time, without occasioning severe pain.

[Some of the advantages of this mode of treatment are then mentioned, and first that "the employment of pressure is not attended by the slightest risk to the patient." This, together with its having proved successful in every case in which it has been employed, forms a powerful argument in favour of this treatment over that by ligature, which, even when most carefully performed, is liable to be followed by fatal results.]

Again, pressure is applicable to certain cases of aneurism; to which the ligature is not, as well as to some cases in which the operation by ligature would be likely to be followed by unfavourable results.

[Thus when an aneurism has attained a large size, the pressure upon the neighbouring vessels causes œdema, and may produce obliteration of some of the arteries; in such, gangrene may follow the application of a ligature; but this cannot happen in the treatment by compression, which acts gradually, and can be interrupted at any time.]

Dr. B. thinks that a large aneurism would be more quickly cured by pressure than a small one.]

When an aneurism has attained a large size, if its contents are principally fluid, and its parietes are much thinned, inflammation and suppuration of the sac very commonly follow the application of the ligature, which may bring the patient's life into danger, and, at best, must render the recovery very tedious. This has never occurred yet after the use of compression, and such a result is evidently much less likely to follow it.

Again, aneurism not unfrequently occurs in individuals in whom the coats of the artery, between the tumour and the heart, are so much diseased, that the vessel, instead of taking on the adhesive inflammation after the application of the ligature, ulcerates; or the ligature cuts its way through; or aneurism may occur in subjects labouring under valvular, or other disease of the heart. In such cases the operation by ligature is contra-indicated, and would almost necessarily fail; whereas pressure may be applied with the same prospect of success as in subjects in whom the heart and arteries are perfectly healthy.

Pressure is applicable to cases of the aneurismal diathesis, and when more than one aneurism exists at the same time; cases in which the operation by ligature is likewise contra-indicated; as well as to cases of spontaneous aneurism occurring in individuals of intemperate habits, or of broken-down constitution; in which the surgeon, with great reluctance, would perform any operation.

In such cases, compression promises to be equally effectual as in any other. Again, cases occasionally occur, where the patient has so much horror of a surgical operation, as to refuse to submit to it, although made acquainted with the risk of delay. Such individuals will gladly embrace any means by which they may be relieved from the necessity of undergoing an operation, and will cheerfully submit to any other method of treatment which promises a chance of cure. Indeed, it may be said to have been this accidental circumstance which led to the recent re-introduction of compression in the treatment of aneurism.

Lastly, if pressure should fail to cure an aneurism (which, from the results hitherto observed, is very unlikely), its employment will not preclude the subsequent operation by ligature; but, by retarding the increase of the aneurism, and assisting in the establishment of the collateral circulation, it would tend rather to render the chances of the operation by ligature more favourable.

[The principal objections which have been urged against the mode of treatment by pressure are three, viz., 1st. That the arteries to which it is applicable are few in number. 2nd. That the pulsation is, for a considerable portion of time, likely to return, in consequence of the artery not being obliterated at the point to which pressure is applied; and 3rd. That it is more tedious and painful than the method by ligature.]

In reply to the first objection, Dr. Bellingham brings forward Lisfranc's table, from which it appears that out of 179 cases collected by that author (exclusive of aortic aneurism), 59 were cases of popliteal, 17 of carotid, and 16 of subclavian aneurism, whilst the external iliac was only affected five times. But even this must be much below the average, for few cases, comparatively speaking, of operation for popliteal aneurism are published owing to its frequency; whereas most of the operations upon the other arteries are brought before the Profession, on account of the infrequency of disease in those vessels. And it surely ought not to be urged against this method, that because aneurism occurs in arteries beyond its reach, we should not apply it to vessels to which it is adapted; or that the practice should be denounced, because it is not applicable to every vessel.

To the second objection, the probability of return of pulsation, the mode by pressure seems even less obnoxious than that by ligature, because the former mode appears to be very nearly that by which nature under the most favourable circumstances, effects a spontaneous cure.

Then as to the third objection, several of the cases prove that less time was occupied in the treatment by pressure than in average cases by operation, and it is very likely that where a longer time elapsed, it was dependent upon imperfection of the instrument, irritability in the patient, or two compressors not being used together. As to the assertion that more pain is caused than when the ligature is employed, this would be very true were it necessary to apply it with such force as to obliterate the vessel, as was formerly supposed, but we know that when compression is properly employed, the pain which the aneurismal swelling occasions is really relieved, instead of being aggravated.

The following conclusions embrace, in a few words, the chief things to be remembered on this subject.]

1st. That the arteries to which pressure is applicable, being far more frequently the subject of spontaneous aneurism than those to which it is inapplicable, compression promises to supersede the ligature in the great majority of cases.

2nd. Pressure has several obvious advantages over the ligature, being applicable to a considerable number of cases in which the ligature is contra-indicated, or inadmissible.

3rd. The treatment of aneurism by compression does not involve the slightest risk; and even if it should fail, its employment not only does not preclude the subsequent operation by ligature, but renders the chances of the operation by ligature more favourable.

4th. Such an amount of pressure is never necessary as will cause inflammation and adhesion of the opposed surfaces of the vessel at the point compressed.

5th. Compression should not be carried even so far as completely to intercept the circulation in the artery at the point compressed; the consolidation of the aneurism will be more certainly and more quickly brought about, and with less inconvenience to the patient, by allowing a feeble current of blood to pass through the sac of the aneurism.

6th. Compression by means of two or more instruments, one of which is alternately relaxed, is much more effectual than by any single instrument.

7th. Compression, according to the rules laid down here, is neither very tedious nor very painful, and can be maintained, in a great measure, by the patient himself.

8th. An aneurism cured by compression of the artery above the tumour, according to this method, is much less likely to return than where the ligature had been employed.—*Dublin Journal of Medical Science, May 1845, p. 163.*

[Another case in which aneurism of the popliteal artery was cured by compression of the femoral artery, by Mr. Edward Greatrex, was communicated to the Royal Medical and Chirurgical Society.]

The patient, a private of the Coldstream Guards, 27 years of age, and previously healthy, on the 22nd May, 1844, complained of pain and swelling behind the right knee. On examination, a large, irregularly-shaped aneurism was found filling up the popliteal space, strongly pulsating, and admitting of being partially emptied by pressure. A delay took place in proceeding to apply compression, till the 18th of June, owing to the patient having been seized with acute laryngitis. An Italian tourniquet, with modifications in its construction, was then applied; but a relaxation in the treatment was soon required, from the patient being attacked with modified small-pox. On the 8th of July, the tumour having increased in size, the plan was adopted of screwing the pad firmly upon the femoral artery, and leaving the patient the key, so that when the pain became intolerable he might relax the pressure by the instrument, and compress the artery higher up by his fingers. On the following day, this method was found to have been successful, for the tumour was perfectly solid, and no pulsation or bellows-sound was afterwards perceived.—The compression was continued for nine days longer. When the instrument was removed, the femoral artery was distinctly felt to pulsate down to its entrance into the tendinous canal, and two arteries, about as large as crow-quills could be traced over the surface of the now hard and solid tumour. From this date, the swelling gradually diminished; the patient began to walk about on the 9th of August, and he was dismissed from the hospital, to undertake light duty, on the 14th of November. He returned to full duty on the 12th of December, which he has efficiently discharged to the present time.

[Mr. Bransby Cooper has known a case in which the femoral artery was tied for aneurism of the right popliteal, whilst a small tumour in the left popliteal space has been treated by compression. Fourteen months after his discharge, apparently cured, the patient returned with aneurism of the left side, which was obliged to be tied. Mr. C. feared the disease might return in this case of Mr. Greatrex, because of the subsistence of pulsation of the artery in connection with the aneurism.]

Mr. Stanley stated that he had seen the limb, and the disease certainly appeared cured. The cases in which compression had been used did not, however, yet afford sufficient evidence that pressure alone was sufficient in these cases. In Mr. Greatrex's case the artery certainly remained pervious.

Mr. Cooper thought that it required twelve months, at least, to determine that the patient was safe from a return. In one of his own cases the disease had returned after that time.

Mr. Curling remarked, that by the mode in which Mr.

Greatrex had treated his case the collateral circulation was not interfered with, and that therefore we might expect a better result than in Mr. Cooper's case, where pressure was differently applied. In the case of popliteal aneurism it was not necessary to obstruct the circulation through the femoral artery completely, as arrest of the circulation through the tumour to a certain extent, effected the formation of a coagulum in the aneurism. At present, we have no evidence of the state of the artery, by examination, after cure by pressure. He should expect, however, to find a firm coagulum in the sac, with freedom of circulation through the vessel.

Mr. Shaw related a case which appeared to bear somewhat on the subject of discussion, as it illustrated the possibility of a coagulum being formed in the sac, though the channel of the blood was not entirely obstructed. *J—Lancet Jan. 25th, 1845.*

[The following case of popliteal aneurism treated by compression of the femoral artery is by F. Newcombe, Esq. The patient, a gentleman, 26 years of age, had been thrown from his horse whilst hunting last season, and received a slight contusion in the lower part of the left thigh, where a large aneurism subsequently formed.]

