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CANADA

MEDICAL AND SURGICAL JOURNAL.

ORIGINAL COMMUNICATIONS.

The First Epidemic of Cerebro-Spinal Fever in Montreal. By R. P. HOWARD, M.D., L.R.C.S.E., &c.; Professor of Theory and Practice of Medicine, McGill University.

(Read before the Medico-Chirurgical Society on the 3d August.)

GENTLEMEN: Having recently seen a few cases of a disease which, so far as I can learn, has never previously been observed to have prevailed in this city, and the affection being one of a most grave nature, I have thought it might be interesting, as well as appropriate, to draw the attention of the Society to the subject.

On the 3d April last I was called to visit a boy aged nine years, residing in St. Maurice street, but attending the Christian Brothers' School in McCord street. He had been in good health until the morning of the 2nd April, when, on waking, he began to vomit. The emesis continued "off and on" all day, and the bowels moved twice. He also complained of pain in his head and stomach, and was heavy and stupid all day. He had had small-pox six years ago.

3d April, 11 a.m.—Temperature, 99 4-5° F.; Pulse, 100. Is very restless; throws himself about, and would fall off the bed if not watched. Very stupid; can be roused, but then mutters rather than speaks, and moans and screams as if hurt; resembles an intoxicated person who has not quite become unconscious. While head and body are hot, feet are cool. Tongue dry and red at point; thin white fur over centre. On neck, chest, and body generally are found purple petechial spots of various sizes and unaffected by pressure.

Diagnosis.—Acute Purpura, but whether antecedent to Cerebro-Spinal Fever or Variola cannot decide. A severe epidemic of the latter now prevails.

To be wrapped in a blanket wrung out of warm water for four hours; then to be rubbed dry. Two teaspoonsful of brandy and 1-36th grain strychnia hourly.

5 p.m.—Temperature, 102°. Much warmer; less stupid; did

not like the warm bath, and after three hours it was removed. Continue treatment.

4th, 10:30 a.m.—Temperature, 99 4.5 °; Pulse, 75, small, soft, occasionally irregular; less restless; complains good deal of pain in head, particularly forehead; still grinds his teeth; although drowsy he is less stupid looking and more intelligent; pupils active; conjunctivæ not injected; no extra heat of scalp; tongue moist, tip red, centre yellow-white; vomited once this a.m., a yellow fluid; thirsty; one alvine discharge this morning; many petechiæ upon either upper lid; a few upon face; many over rest of surface; cheeks flushed; a red circumscribed swelling of about the area of a crown piece upon the dorsum of the right hand; another as large as a sixpence upon the right instep, (these resemble the wheals of urticaria. but are not itchy); both forearms partially flexed, and tendon of biceps rigid; forcible extension painful; right ham-strings in same condition; left not; no retraction of head noticed; mouth and lips in motion as if eating.

R. Potass. Bromidi, ʒij.; Potass. Iod., ʒi.; Ergotæ Ext., Fl. ʒiv.; Digitalis Tinct., ʒiv.; Aquæ Ad., ʒvi. A dessertspoonful every two hours. Omit strychnia. Beef-tea, cold milk and barley-water as food.

5th, 10:30 a.m.—Has passed a sleepless day and night; slept only in snatches till 4 a.m., when he became quieter and began to sleep longer and better; has complained all day of pain in head and limbs; rigidity affects both arms and both legs; abdomen retracted, and its walls rigidly contracted; head somewhat retracted; no tenderness of spinous processes; brows knit; grinding of teeth persists; temperature, 101 °; pulse, 84, unequal and irregular; R., 20, regular; retches but does not vomit; small, liquid, yellow stool to-day; moderate thirst; petechiæ turning a dirty yellow, and fading as ecchymoses do; a measly mottling along the right forearm; some fresh wheals, scarlet-coloured; one at base of right great toe, another near outer malleolus, a third over right patella, (these are all very *tender* but *not itchy*); two defined pink patches, not raised, upon dorsum of left foot; a similar long red patch along radial border left forearm and thumb; one, slightly raised, the size of a sixpence, at base of right thumb.

Continue mixture; bladder of ice to vertex; another to nape of neck; Unguentum Belladonnæ. to be rubbed down the spine every three hours.

6 p.m.—Temperature, 100 4.5 °; Pulse, 108; R., 32; face more flushed; purpuric spots fading rapidly; intercostal muscles seat of tonic spasm.

To have a dose of chloral-hydrate if unable to sleep.

6th, 10:45 a.m.—Rested well all the evening and most of the night, and had but little delirium; much more collected and rational; is more conscious of his trifling ailments, and complains that his tongue is sore. This is due to a collection of aphthæ along the border of the tongue, which resemble a patch of herpes; petechiæ almost gone; wheals fading and reducing in circumference; those on left foot, which are the latest, are almost gone, and one has a yellow colour like a fading bruise-stain; temperature, 100 3-8 °; pulse, 120, small and firm; R., 28; tongue moist, borders red; yellow-white fur on centre; no emesis nor alvine discharge; urine high-coloured; depositing lithates; not tested for albumen.

Countenance open and less distressed looking; knitting of brows gone; less retraction of head; tonic spasm of other parts as before; about the flexure of the right elbow and anterior aspect of right forearm, are numerous red, congested patches, not unlike the exanthem of measles; the general appearance of the forearm reminds one of the "subcuticular rash" of typhus; puffy swelling of both elbow-joints, most marked over head of radius. Continue treatment.

7th, 9:30 a.m.—Cried so much last night from pain in the head that a dose of chloral was given, and in a few minutes he fell asleep and slept till 5 a.m.; is now perfectly sensible and somewhat cross; no trace of petechiæ; several of the red blotches still visible, but very pale; a new one not elevated upon face; slight effusion into left knee-joint, and considerable swelling of right foot, chiefly of dorsum.

In lifting him off the bed this morning his father found his body quite stiff; spasm of the flexors continues, and slight retraction of the head; bowels moved to-day; passed urine in the bed last night; temperature, 103 2-5 °; pulse, 126. Continued treatment.

8th, 11 a.m.—Slept well till 3 a.m.; slight nocturnal delirium; perfectly rational now; pupils active and of medium size; no dislike to light; pain in neck, with retraction of head; spasm of flexors continued; red patches all gone, except one which appeared upon cheek yesterday; right knee and left hip painful; two formed stools; urine abundant; pulse, 118.

9th, 11:30 a.m.—Temperature, 102 4-5 °; pulse, 120; slept well, without delirium; cervical pain and spasm, and pain in the head continue; three herpetic vesicles upon ulnar border of left thumb; less swelling of joints; one alvine evacuation; don't like the ice application.

Continue mixture. Hydrarg. c. Creta, gr. iij.; every four hours.

10th.—A good night; temperature, 102 1-5 °; pulse, 120; less

retraction of head, but spasm of flexors continues; swelling leaving the articulations; tongue cleaning rapidly; a liquid stool this a.m.; epistaxis in the night.

11th.—Another good night; perspired freely yesterday; temperature 101 3.5°; pulse, 116; no retraction of head; ham strings and bicipital tendons somewhat tense; still some effusion into both elbows and left knee; clean moist tongue. Omit grey powders, of which he has taken nine. Continue mixture.

12th.—Slept well; temperature, 100 4.5; pulse, 118; tongue a little coated; very little tension of tendons; right elbow more swollen and painful; lies chiefly on right side. Continue mixture, which has been given very regularly unless during sleep.

14th.—Continued and rapid improvement since; appetite very good.

16th.—Found at the hall door in his night shirt. He had been brought down to the parlour, and, hearing a noise at the door, tottered to it to see what was going on. His convalescence was complete and rapid.

This was the first case of so-called "Epidemic Cerebro-Spinal Meningitis" I had ever seen, and appeared to be an example of what has been called the "purpuric" variety, the "Malignant Purpuric Fever" of Stokes. Very soon after, on the 15th May, I had an opportunity of seeing, with Dr. Gardner, in the West end of St. Joseph street, a second case very like the one just related. The subject, a boy aged ten years; the seizure sudden, while in good health; the leading symptoms, early vomiting, pain in head without much heat of scalp, delirium, cerebral oppression, early appearance of petechiæ, then retraction of head, rigidity of posterior crural, abdominal and thoracic muscles, effusion into one ankle-joint, followed by comatose and typhoid symptoms, and death in the eighth week.*

On the 26th of the same month, in consultation with Dr. Fuller, a third case of the disease came under observation; this time three miles beyond the city proper, and upon the Lower Lachine road. It resembled, in most of its features, the two cases already described. A healthy boy, between eight and ten years old, suddenly seized with severe illness, early emesis, pain in the head without great heat of scalp, more or less stupor, then retraction of the head, and severe pains in various parts of the body, but neither cutaneous extravasations nor articular effusion. This case recovered.

* This and a second case were admirably reported by Dr. Gardner at the same meeting at which this paper was read.

Strange to say, on the same afternoon Dr. Bessey asked me to see, in Fortification Lane, near St. Peter street, a boy of about ten years of age, who had been quite well on the 24th May, and was suddenly seized, on the 25th, with signs of collapse, cold surface, sunken eyes, rapid small pulse, cyanotic aspect. These symptoms were followed by those of reaction, attended, however, with convulsions, delirium, restlessness and more or less stupor. He had been ill about twenty-four hours when I saw him with Dr. Bessey. He then exhibited all the symptoms of profound collapse, combined with incessant restlessness, jactitation, delirium, and more or less stupor. Death ensued the same evening. It appeared to me to be an example of the third variety of the disease described by Radcliffe, the "Fulminant" form. I don't remember whether any spots existed on the surface of this fourth case.