On the 20th of September last he took a long walk, and shortly after, perceived a tumour in the inside of the thigh, which has rapidly increased up to the present time. The tumour now occupies the entire of the upper part of the popliteal space, which it fills, so that the edges of the hamstring muscles cannot be felt; it is prolonged thence along the inner side of the thigh, as far as the internal condyle of the femur. The tumour may, in fact, be considered as consisting of two portions—that occupying the upper part of the ham, comparatively firm and resisting—and that extending along the inner side of the thigh, considerably the larger of the two, soft, yielding, and compressible, evidently containing fluid blood, and its parietes so thin, that great apprehensions are entertained lest they may give way. There is general œdema of the limb; its greatest circumference at the affected part exceeds that of the opposite one, $5\frac{1}{2}$ inches. It is unnecessary to state in minute details the general characters of aneurism presented by the tumour; but it is necessary to mention that the pulsation is much stronger in the larger portion of the tumour than in that which occupies the ham, and though pressure on the femoral artery caused complete cessation of the pulsation, it produced no diminution in the size of the tumour. It is remarkable, however, that the pain, which was very severe in the tumour, and also in the course of the saphena nerve, ceased completely when pressure was made on the femoral artery in the groin. Seeing that the greater portion of the aneurismal sac was so very thin, and its contents perfectly fluid, it was thought prudent by Mr. Cusack to apply pressure on the femoral artery during the removal of the patient to Dublin; and for this purpose I was furnished with a press artère, with which Mr. Cusack had previously effected a cure in a case of popliteal aneurism, and which is described and figured in the Medical Press, vol. IX, p. 279. Pulse 120. Previous to the commencement of our journey, this instrument was applied, the pressure being made on the artery as it crosses the pubes; the pulsation in the tumour was easily commanded. The pain in the limb was at the same time completely removed. The instrument was kept on until our arrival in Dublin, being, however, now and then slightly relaxed, when its presence caused uneasiness.

[On arriving in Dublin, whence he was brought from the country, the patient was seen by Sir P. Crampton, who agreed with Mr. Cusack, that pressure of the main artery above the tumour should be tried, a night's rest being allowed to recruit the patient.]

It having been determined to use two instruments similar to those described by Dr. Bellingham, in the Medical Press for Aug. 28, 1844, and in the same manner as he had employed them in a case of the same kind, I proceeded to apply the pressure in the following manner, in the presence of Mr. Cusack and Sir P. Crampton:—One clamp was applied to the femoral artery at the lower part of Scarpa's space, sufficiently tight to greatly diminish, without completely arresting the flow of blood through the vessel, and nearly to stop the pulsation in the tumour; the other clamp was applied higher up upon the limb, but not tightened. When the pressure from the first clamp became inconvenient, the second was tightened, and the other was relaxed. By thus alternating the action of the instruments (which it was found necessary to do

at intervals, varying from half an hour to an hour, and by shifting them, as occasion required, to various points, ranging from the pubes to the edge of the tumour), permanent pressure was enabled to be maintained. It would have been easy to have stopped the current through the artery, but when pressure was carried to this extent, the patient complained of palpitation of the heart, which, however, ceased when the instrument was slightly relaxed. It may be well to observe, that the nature of the disease, and the principle of the treatment proposed, had been explained to the patient, who materially aided in the management of the case. No bandage was applied to the limb, or over the tumour.

Low diet was enjoined, and digitalis was administered with an opiate at night.

No pulsation can be felt in popliteal or tibial arteries.

[Pulsation soon ceased in the tumour, and the sac began to thicken. The pulse, which on the second day was 120, fell next day to 80, at which it remained. Pressure, which at first could only be borne a few minutes in one place, gradually gave less and less pain; the tumour diminished slightly in size, its hardness meantime increasing; and on the 7th day the use of digitalis was discontinued. Fifteen days after the commencement of this treatment, the circumference of the affected limb was less than an inch more than that of the sound limb, and the anterior and posterior tibial arteries had apparently resumed their natural size; and in about three weeks after this, the patient was wearing merely an elastic bandage, and was permitted to remove from his bed to a sofa, and in a few days subsequently was allowed the use of crutches, the foot being supported by a sling.]

During the entire course of this treatment there was no perceptible difference in the temperature of the two feet.—*Dublin Journal of Medical Science, March, 1845, p. 155.*

MIDWIFERY.

OBSERVATIONS IN MIDWIFERY.

By W. TYLER SMITH, M. B. London., Lecturer on Midwifery and the Diseases of Women, at the Charlotte-street School of Medicine.

ON THE TREATMENT OF PUERPERAL CONVULSIONS.

Remarks on some of the more important remedies of centric spinal action.

In treating of the pathology of puerperal convulsions, I have endeavoured to show that this disease must always depend on one of two causes,—either on direct irritation of the spinal marrow, or on some irritation of excitor spinal nerves. If there be any truth in this view, it is evident that remedies also should be divided into those which allay irritation of the spinal centre, and those which remove irritation from the incident excitor nerves, or diminish their excitability. A large and important class of diseases are referrible to the spinal system, and every branch of this new department of pathology calls for some therapeutic division of this kind. Medicines must be studied with reference to their effects on the different divisions of the nervous system. Unless the spinal marrow be dissevered, therapeutically, as well as physiologically, from the other nervous centres, the anomaly presents itself, of remedies which act as stimulants to the spinal marrow, but as sedatives to the brain, and vice versa. Indeed, on looking to the three great divisions of neurology—the brain, the spinal marrow, and the ganglionic system—remarkable instances at once present themselves of therapeutic agents which affect them severally in the most opposite modes. Thus the ergot of rye increases the contractions of the uterus, an organ chiefly under the control of the spinal marrow, but it depresses the action of the heart, which is under the control of ganglionic nerves; strychnia affects the purely spinal actions to an intense degree, leaving the functions of the brain perfectly intact; while conium on the other hand, affects, in poisonous doses, both the spinal marrow and the brain, producing at once delirium and convulsions.

The spinal system being that which is chiefly involved in puerperal convulsions, all remedies resorted to in this disease must be studied with especial reference to spinal physiology and pathology. Remedies affecting the spinal system very naturally divide themselves into those which act on the central organ, the spinal marrow, and those which affect the extremities of incident spinal

nerves. Those to be considered in the present communication are all of the former class.

Bloodletting.—The action of bloodletting on the spinal marrow is greatly modified by the condition of the circulation. In fullness of the vascular system, it is the most powerful sedative of spinal action we possess. Hence, venesection is the grand remedy in the simpler form of puerperal convulsion, where the disease chiefly depends on stimulation of the spinal marrow by excess of blood, or on the mechanical pressure exerted by the blood on that organ, together with the counter-pressure of the distended brain on the medulla oblongata. In such cases, bleeding should be performed with a view to its sedative action on the spinal marrow, and to avert the mechanical effects of vascular pressure from this organ. Alone, it will frequently be sufficient to subdue the disease, particularly when the fits come on before the beginning of labour, or after delivery. But another most important intention of bloodletting should never be lost sight of—namely, that of preserving the brain from injury during the convulsion. Besides the primary cerebral congestion, which may have been the cause of the attack by its counter-pressure on the medulla, the convulsive action itself, with the glottis closed, exerting great muscular pressure on the whole vascular system, and causing, as it does, the greatest turgidity of the vessels of the head is a dangerous source of fatal cerebral congestion, or of serous or sanguineous effusion. As in the case of epileptics, women in puerperal convulsions frequently die of apoplexy, produced by the immense pressure exerted on the cerebral column of blood during the fits. It is in great measure from the effects of bloodletting in warding off accident from the brain that bleeding is so universal in this disease. The due recognition of the distinct operation of bloodletting on the cerebral and spinal systems is of the utmost consequence. In plethoric states of the circulation, it is in this disease, *curative* in its action on the spinal marrow, *preventive* in its action on the brain.

In the absence of definite ideas regarding the effects of bloodletting in this malady, it has been often pushed to excess, or practised where it should have been altogether avoided. In the numerous cases where, beside vascular excitement of the spinal marrow, some irritation of spinal excitor nerves exists as a conjoined cause of convulsion, repeated bleedings will often fail to subdue the disease, unless the *eccentric* irritation be at the same time removed. When irritation of the uterus, the rectum, or the stomach, is in part excitor of the convulsion, bleeding alone cannot be relied on. It may at first diminish the impressibility of the central organ, rendering it less susceptible of the incident irritation, but if persisted in to a large extent without the removal of the *eccentric* irritation, it becomes in the end positively injurious, by increasing instead of diminishing the excitability of the spinal marrow.