I have mentioned these cases seen with my colleagues only with the view of proving that the disease is truly the so-called "epidemic cerebro-spinal meningitis," as they afford examples of two of its three recognised varieties. I hope they will themselves state to the Society the features of their respective cases.

All the subjects of the preceding cases, you will have noticed, were boys between eight and ten years of age, but on the 20th June I was requested to visit, in Ottawa street, a female child twenty months old, of whom the following history was elicited: In good health till 8th June, when it appeared less lively than usual; dull and drowsy upon the 9th, but not feverish; soon vomiting set in with fever, and then general soreness of the surface, so that the child cried when moved; during the first week the child frequently put its right hand to its head. No eruption on the skin was noticed, and the mother attributed the symptoms to teething.

When seen by me on the 20th, the child was in the following condition: Appears stupid and helpless; unable to sit up; pupils large and fixed; sclerotic uninjected; strabismus, with oscillation of eyeballs; moderate retraction of head; skin presents a peculiar, light scarlet blush, from capillary injection; a scratch is soon followed by a line of deeper redness, as if the capillaries had become suddenly enlarged ("tache cerebrale"); no rigidity of extremities; face pale; features vacant.

The retraction of the head had been noticed first on the 16th. The emesis has not returned; bowels move once or twice daily; urine is passed in bed; pulse small and shabby—120-130.

To have beef-tea, a teaspoonful of wine hourly, and the following mixture: R. Potass. Bromidi, ζ iss.; Potass. Iodidi, ζ i.; Digitalis Tinct., ζ i.; Syrupi Aurantii, ζ i.; Aquæ ad., ξ iv. A tea-

spoonful every three hours. An ointment of the Red Iodide of Mercury, with Extract of Belladonna, to be rubbed down the spine every four hours, and if scalp grows hot, ice to be applied.

21st.—Rigidity of legs set in yesterday afternoon and continued at intervals to-day; left great toe is extremely extended at times; no herpes nor articular swelling; slept in snatches last night; head not particularly warm; pulse, 150—weak, small, and irregular. Continue treatment.

22nd.—General tetanic spasm seized arms and legs yesterday, and have recurred at intervals since. In these attacks, the back, arms and legs became rigidly extended; the feet extended and adducted; the left hand clenched and pronated; pulse very small and frequent; child cannot last long. Death ensued during the night.

There is some room for question as to the true nature of this case, but I have myself no doubt that it was not an example of that common affection Tubercular Meningitis. It may have been an instance of that comparatively rare disease of which I have seen a few cases, Sporadic Cerebro-Spinal Meningitis; but, in view of the recent occurrence of several cases of "Epidemic Cerebro-Spinal Meningitis," it is not improbable that it was an example of the "Simple" form of the latter affection—that in which purpuric symptoms are wanting.

As to the *nature* of this so-called "Epidemic Cerebro-Spinal Meningitis," the opinion now generally held by pathologists, that it is a peculiar form of fever and not merely a local inflammation, is probably correct. For, first, the circumstance that there are varieties in the disease, in one of which the constitutional symptoms are so intense that they may destroy life before the local lesion—the inflammation of the cerebro-spinal membranes—has been developed, places this febrile affection amongst those well-known Fevers, Typhus, Enteric Fever, Scarlatina, Variola, &c., in which, occasionally, the same malignancy is observed, and the vital powers are overwhelmed in a few hours, before time has elapsed for the evolution of the disease. Secondly, the suddenness and violence of the invasion; the profound prostration of the nervous system at the outset, in severe cases, as shown in the pale cold surface, the feeble pulse and heart's action, the intense restlessness, peculiar stupor and the delirium; and the daily occurrence of purpuric symptoms, in some cases, render it highly probable that some morbid agent, some specific fever poison has entered the system.

Such is the case in malignant small-pox, for example, in which, together with similar prostration of the nervous system, there is a marked tendency to the occurrence of purpuric symptoms at

the invasion of the disease and before the appearance of the characteristic eruption.

Previous to the appearing of this cerebro-spinal fever amongst us, the manifestation of purpuric symptoms at the *outset* of a febrile disease has, in my own experience, nearly always indicated the existence of variola, and I do not know any mere inflammatory disease in which purpuric symptoms occur *early*. That cerebro-spinal fever resembles, in these respects, small-pox, is a strong argument that it is also a zymotic disease, caused by a specific poison.