In vascular plethora, depletion is undoubtedly a sedative to the spinal system, but when the circulation is reduced considerably below par, loss of blood becomes an actual stimulant to this organ. Hence it is that the reports of those who have most pertinaciously followed bloodletting, exhibit the loss of a greater number of patients than those who have been more cautious in this respect.—The propriety and extent of venesection must be estimated, then, not by the violence of the disease, but by the state of the circulation in the interval of the fits, and with especial reference to the different effects of vascular plethora and vacuity on the spinal centre.—I should avoid these manifest repetitions had I not thoroughly convinced myself that patients rightly bled in the first instance are frequently subjected to successive depletion until loss of blood itself becomes the cause of the final seizures. Nothing is, I believe, more certain to remove this deplorable source of mischief than the distinct preception of the effects of venesection on the spinal marrow, the true organ of puerperal convulsion.

Similar remarks would apply with almost equal force to the other parts of the common antiphlogistic regimen. Nearly allied to the *modus operandi* of bleeding are the effects of nauseating doses of emetic tartar, which have been found so serviceable in the treatment of puerperal convulsions by Dr. Collins. It is extremely probable that this remedy acts on the spinal system through the medium of its effects on the circulation.

In the convulsions occurring in delicate anemic women, bleeding is generally inadmissible, becoming, in fact, an exciting cause of the disease under such circumstances. Still, in cases approaching to this state, cautious bleeding may be sometimes necessary to preserve the brain from injury, but here venesection

requires to be followed promptly by stimulants; such cases are, however, rare in comparison with those in which fullness of the circulation exists at the outset of the disease.

Dilatation of the glottis.—During the attack of convulsion the glottis is partially or entirely closed. The greatest authority on this point, Dr. Marshall Hall, questions if true convulsion could ever occur without this state of the glottis, and the cerebral and spinal congestion it occasions. We know that sometimes the epileptic attack is warded off by the dash of cold water on the face or chest, so as to excite a sudden inspiration and the dilatation of the glottis. It is on the same principle, that of exciting a strong inspiratory act, that we stimulate the nostrils or sprinkle the face with cold water in syncope. Excitation of the incident nerves of inspiration in the same way has been known to prevent the puerperal convulsion.

Harvey gives an instance in which stimulation of the trifacial nerve in the nostrils recovered a woman who became comatose during labour. Denman also relates an interesting case, in which a convulsion was excited during every labour-pain, but in which he kept off the attacks until delivery was completed, simply by throwing cold water on the face with a bunch of feathers at each accession of pain. It was found that this mode of proceeding, from which he augured so favourably from its effects in this and other cases, did not prove equally efficacious on all occasions. He observes, that this is "a safe remedy," which cannot be said of all measures resorted to in this disease. It certainly must be productive of benefit in cases where the glottis is not so firmly locked as to render its dilatation by this means impossible. Even if it does nothing to prevent the accession of the fit, every time we can dilate the glottis, and cause a full inspiration, we take off a considerable amount of vascular pressure from the nervous centres, and lessen the proportion of venous blood in the system.

The application of cold.—Cold, applied to the head in the form of napkins, lightly wrung out of iced or cold water, ice itself, or a full stream of cold water poured from a height, has become an approved remedy in puerperal convulsions. It therefore becomes an interesting question—How does cold thus used act on the nervous system? It may act as a sedative on the cerebral portion of the spinal marrow, or it may lessen the distended state of the cerebral circulation, and thus relieve the counter-pressure of the brain on the intra-cranial portions of the spinal system. Probably it acts in both of these modes. When used in the form of the continuous douche, as recommended by Dr. Copland, it would, in addition, tend to excite acts of inspiration and thus dilate the glottis. The sedative action of cold on the nervous centres would seem to be shown satisfactorily by the reputed good effects of cold applied to the whole length of the spinal column in tetanus.

The application of cold to the spine as well as to the head may hereafter be found beneficial in puerperal convulsions. Whenever cold in any form is resorted to, its use, except for the purpose of exciting the respiration, must be continuous, as the intermittent application of cold, locally or generally, would excite instead of allay the spinal system. The benefit derivable from cold must arise from its local action on the nervous centres, because in tetanus, the purest form of increased morbid spinal action, cold applied to the spine is serviceable, whereas, when applied to the whole surface of the body, it is extremely dangerous, and even fatal.

Administration of opium.—It is an object of very great therapeutic importance to ascertain the true effects of opium on the spinal system. One author maintains that opium diminishes the contraction of the uterus in after-pains, another, that it increases their energy. Some recommend it in uterine hæmorrhage, as an efficient means of exciting uterine contractions, while some blame its administration on the plea that it produces uterine inertia and hæmorrhage. Some, again, maintain that it retards, and others that it accelerates, the progress of labour. With respect to the propriety of its use in convulsions, there is a great discrepancy of opinion. Though we may not yet have sufficient data to form a perfect and decisive judgement, I believe we can at the present time make a pretty considerable advance in the right direction.

When the amphibia are in a state of narcotization from opium, the whole excitatory system is exalted to an intense degree.—The slightest irritation of the surface of the body produces universal convulsions. If this fact were applicable to man, it would be an argument to show that it is a powerful spinal stimulant, as it certainly is in the amphibia. In the state of narcotization by opium in man, there is no positive evidence that the incident spinal nerves are more excitor than at other times; still, in poisoning

by opium, convulsions do not unfrequently occur as one of its toxicological effects. On the contrary, in poisoning by belladonna, true convulsive action is very rare, and it has been found by Dr. Hutchinson, of Nottingham, a successful cultivator of spinal pathology and therapeutics, that belladonna exerts a sedative influence on the spinal marrow in tetanus. That opium does not, in man, allay excitement of the spinal marrow, is shown by its failure in the treatment of tetanus and hydrophobia, the purest and most intense forms of morbid spinal action. The patient may be poisoned by opium without any reduction of the spasm.

Mr. Bonney, in a paper on the effects of opiates, ingeniously suggests that they prove indirectly stimulant to the reflex actions, because the arrest of the cerebral functions they occasion increases the muscular irritability. I think there are reasons for supposing that, besides this effect, which is very probable, opium is a direct excitant of the spinal system. It aggravates convulsions, when there is already a state of insensibility from other causes, and when, therefore, this explanation could not be received. It is the general opinion of practical men, that opiates are injurious in the convulsions of children, in epilepsy and in puerperal convulsions; and it is certainly of little or no value, probably, indeed, prejudicial, in tetanus, hydrophobia, and other severe diseases of the excitatory system.

Some striking distinctions may be made respecting the administration of opium under different circumstances, particularly in puerperal convulsions. If a dose of opium be given in this disease in a full state of the circulation, before bleeding, there is an aggravation of the disorder; while if it be given in puerperal convulsions in an anæmic subject, or after excessive depletion, it is of great service. If in a case of convulsions opium be given at the commencement, it is dangerous in its effects; but the same medicine

frequently valuable in the advanced stage of the same case when the vascular system has been powerfully depleted. Thus it would appear evident that in convulsions with a full state of the circulation, opium is a *stimulant* to the spinal marrow, while in convulsions with anæmia, it is distinctly *sedative*. It is certainly an important point in practice, that the effects of opium in puerperal convulsions depend on the state of the circulation; that in plethoric or inflammatory conditions it is always dangerous, while in anæmia and debility it may always be used beneficially.

Emotion.—The regulation of emotion is of considerable importance in preventing the accession of convulsions when they are threatened, and in averting the return of the attacks, in the intervals where *consciousness* is retained. Mental excitement of every kind should be soothed, and avoided as much as possible. The sight of the infant, of alarmed friends or relatives, unpleasant intelligence, noises in the sick chamber, or still more trifling matters, have caused or renewed convulsions. Perfect quiet and repose within the sick room, and the absence of all signs of excitement on the part of the attendants, are of the utmost consequence; the calm or timid look of the professional man may either excite or prevent a fit. The *psychical* effects of emotion upon the spinal marrow—an otherwise purely *physical* organ, in health and disease—is one of the most striking and indubitable facts furnished by the pathology and physiology of the spinal system.

Bolton-street, Piccadilly, June 18th, 1845.

CHEMISTRY, MATERIA MEDICA, AND PHARMACY.

ON A NEW METHOD OF PREPARING MEDICATED TINCTURES.

By HENRY BURTON, M.D., Physician of St. Thomas's Hospital.

In a paper published in the *Medical Gazette* for August 1844, "On a new method of making Medicated Tinctures," I ventured to propose a deviation from the ordinary plan of agitating the solids in direct contact with their spirituous solvent, and suggested the interposition of a bag, in which they might be suspended and macerated in the spirit without agitation.

The principle on which the process is conducted was stated in my paper to have been long familiar to scientific chemists, and, I may add, had been often applied by them to the dissolution in particular of saline compounds, either suspended by means of a linen bag, or a perforated metallic

plate. The application of this principle to the preparation of medicated tinctures, and the use of a bag to serve the twofold office of suspending the solid, and of filtering the tincture as soon as formed, I considered a novelty, and have not met with any account of its previous application to a similar purpose. I have, however, recently had the pleasure of reading the remarks of Mr. Bell, the experienced Editor of the *Pharmaceutical Journal*, on my paper in the April number of that useful periodical, by which I was first apprized of Mr. Alsop having several years ago used "a perforated diaphragm or plate, fixed above the middle of a jar, on which the ingredients for making infusions were placed." A similar arrangement to this was likewise proposed by me, in ignorance of Mr. Alsop's paper, as being occasionally serviceable in making tinctures as well as infusions; but, since that suggestion was made, I have found this arrangement frequently inapplicable, and that while it will only answer satisfactorily in preparing a few, it is objectionable in making the majority of the official tinctures. I do not therefore recommend the use of either perforated plates, or sieves of any material, in these processes.

I am happy in believing the plan under consideration is likely to attract the notice of experienced operators, through the medium of the *Pharmaceutical Journal*, and feel confident it will be found much more generally applicable than is anticipated by the Editor of that periodical. But before any correct opinion can be formed of its merits, comparative experiments should be performed on large and small quantities of similar materials, macerated together respectively by the old method and the one suggested as its usual substitute, and the results carefully noted.

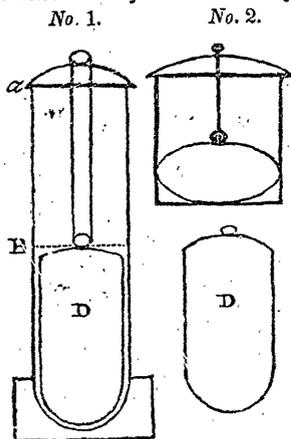
With the desire of arriving at accurate conclusions, I have greatly multiplied my comparative experiments on small quantities; and by the kind assistance of Mr. Whitfield, the apothecary of St. Thomas's Hospital, I have likewise been enabled to perform several experiments on large quantities of the requisite materials, since the bag process was proposed. The results of these numerous experiments induce me still to adhere to the opinion I have already expressed of its great eligibility, and to continue in the belief that, with certain precautions to be hereafter pointed out, almost all the medicated tinctures may be prepared by the new plan, of equal strength to the corresponding tinctures made by the old plan, with less risk of incurring a loss of strength by inattention to the degree, and repetition of the agitation which is requisite on the old plan, with less labour, and also a less expenditure of spirit. I am, however, bound in candour to add, that although the bag process may be advantageously followed in preparing almost all the tinctures, yet it has proved more eligible in some instances than in others, and the concluding remarks will explain the circumstances in particular which were supposed to influence its degree of eligibility; but none of them seem to possess an importance sufficiently great to justify a condemnation of the process without reference to comparative experiments, and least of all the circumstance of the bulks of the solids employed being variable; no material difficulty is to be apprehended on the score of bulk, although the variation is sometimes very considerable, as, for instance, between the bulks of kino and of hop, both of which are directed to be macerated in equal quantities of spiritus tenuior. This variation, however, demands attention, and must be provided for by the operator; but it is not a circumstance which interferes with the effectual maceration of bulky substances, not even of the most bulky, as hop. Now, when the bulk of the hop is compared with that of the proportional quantity of the spirit in which it is directed to be macerated, its effectual maceration seems to be at first sight impossible; but the impossibility is apparent only and not real, and the seeming difficulty may be easily surmounted by modifying

the shape and dimensions of the bag, and adapting them to those of the vessel in which it is to be suspended. When this adaptation is properly effected, all the substances without exception may be effectually covered by, and efficiently macerated in the proportional quantity of spirit.

But in my former paper on this subject, the use of a conical vessel was suggested, and the shape of the bag was that which would result from enclosing a substance in fragments in a piece of linen or calico with string, or a modification of the sphere; and with this arrangement, about thirty-seven of the officinal tinctures may be conveniently prepared; but the remaining eight or nine tinctures being made with very bulky solids, cannot be efficiently macerated in this form of apparatus, but require for the purpose a modification of it, as above noticed, and in which it will be practicable to immerse the solids, without being subjected to forcible compression, in the proportional quantity of spirit.

Whether the vessel is conical or cylindrical, is immaterial, provided it has the requisite capacity; but the bag, when the conical vessel is used, should be likewise conical; and when the cylindrical vessel is preferred, oblong. Their relative dimensions in both cases must be such, that no more space be left unoccupied by the bag, when loosely packed with the dried solid and introduced into the vessel, than is sufficient to allow for the expansion caused by the absorption of spirit by the solid, and be sufficient also to admit of the interposition of a thin stratum of the spirit, which remains unabsorbed between the sides of the expanded bag and the interior sides of the vessel. If this adaptation is made with common care, a free circulation of the resulting tincture will be insured, as its density varies; and an exceedingly thin stratum of interposed spirit will suffice. The bag having been prepared by the sempstress under directions, is to be filled with the substance, previously reduced to the state of disintegration directed in the London Pharmacopœia, and allowed to fall into the bag by its own gravity without the application of additional pressure, except in the examples of hop, hyoscyamus, and conium, in packing which, but particularly hop, a moderate degree of pressure will be required to contract their bulks within the requisite limits.

The bag is next to be closed, a little above the solid, by string, and finally immersed in the proportional quantity of spirit previously introduced into the macerating vessel; and with an apparatus resembling in its proportions that in the annexed sketch, to the exclusion of the conical vessel, all the officinal tinctures may be conveniently prepared.



ence to cylindrical vessels of the requisite capacity, their height should always rather exceed twice the height of the packed bag, so as to allow of it being raised under cover, and drained above the surface of the tincture. The diameter of the vessel does not materially influence the process when small quantities of solids are macerated; but when large quantities are employed, a vessel of a larger diameter, and shallower than that represented on the sketch No. 1, with a bag to correspond, and made so as to expose as extended a surface of the solid as possible to the action of the solvent, with the least depth, would be preferable to the oblong bag, as being more favourable to the perpendicular circulation of the tincture through the solid, as in the sketch No. 2.

But while, on the one hand, by an apparatus of the kind suggested, the bulks of the substances to be macerated in it is a circumstance of secondary moment; on the other, their chemical nature and state of aggregation continue to exert considerable influence over the process, and materially affect the rate of circulation through them. The circulation of the resulting tincture, for instance, varies with the solubility and porosity of the solid immersed in the spirit, as well also as with the nature of the insoluble residue left in the bag: thus, when the substance is very soluble, and contains a very small proportion of matter insoluble in spirit, as kino or guaiacum, the rate of circulation is comparatively rapid; so, also, when the substance is very porous, its extractive very soluble, and its insoluble components are likewise very porous, as in the examples of cinchona, hop, and conium, the rate of circulation is rapid, and the process goes on very favourably. But if the substance becomes viscid when saturated with spirit, as squill, and the residue is abundant and gummy, as that of jalap, opium, myrrha, and assafoetida, or is feculent, as that of liquorice, then the rate of circulation, although rapid for some hours after the solids have been thoroughly saturated with the spirit, will become languid towards the close of the maceration, and will require to be stimulated by the interference of mechanical aid.

With the object, therefore, of quickening the circulation of the solvent through the majority of the solids used in making tinctures, the packed bag should be raised, and drained under cover, after it has been immersed in the spirit for one or two days, and again lowered as soon as the tincture has entirely ceased to drain from it. This alternate raising and lowering will have the effect of restoring animation to the circulation of the tincture stagnating in the centre of the congested solids, and should be repeated daily during the process of maceration.

This process is usually perfected in two to four days when small quantities of the respective ingredients are used, as, for instance, an ounce of a solid, and its proportional measure of spirit; but is protracted two or three days when large quantities of similar materials, as eight pounds of cinchona and three gallons of spirit, are macerated together. The influence of quantity, although evident, is nevertheless much less marked than that of the chemical nature of the substance under treatment with spirit; and by no process of maceration can the original affinities between the components of different substances be invariably subverted by the spirituous solvent in equal intervals of time. Some are more readily overcome than others under similar conditions; and this inequality of interval is rendered very apparent when the same kind of substance is macerated in different states of aggregation, and at different temperatures. It is necessary, therefore, to attend to these conditions, with the object not only of abbreviating the duration of the process, but likewise of insuring the exhaustion of the solid, and the uniform strength of the tincture. And generally, a substance in mass cannot be dissolved by spirit at a lower temperature so quickly as when the same kind of substance, being reduced either to fine or coarse powder, is macerated at a

The sketch is too simple to require explanation, but it is proper to observe, as a general guide in making the arrangement and in conducting the process, that, with refer-

higher temperature. It is, moreover, probable, that the components of some substances are extracted at the higher, and not at the lower temperatures; for instance, a stronger and better tincture may be prepared by macerating the materials together at a temperature of 65° to 70°, than with similar materials used at a temperature of 50°; and I believe no extension of the time of macerating them at the lower degree would compensate for the deficiency of heat. The quality of the solids, whether good or bad, as well as the states of dryness in which they are used, are other circumstances which also influence the strength of the tinctures made with them and should be taken into calculation in comparing the results of any experiments together.

(To be Continued.)

FORENSIC MEDICINE.

We have been favoured by a friend with four numbers of the *Carlisle Journal*, containing the minute details of a very important investigation by W. Carrick, Esq., coroner, on view of the body of Mr. John Graham, yeoman, of Grimsdale, whose death was supposed to have been the result of the administration of poison. Deceased was a man well known in that part of the county in which he resided, as an intelligent, industrious, amiable, and highly respectable farmer. Suspicion pointed to the son as the author of the unnatural crime, who was not only Mr. Graham's heir, but also a farmer standing high in his profession for his intelligence and success in many departments of agriculture. During the progress of the investigation, which was adjourned to several sittings, and which appears to have been conducted in a manner highly creditable to the coroner, rumours got abroad that suspicious circumstances attended the decease of the son's wife, an event which occurred in the month of November of last year. Shortly after her death, suspicions as to foul play extensively prevailed, but they were speedily lulled, nor were they revived until the death of his father, under precisely similar symptoms, enhanced, too, after the development of similar symptoms, though not terminating fatally, in six other individuals, all of whom partook of the same cake, at different intervals, and which appears to have contained the poison. The evidence criminating the son in the death of the father, appears to have been by no means conclusive; it amounted to no more than his having been near a place in which stood a pot of yeast, and which evidently had been employed in the manufacture of the cake. But this circumstance, coupled with the singularity of his demeanour during his father's illness, and after the fatal issue, and the undoubted fact of his having been the guilty agent in his own wife's destruction, points to his active agency in this case also, with a probability, amounting almost to a certainty. The verdict of the jury in the case of John Graham, the father, put the mildest construction possible

on the occurrence, recording it as their opinion—"that the deceased died from the effect of poison wilfully administered to him; and they record their verdict of wilful murder against some person or persons unknown."

The case of the wife is particularly interesting in a medico-legal point of view, presenting another instance of the ready detection of arsenic in the human body, after months of interment, and the decidedly preservative powers against rapid decomposition of the animal tissues which that substance possesses. The evidence criminating the husband in this case was most conclusive, and the jury unanimously returned their verdict in three counts:—

1. "That Margaret Graham died from taking arsenic.
2. "That such arsenic was administered by design.
3. "That the person who administered it was John Graham."

In the chemical examinations requisite, and undertaken in both instances, Reinsch's test has been brought prominently forward, and its value amply demonstrated. We subjoin the medico-legal reports of both cases, as possessing great interest, and being very creditable to the parties concerned in this department of the investigation:

THURSDAY, MAY 22.

Post Mortem Examination of John Graham.

EXTERNALLY.

Considerable discoloration of the depending parts of the body, and signs of commencing putrefaction.

INTERNALLY.

Brain healthy.

Chest, Lungs.—Right one shrunk, and much smaller than the left, apparently from a previous attack of pleurisy. A great number of old adhesions of considerable length.

Left lung healthy, though a few slight adhesions existed there also.

Heart.—Healthy in every respect, and containing a small quantity of blood.

Esophagus.—Considerable inflammation of the mucous membrane of the left side of the pharynx, or upper part of the gullet, which was of a red colour, and became much brighter on exposure to the air. There were also several dark spots caused by blood effused below the mucous membrane, as was seen on removing that membrane. The same appearance continued the whole length of the gullet, though in a much slighter degree.

Stomach.—Its inner surface near the cardiac orifice (or where the gullet joins it) was of a uniform redness, and presented the appearance of a severe inflammation having existed before death. On exposure to the air, the redness became much brighter, and more distinctly marked. The redness was of a triangular form, with its base next the termination of the gullet; it extended along the lesser curvature of the stomach, gradually tapering to a point close to the pylorus, or other extremity of the stomach. On removing the mucous membrane, which covered the inflamed part, morbid redness was visible along with several small patches of effused blood. The discoloration along the larger curvature of the stomach was slight, though here several small spots of effused blood were also seen.

Duodenum, or first portion of the small intestine joining the stomach.—Marks of inflammation were also here present, with numerous spots of effused blood, about the size

of split pease, in the course of the blood vessels, as seen on removing the mucous membrane. The marks of inflammation were seen both in that membrane and in the tissue below on its removal. Rectum slightly vascular, but not more so than might have been expected at his age.

The other abdominal viscera did not present any appearance requiring comment.

CHEMICAL ANALYSIS.

1. An ounce weight of the cake was cut into pieces, and boiled in six ounces of distilled water, with two drachms of muriatic acid. Three small bundles of the finest copper wire were successively introduced, and boiled in this liquid. On their removal the bright colour of the copper was found to have been completely converted into an iron grey.

2. A comparative experiment was then made with the same quantity of muriatic acid, distilled water, and copper wire. After boiling for the same length of time, the copper was removed unchanged.

3. The iron grey wire having been previously carefully washed and wiped dry, was then introduced into a test tube, and heated to a low red heat. A white ring sublimed, and the copper wire lost its iron grey colour. On examining the white ring through the microscope, an abundance of crystals with equilateral triangular facets or surfaces were distinctly seen. About a drachm of distilled water was then introduced into the tube, and boiled till the white ring was dissolved, the copper wire having been previously removed. When cold, the three following tests were applied:—

1. On the addition of the ammoniaco-nitrate of silver in solution, there was a well marked yellow curdy precipitate, which soon became brown.

2. On adding a solution of the ammoniaco-sulphate of copper, a very slight green colour resulted, not very distinct at first, but which, on standing, deposited a well marked green precipitate.

3. On passing a few bubbles of sulphuretted hydrogen gas through the remainder in the tube, a bright yellow was immediately the result.

The liquid in which the cake had been boiled was then filtered, and a stream of sulphuretted hydrogen gas was passed through it. The excess was driven off by boiling, and the liquid filtered. A very copious orange-coloured precipitate which had settled in the bottom of the vessel was carefully collected and dried. A portion of it was then heated in a test tube, with twice its bulk of black flux, which had been previously carefully dried. A beautiful metallic ring was sublimed, brilliant, shining, and with a distinct, dull, granular surface internally.

The Flour.—This was submitted to the same process that the cake had undergone. There was no deposit upon the copper wire, which came out untarnished.

Butter.—The same steps were gone through as with the cake and flour. The copper wire came out untarnished.

Contents of the Stomach.—These were filtered, two drachms of muriatic acid added, and copper wire boiled in the liquid. No change was produced in the copper wire.

Mucus scraped from the Stomach.—This was dried on filtering paper, and put into a test tube with wood charcoal, and heated. No result could be obtained on account of the empyreumatised moisture, which obscured the tube.

The Stomach.—This was cut into pieces, and boiled in a gill of distilled water, with half an ounce of muriatic acid. The liquid was then strained, and boiled with half an ounce of acetic acid to deposit the animal matter. After straining, this was again boiled with animal charcoal, (purified and recently incinerated,) for the purpose of clearing the liquid. Copper wire boiled in this became partially coated with grey. On treating this wire in a test tube, a white crystalline ring was sublimed, in which numerous octohedral crystals and triangular facets were distinctly seen.

The Liver.—About one-third, cut into small pieces, was

boiled in eight ounces of distilled water, with two ounces and three quarters of muriatic acid. Copper wire was boiled in this. It was partially coated with a grey colour. After washing and drying, it was heated in a test tube. There was a faint white ring sublimed, but no characteristic crystals could be seen under the microscope.

Sixteen ounces weight of the liver was put into an evaporating basin of Berlin porcelain, with two ounces and a half weight of pure sulphuric acid, previously tested. This was put in a sand bath, where it was allowed to remain till it became carbonized. To the ash six drachms of pure muriatic acid, and the same quantity of pure nitric acid, were added. The whole was then placed in the sand, both evaporated to dryness and incinerated. The ash was powdered and boiled in six ounces of distilled water. One drachm and a half of muriatic acid was then added, and copper wire boiled in it. On its removal, it was of an iron grey colour, with here and there the copper tinge. On heating the wire to a low red heat in a test tube, a white ring was slowly sublimed. On examining this in the microscope, the octohedral crystals and triangular facets were distinctly seen.

The Blood.—To four ounces of this, half an ounce of muriatic acid was added. Copper wire boiled in this became of a grey colour, and on heating it at a low red heat in a small test tube, a white crystalline ring was observed under the microscope. This showed the octohedral crystals, and triangular facets, with remarkable distinctness.

REPORT.

From the well marked appearances of acute inflammation in the pharynx, stomach, and duodenum, and from the circumstance of arsenic having been detected in the substance of the stomach, the liver, and the blood, we are of opinion that the death of the deceased was caused by taking arsenic.

THOMAS ELLIOT, Surgeon.
RICHARD JAMES, M.D.

FRIDAY, JUNE 6, 1844.

Post Mortem Examination of Mrs. Margaret Graham, of Kirk Andrews, who died on November 27th, 1844.

Grave deep—soil dry—coffin made of oak, and quite perfect. The nails not rusted, and the inscription on the plate very little erased. The words were “Margaret Graham, aged 45 years, 1844.”

The winding-sheet was marked with the initials M. H., with the figure 2 below, and was damped with a yellowish fluid. It was also completely covered with mould, which presented the appearance of fine cotton wool spread over it. On removing this substance from the face, the latter appeared of a yellowish brown colour, and the skin almost of the consistence of shoe-sole leather, except over the gristly part of the nose, where it was soft. The upper lip was shrunk, and the teeth projected beyond those of the lower jaw. The eyelids were soft, moist, and much depressed; the eyeballs collapsed, but their different textures quite distinct. The hair was of a grey colour, long, and very easily pulled out. The integuments of the chest were of a dullish green colour in front, and the cuticle peeled off with the slightest rubbing. The integuments of the belly presented the same appearance,—they were soft and elastic.

INTERNAL EXAMINATION.

The Head.—On removing the upper part of the skull, a large quantity of air was found distending the outer membrane covering the brain. The different membranes presented nothing particular in appearance. The brain itself was very soft, but its component parts could be easily distinguished by their difference in colour. There was no appearance of any disease discovered.

Chest—Lungs.—Their surface was of a pinkish grey co-

lour, and healthy mottled appearance. Air was effused here and there between the lungs and pleura, or membranes covering them. The lungs crepitated under pressure, floated in water, and after being well squeezed, could not be made to sink. They were healthy internally, and free from adhesions externally. About a pint of bloody serum was removed from the two cavities of the chest.

Heart.—There was no fluid in the pericardium, the interior of which was of a redder colour than natural. The interiors of the two cavities of the right side of the heart were of a deeper red colour than natural, and contained a small quantity of fluid and clotted blood. The remaining two cavities of the heart were empty, and presented a healthy appearance.

Alimentary Canal.—The soft palate in a great measure deficient.

The Gullet.—Its internal surface was much redder than natural, with a number of small transparent gritty particles adhering to it.

About two inches from the stomach, we found a transparent crystal, about the size of a raisin stone, firmly adhering.

The Stomach.—The end where the gullet joins was of a dull, dark, red colour externally, where in contiguity with the spleen. The other end of the stomach presented the same red appearance. There was slight venous congestion along the small curvature.

Internally.—The contents of the stomach, (not more than three or four table-spoonfuls of fluid,) were collected. The internal surface presented great redness, corresponding in situation to that seen externally; numerous gritty particles, some yellowish, others transparent, were seen in the mucus, and firmly adhering to the lining membrane of the stomach. On the posterior surface, a small yellow spot was seen, about the size of a split pea, at a short distance from where the small bowel arises.

The small and large intestines were found nearly empty. The gritty particles, such as had been noticed in the gullet and the stomach, were seen in great numbers along their whole length in the mucus, and adhering to the lining membrane. In some places the bowels were much reddened, with here and there patches of a greenish yellow colour.

The remaining viscera presented no appearance requiring special notice.

It is worthy of remark that the whole of the body, with the exception of the brain, was in a wonderful state of preservation.

CHEMICAL ANALYSIS.

The Contents of the Stomach.—On careful analysis, no traces of any poison were obtained.

Mucus of the Stomach.—A portion of this was carefully scraped off, washed in distilled water, and allowed to settle. A crystalline sediment was deposited, carefully dried, and heated with black flux, a characteristic metallic ring sublimed, bright and shining externally, dull and granular internally.

The Stomach.—Was cut in small pieces, and boiled with an ounce of water, and half an ounce of muriatic acid. Several bundles of copper wire were successively introduced, and on their removal presented an iron grey appearance. On heating one of these bundles in a test tube, a white ring very slowly sublimed, which appeared distinctly crystalline to the naked eye. Under the microscope it showed octohedrons, with equilateral triangular facets, with remarkable distinctness.

The Intestines.—These were cut in pieces, and carefully washed in distilled water. This water, on being allowed to stand, deposited a crystalline sediment, which was carefully removed, washed, and dried. This was then heated in a test tube with black flux, newly dried at a red heat; a broad characteristic metallic ring was then sublimed. The

part of the tube containing this ring was cut off and enclosed in another tube. On the application of heat, the metallic ring sublimed in the form of a white crystalline ring. A pocket magnifying glass distinctly showed the octohedral crystals, and triangular facets. A few drops of distilled water were boiled in the tube containing these crystals, and divided into three parts. The first of them gave a yellow curdy precipitate, with a solution of the ammoniaco-nitrate of silver. The second gave a green precipitate, with a solution of the ammoniaco-sulphate of copper. The third was exposed to a stream of sulphuretted hydrogen gas, and gave a beautiful yellow precipitate.

REPORT.

From the circumstance of our having detected arsenic in the gullet, stomach, and bowels, in considerable quantity; from the remarkable state of preservation in which we found the body, and from the appearances observed on dissection, we are of opinion that the deceased had taken arsenic in sufficient quantity to cause death.

THOMAS ELLIOT, Surgeon.
RICHARD JAMES, M.D.
GEORGE SINNISWOOD, M.D.
JOSEPH CARTMELL, M.D.

THE BRITISH AMERICAN JOURNAL

MONTREAL, SEPTEMBER 15, 1845.

It will be seen by our title page, that the Editor has associated to himself Dr. MACDONNELL in the management of this Journal. From that gentleman's experience in the conduct of a periodical of this nature, having been for many years the Editor of the *Dublin Journal of Medical Science*, we entertain the hope, that the division of labour which is consequent upon the change now announced, will tend materially to its advantage in many respects.

As it is intended that a portion of the pages of the Journal will be devoted to reviews, the present opportunity is taken for announcing, in a more definite manner than has previously been done, that new works bearing on *Medicine, or any of the natural sciences*, will be received for that purpose, while from the large circulation which it enjoys among the scientific community of these Provinces, a direct means is thus afforded for introducing them to their particular notice. The attention of American and British publishers is especially requested to this notification.

In Great Britain, works intended for review in this Journal, may be addressed to the care of Messrs. Longman and Co., Booksellers, Paternoster-row, London, who will duly forward them, when opportunity presents, to this country.

PROVINCIAL MEDICAL ASSOCIATION.

Since the publication of the last number of our Journal, events of no mean importance have transpired in the medical community of this Province, which, were

we to consult our private feelings on the matter, we would fain bury in oblivion. Our duty as a journalist, compels us to an opposite course, and unpleasant though the task be, this obligation is paramount to all other considerations. The last few weeks have witnessed the frustration and overthrow of a scheme—the formation of a “Provincial Medical Association,” at the very moment of its consummation. They have exhibited the fact of a project, calculated in its very nature to have produced the greatest benefits to the Province, thwarted and strangled in its very birth, by the very parties who, for several months, had watched with an apparently anxious care, its progressive development—a scheme which, viewed either in its relations to the Profession itself or to the community at large, was an advance, to say the least, to the adoption and the maintenance of that *position* which the former ought to possess, as well from its numbers as its intelligence, and which we feel confident the latter would desire to see it enjoy. We expressed, in our last, our fear of the supervention of difficulties; our anticipations have been realized, and much as the circumstance is to be regretted, we cannot avoid the reflection, that the parties who have been instrumental in its failure, have placed themselves in no enviable position towards the mass of the Profession of this Province, to whom they are clearly responsible, and that the influence which they appear to have possessed should not only have been perverted from its proper use, but that parties could be found, who, regardless of consequences, could so readily have acknowledged its potency. What the object which has been secured by the frustration of the measure, or what the motives which have dictated the conduct which has terminated in that result, we cannot divine. We view the failure, however, as but a temporary one, for measures will shortly be taken to *establish the “Association”* although the means to effect the object must and will be different.

We shall now only further remark, that as the Convention, the nature and objects of which were detailed in our last number, was intended to have been exclusively confined to the *Delegates of the different Medical Societies of the Province*, as appears evident from the official correspondence of the Societies, in which this principle appears throughout to have been distinctly recognised, the Medico-Chirurgical Society of this city, to obviate the very likely supervention of a difficulty, and to remove as far as possible every thing tending in the slightest degree to discord or disunion, amplified the powers of its delegates, by authorising them to meet in Convention delegates from *district meetings of the profession*, having no connection with medical societies,

With these introductory remarks, which we assure our readers we have not the slightest inclination to extend, we shall place in detail authentic reports of the proceedings which have originated them, in the order in which they have occurred. The report of the delegates of the Medico-Chirurgical Society, which will be seen on another page, will be found to contain a minute detail of the proceedings on the 20th ult. up to the period when these gentlemen left, and will prove a wholesome interpreter of the nature of the “conciliatory” measures, and the cause of the necessity for them, alluded to in the official account of the proceedings of that day.

DISTRICT MEETING OF THE PROFESSION.

At a meeting of the members of the Medical Profession of the district of Montreal, held at the Court House Montreal, pursuant to public notice, on the 19th day of August, 1845. The following gentlemen were present:

Drs. Arnoldi, Sen., Arnoldi, Jun., Alexander, Barber, Boucherville, Bruneau, Boyer, Bowie, Bibaud, Carter, C. Campbell, Coderre, Charlebois, Cartier, Cushing, D'Amour, Decrets, David, Ensley, Fisher, Fraser, Fortier, Godfrey, Holmes, Hall, Hebert, Jigon, Kimber, Long, MacDonnell, McCulloch, Morson, McGale, McKenzie, Munroe, Jun., Mount, Nelson, Sen., Nelson, Jun., Papineau, Picault, Poulin, Pominville, Rosenstein, Rowand, Regnault, Richelieu, Roi, Regnier, Scott, E. Sewell, C. S. Sewell, E. Sabourin, Sutherland, Trudell, Tavernier, Trester, Valois, Weibrenner.

On the motion of Dr. Wolfred Nelson, seconded by “*le doyen*” Dr. Arnoldi, Dr. Valois was unanimously called to the chair.

On the motion of Dr. H. Nelson, seconded by Dr. Munroe, Dr. Bibaud was unanimously chosen Secretary; when it was proposed by Dr. Fisher, seconded by Dr. Fraser—That Dr. David be appointed Joint Secretary. The President declined to receive the motion, and remarked that the motion was contrary to all usage in such meetings, as Dr. Bibaud had been unanimously chosen, and was equally well acquainted with the French and English languages, and a second Secretary was, therefore, perfectly useless. Dr. Fisher persisting in his motion, called for a division, when it was carried—the votes being 24 for, and 23 against it.

For—Drs. Fisher, Fraser, Barber, Holmes, Scott, C. A. Campbell, Chas. Sewell, Bruneau, Crawford, Hall, Rosenstein, Godfrey, Edw. Sewell, Long, Boucherville, Sabourin, Papineau, Rowand, Picault, MacDonnell, McCulloch, Boyer, Bowie, Morson—24. Against—Drs. Arnoldi, senr. McGale, Regnault, Trudell, Nelson, sen., Tavernier, Coderre, Poulin, Charlebois, Kimber, Carter, Ensley, Munroe, Nelson, jun. Jigon, Richelieu, Cartier, D'Amour, Hebert, Pominville, Decrets, Arnoldi, jun., Bibaud.—23.

Dr. David declined voting.

Dr. W. Nelson then offered a few remarks to the purport of not allowing the delegates chosen by the Medico-Chirurgical Society of this city to take any part in the proceedings of the day, and was replied to by Dr. Papineau. Dr. Arnoldi, jun., also spoke in favour

of Dr. Nelson's remarks, and was answered by Dr. Holmes. Dr. Arnoldi, jun., again addressed the meeting, and read extracts from two letters received by him from Dr. Painchaud, of Quebec, and concluded by moving, seconded by Dr. W. Nelson—"That the five delegates elected to represent the Medico-Chirurgical Society, are disqualified, in virtue of such election, from taking part in the election of delegates at this meeting," when, after some discussion, Dr. Arnoldi withdrew his motion.

It was then moved by Dr. Fraser, seconded by Dr. Crawford—"That Drs. Sabourin, Weilbrenner, Alexander, Smallwood, and Grosbois, be the delegates of this district, to meet the delegates from Quebec, Toronto, &c."

When it was moved in amendment by Dr. Coderre, seconded by Dr. Sutherland—"That Drs. Kimber, Nelson, Arnoldi, jun., Grosbois, and Valois, be the delegates to represent the district of Montreal." The votes being taken on Dr. Coderre's motion, it was carried—the votes being 32 for, and 26 against it.

For—Drs. Arnoldi, jun., Cushing, Arnoldi, sen., Sutherland, Rosenstein, Tavernier, McGale, Regnault, Ensey, Trudell, Kimber, Nelson, senr., Carter, Charlebois, Coderre, Poulin, Nelson, junr., Gariepie, Jigon, Richelieu, Decrets, Pominville, D'Amour, Hebert, Munroe, Regnier, Cartier, Roi, Labourdais, Cartier, Boucherville, Bibaud.—32. Against—Drs. Fraser, Barber, Scott, Crawford, Mount, Hall, Fortier, Alexander, Stewart, Bruneau, Holmes, Boyer, Campbell, Bowie, Godfrey, Thurbar, McCulloch, Long, MacDonnell, Sewel, Weilbrenner, Sabourin, Papineau, Picault, Fisher, David.—26.

There being no further business, the meeting adjourned.

M. F. VALOIS, Chairman.
A. H. DAVID, M.D. } Secretaries.
J. G. BIBAUD, M.D. }

MEETING OF DELEGATES.

(From the Courier of 4th September.)

The Delegates sent to represent the Medical Profession of the Districts of Quebec, Three Rivers, Montreal and Toronto, (Niagara and Kingston sent none), met in Convention on Wednesday the 20th instant, in the rooms of the School of Medicine, St. Urbain Street, at 11 A.M.

The Delegates from the Medico-Chirurgical Society of Montreal were also present. The Quebec Medical Society, and the Medico-Chirurgical Society of Toronto, were represented by the same gentlemen, who had been previously named by the District to which each Society belonged.

Dr. Morrin, of Quebec, was called to the Chair, and Dr. Badgley, of Montreal, named Secretary, both *pro tem*. The Delegates for the District of Quebec, were—Dr. Painchaud, Dr. Blanchette, Dr. Sewell, Dr. Morrin, and Dr. Rousseau.

For three Rivers—Dr. Gilman, Three Rivers; Dr. Marsden, Nicolet; Dr. Fortier, Gentilly.

For Montreal—Dr. Nelson, Dr. Arnoldi, Jr.; Dr. Valois, Pointe Claire; Dr. Kimber, Chambly.

For Toronto—Dr. Hodder.

The Delegates for each District having produced their credentials; Dr. Valois of Pointe Clair, then rose and requested the meeting to consider before proceeding, whether

Montreal should have the advantage of more votes than the other Districts, seeing that when other Medical Societies existed, such Societies had entrusted its affairs to the Delegates of their respective Districts.

After considerable discussion, and after various modes of conciliation were proposed without effect, the question was about being put, as to whether the present Convention was one of Delegates of Societies, or one of the different Districts; when Dr. Badgley moved to resolve, seconded by Dr. Marsden:—

"That an Association of the Licensed Practitioners of the United Province of Canada, be now formed, with a view to excite and encourage a more extensive cultivation of all the department of medical science, and thereby to elevate the character of the Profession—to superintend, protect, and maintain the rights and privileges of its members, and to induce among them cordial co-operation, in what relates to their common calling, as well as friendship and good feeling in their private relations."

To which Dr. Rousseau, seconded by Dr. Painchaud (Dr. Fortier also offered to second it) moved the following amendment:—"Dr. Rousseau propose en amendement, que les délégués de la profession médicale des différentes districts de la Province, ici représentés, se forment immédiatement en convention, pour délibérer sur les intérêts de la dite profession."

The amendment was carried by a majority of one,—the Chairman not voting.

The votes for the amendment were:—Doctors Painchaud, Rousseau, Kimber, Gilman, Arnoldi, Jr., Blanchet, Nelson, Fortier and Valois.

Against the amendment:—Doctors Badgley, Fraser, Marsden, Crawford, MacDonnell, Hodder, Sewell and David.

Immediately after the passing of the motion, the minority protested verbally and retired, excepting Dr. Sewell, who having voted in his capacity of Delegate from the Quebec Medical Society, remained to discharge his duty as Delegate of the District. Dr. Rousseau handed a motion to the Chairman, who requested the retiring members to hear it read before leaving, which they declined, and immediately left the room. The motion ran thus, "Moved by Dr. Rousseau, seconded by Dr. Painchaud, that the Delegates from the different Societies do meet to-morrow morning at eleven o'clock to concert a plan for a general Medical Association of the Province." During the discussions, Dr. Hodder of Toronto read portions of his instructions, which he stated were positive, and from which he could not deviate. They were to this effect: that his constituents considered the plan of a Medical Association for the whole Province, as not practicable or necessary, and that they preferred having a Medical Bill, which would apply exclusively to their section of the Province. And doubted his power of voting in any questions which might be mooted, unless they were in accordance with his instructions.

The delegates of Districts then remained and formed themselves into convention, when Dr. Morrin was again called to the Chair, and Dr. Arnoldi, Jr., was appointed Secretary to the convention.

The Committee then proceeded to read over and discuss the Medical Bill, which was introduced in the last Session of Provincial Parliament. After various suggestions from different members about the Bill and a Tariff, sundry memoranda were placed in the hands of the Secretary, and he was requested to draw up a Tariff and Medical Bill in accordance with the views and suggestions of the meeting, which he should submit with the least possible delay to the Delegates in convention. At four o'clock the meeting adjourned, *sine die*.

JOS. MORRIN, Chairman.
FRS. C. T. ARNOLDI, Secretary.

MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

This society held an extraordinary meeting on the 4th instant, for the purpose of taking into consideration the Report of the Delegates from the Medico-Chirurgical Society of Montreal, appointed to meet the Delegates from the Medical Societies of Quebec, Toronto, and Three Rivers, at the convention held on the 20th ult.

Dr. Badgley laid the following report before the Society :—

“The Delegates appointed by the Medico-Chirurgical Society of Montreal to represent its interests at the convention called for the 20th instant, beg to report, that, in accordance with arrangements previously made, they met the following gentlemen on the above named day, at the Rooms of the School of Medicine and Surgery of this city.

- | | | |
|---|---|---|
| Drs. Valois,
Nelson,
Arnoldi,
Kimber, | } | Delegates from the District of Montreal. |
| Marsden,
Gilmour,
Fortier, | | |
| Morrin,
Painchaud,
Blanchet
Rousseau,
Sewell, | } | Delegates from the Quebec Medical Society and the District of Quebec. |
| Hodder— | | |

Delegate from the Toronto and Niagara District Medical Societies. Two delegates from the latter attended at the meeting of the former on the 15th Aug., and concurred in the appointment of Dr. H. as sole representative.

“Dr. Morrin having been unanimously called upon to take the chair, and Dr. Badgley to act as Secretary, *pro tem.*, the delegates presented their credentials from the bodies which they respectively represented.

“Before the announcement from the chair of the objects for which the convention had met, Dr. Nelson rose and enquired whether it was intended that the *nine* delegates from Montreal should be permitted to exercise their right of voting, seeing that there were but *five* to represent the Medical Society and District of Quebec, *three* the Districts of Three Rivers and St. Francis, and *one* the Societies and Districts of Toronto and Niagara. This gave rise to a lengthened discussion, in the course of which, among other conciliatory measures, it was proposed by your delegates, that the five gentlemen representing both the Medical Society and District of Quebec should be permitted to have ten votes. With a view to proceed to business, and to carry out the plan originally designed by the Medico-Chirurgical Society of Montreal, and to continue the measures subsequently adopted by the other societies in the Province, it was moved by Dr. Badgley, seconded by Dr. Marsden,

“That an association of the licensed practitioners of the United Province of Canada, be now formed, with a view to excite and encourage a more extensive cultiva-

tion of all the departments of Medical science, and thereby to elevate the character of the profession; to superintend, protect, and maintain the rights and privileges of its members; and to induce among them cordial co-operation in what relates to their common calling, as well as friendship and good feeling in their private relations.”

“To this an amendment was moved by Dr. Rousseau, seconded by Dr. Fortier :

“Que les Délégués de la profession Médicale des différentes districts de la Province, ici représentés, se forment immédiatement en convention, pour délibérer sur les intérêts de la dite profession.”

“The amendment being put from the chair, was carried by a majority of one, the votes being

For the Amendment,

- Drs. Arnoldi,
Blanchet,
Fortier,
Gilmour,
Kimber,
Nelson,
Painchaud,
Rousseau,
Valois.

Against it,

- Drs. Badgley,
Crawford,
David,
Fraser,
Hodder,
Marsden,
MacDonnell,
Sewell.

“The amendment of Dr. Rousseau having been carried, your delegates, being the representatives only of a local Society, (albeit, that the Society which they represented had originated the scheme, which the Convention of delegates was to have ratified,) felt that they were virtually excluded from taking any farther part in the business of the meeting, and having verbally protested against the extraordinary line of conduct adopted by the majority, withdrew. They were accompanied also by Drs. Hodder and Marsden.

“Had Dr. Badgley’s original motion been carried, the following, which was to have been moved by Dr. Crawford, seconded by Dr. Sewell, and which had been more than once read to the meeting before Dr. Rousseau’s amendment was put, would have been proposed:—

“That we, the delegates named by the different *Medical Societies and Districts* of this Province, to represent them at this meeting, do hereby agree to form ourselves into and constitute ‘The Provincial Medical Association of Canada.’”

“Your delegates deeply deplore the result of the day’s transactions, and the temporary defeat of a measure calculated, without the slightest reference to party or private interest, religion or race, to effect so much benefit not only on the Medical Profession, but on the public generally, and in expressing their regret, they feel reluctantly compelled to attribute the event to the conduct of some of the representatives of the Quebec Medical Society, as well as of certain members of *this* Society, who, in raising the question as to the right of voting, demonstrated most distinctly and forcibly their determination to exclude your delegates from all participation in the business of the meeting, and to treat the Society which they represented with the most bitter contempt. They beg leave, however, to allude to certain circumstances connected with the meeting, upon which they would congratulate their fellow members.

“1st. The gentlemanly demeanor, strict impartiality,

and conciliatory disposition evinced by Dr. Morrin, as the chairman of the meeting.

"2nd. The approval of the views taken by your delegates, as evinced by the votes of Drs. Sewell, Hodder, and Marsden, and also by the declaration of Dr. Morrin, to the effect, that had he not been in the Chair he should have voted with the minority, or had there been a "tie," he should have given his casting vote to the same side. He also distinctly charged his own townsmen and others, who *subsequently* voted in the majority, that it was clear to his mind, "that they were for war, while the other party were for peace."

"And 3rdly. The enjoyment by the Medico-Chirurgical Society of Montreal of the confidence and respect of the Sister Societies of Canada West—Dr. Hodder having publicly as well as privately stated in the course of the day, that he had been sent down to the Convention purely out of compliment to the Medico-Chirurgical Society of this city.

"In conclusion, while your delegates would strongly urge upon the Society the renewed exercise of its best efforts to carry out the plan of establishing a Provincial Medical Association, they would most respectfully recommend the principle and mode of action recognized in the resolutions passed at the meeting of the 8th March last, as the basis of the contemplated scheme and the guide of their future conduct.

All which is most respectfully submitted.

FRANCIS BADGLEY, M. D.
JAMES CRAWFORD, M. D.
ROBERT L. MACDONNELL, M. D.
W. FRASER, M. D.
A. H. DAVID, M. D

Montreal, 30th August, 1845.

Moved by Dr. Hall, seconded by Dr. Morson—

Resolution 1.—That the Report of the delegates of this Society to the meeting called for the 20th ult., be received by the Society, approved of, and entered on the Minutes.

Carried; with only one dissentient.

Moved by Dr. Fisher, seconded by Dr. Scott—

Resolution 2.—That the best thanks of the Medico-Chirurgical Society of Montreal are most justly due, and are hereby given, to the delegates who represented it at the Convention on the 20th ultimo, for the firm stand which they took on that occasion, when its interests were menaced, its franchise assailed, and its position as a body treated with contempt.

Carried unanimously.

Moved by Dr. Scott, seconded by Dr. Bowie—

Resolution 3.—That the Society, sensible that a feeling has been excited hostile to it, and totally at variance with its proposed object, of establishing a friendly union among the members of the Profession generally, deprecates the course adopted by certain of its members, at the meeting of the 20th ultimo.

Carried unanimously.

Moved by Dr. Fisher, seconded by Dr. McCulloch—

Resolution 4.—That before taking any further action in the formation of a General Medical Association, as proposed and determined upon in the resolutions adopted at its meeting on the 8th March last, the Medico-Chirurgical Society of Montreal feels it due to itself to require from the Medical Society of Quebec a positive expression of its feelings, as approving or otherwise of the conduct evinced by the majority of its representatives, at the Convention on the 20th ultimo, towards the representatives of this Society.

Carried unanimously.

Moved by Dr. Bowie, seconded by Dr. Scott—

Resolution 5.—That a copy of the Report of the Delegates, as well as of these resolutions, be immediately transmitted by the Secretary to the Secretaries of the Quebec, Toronto, and Niagara Medical Societies, and that they be inserted in the *British American Journal of Medicine*, and also in one of the French and English papers of this city.

Carried unanimously.

Published by order,

ROBERT L. MACDONNELL, M.D., Secretary.

At a meeting of the Governors of the University of McGill College, held on the 12th inst., Dr. Papineau was appointed to the Chair of Botany. He will not commence the active duties of his department until the next Summer Session, May, 1846.

Along with the present number of this Journal, our subscribers will receive accounts for their subscription for the current year. The expenses incident to the publication of a periodical of this magnitude in this country are large; and feeling assured that the Journal is very generally approved, we are satisfied that the hint now thrown out will not be lost. It is particularly requested that the trifling amount be remitted to the publisher in a post-paid letter, after which a receipt will be transmitted by the first opportunity.

BOOKS, &c., RECEIVED DURING THE MONTH.

Braithwaite's Retrospect. January to July, 1845.
London & Edinburgh Medical Journal. May, 1845.
American Journal of Insanity (Utica).
Illinois Medical & Surgical Journal. No. 5.
Medical Examiner (Philadelphia.) September.
Southern Medical & Surgical Journal.
Boston Medical & Surgical Journal.
Buffalo Medical & Surgical Journal.
St. Louis Medical & Surgical Journal.

NOTICE TO CORRESPONDENTS.

We acknowledge receipt of letters from Professor Croft, with circular of King's College, Toronto; Dr. Foster, (Shefford); Dr. Taylor, (Ristigouche), with enclosure; Dr. Grasset, (secretary of Toronto Medico-Chirurgical Society, with enclosure); Dr. Gesner, (Cornwallis, Nova Scotia)—any communication from Dr. G. will be received with pleasure; Dr. H. Gilchrist, (Port Hope), with enclosure; Dr. Cartier, (Beauharnois); Dr. Hamilton, (Toronto), with enclosure; and Dr. Marsden (Nicolet.)

Dr. Marsden's communication, arrived this morning, is too late for insertion in this number.

The Hospital reports and Meteorological report for the city of Montreal, are crowded out.

We have concluded upon omitting for the future, the Meteorological report of the city of Quebec, in consequence of the great difficulty we have experienced in obtaining it. We expect to supply its place with one from Toronto.