Thirdly, The same view is supported by the circumstance that in some cases of the disease no lesion of the nerve centres or their coverings is found after death; which seems to prove that the local affection is not essential, although it is usually present.

Fourthly, Its epidemic character supports the same view, for most, if not all, epidemic diseases are now held to originate in a specific febrile poison.

Fifthly, There are facts, not, perhaps, of an absolutely conclusive nature, tending to show that cerebro-spinal fever is occasionally communicable from the sick to well persons, just as cholera is; and these facts, as far as they are reliable, favour the idea that the disease has its own specific poison, like all other specific fevers.

Sixthly, The existence of well marked signs of inflammation of the meninges of the brain and cord, and of those centres themselves, is not opposed to this view; for it is quite in harmony with what is known of other fever-making poisons to suppose that in this affection the poison has a special action upon the nerve centres and their coverings, just as the poison of typhoid fever has upon the intestinal glands, and the poison of whooping cough upon the pneumogastric nerve or its centre. Indeed, it is only upon the supposition that some specific poison has produced a specific form of disease that one can explain the epidemic prevalence of inflammation of the cerebro-spinal centres; primary or idiopathic cerebro-spinal meningitis, in healthy persons, being of so rare occurrence, if it occur at all, that the pathological doctrines of the day deny its existence. Sporadic inflammation of the membranes of the brain and cord is a rare affection, and originates either as a manifestation of some fever, such as typhus, or variola, or pyæmia, or of some constitutional disease, as syphilis, gout, rheumatism or tuberculosis; or is secondary to some local lesion, such as injury or disease of the bones, effused blood, tubercle, and morbid growths, &c.

I have nothing to say from personal experience respecting the best method of *treating* the disease. From the varying but always

high mortality of the several epidemics recently witnessed in the United States and in Continental Europe it may, I fear, be inferred that we possess little power over the course of the disease.

Recognising the disease as a FEVER, modern experience suggests, if I am not mistaken, that the province of the physician quoad its treatment is to *guide*, not to drive it to a favourable termination. Before this audience it is unnecessary to discuss the general principles upon which this, in common with all fevers, is to be treated; but as in typhoid fever or scarlatina, for example, there are certain special indications to be fulfilled; so there are in cerebro-spinal fever, and upon these I will offer a few observations.

The main, special indication appears to be, to lessen the severity and prevent the extension of the inflammatory process, engaging the cerebro-spinal membranes and, more or less, the centres they enclose.

The testimony in favour of the local application, at the outset, of ice to the head and spine, short of producing over-depression, is stronger than of any other remedy. If there exist much prostration, external heat is to be applied by bottles of hot water, bags of hot salt or oats, warm flannel bandages, &c., during the employment of the ice and subsequently.

A difference of opinion obtains as to the value of the local abstraction of blood by leeches and cups applied behind the ears and to the nucha.

During the epidemic observed in 1865 by Dr. Burdon Sanderson, upon the Lower Vistula, "free local bleeding during the first few hours, while the patient was still vomiting, occasionally produced the most striking results." And in the Philadelphia epidemic of 1866 Dr. Stillé states that cupping the nape of the neck, in the more sthenic cases, was of "essential service in mitigating, and generally, indeed, in wholly removing the neuralgic pains" of the disease.

The Germans, of whom the late Niemeyer may be taken as a fair representative, employ calomel in frequent doses, much in the same way as it has usually been employed in sporadic meningitis; and, however unfashionable it may be, I own to the view that it is likely to be useful, if not in limiting the quantity of the inflammatory products, in promoting their more speedy removal.

While giving the calomel the other remedies should be faithfully employed. It is right to add that English and American physicians, as a rule, do not advocate mercury in the disease.

Antipyretic doses of quinine, at the very beginning of the disease, have been favourably reported upon by a Committee of the American Medical Association. As, however, the testimony respecting

this means is quite conflicting, it may be that when the disease obtains in malarious districts quinine may really prove useful. And I may mention in this place the interesting circumstance that, in Mr. Burdon Sanderson's opinion, malaria was one of the only two local conditions (the other was a cold climate) which appeared, probably, to have had some share in determining the preference of epidemic meningitis for the two localities in which it manifested itself most severely about the Lower Vistula.

Of course, large doses of quinine may be occasionally useful when the pyrexia is very high, but then it is used, as in other fevers with hyperpyrexia.

Stillé and other American physicians, and some Germans, notably Ziemssen, think highly of opium in the early stages, given in moderate doses (1 gr.) every hour or two, according to the severity of the case; and Burdon Sanderson testifies to its value "after the initial symptoms had subsided." The indications for it are: restlessness, sleeplessness, maniacal delirium, pain and spasm. I cannot help thinking that chloral hydrate and bromide of potassium will be found equally useful and quite as safe for the same indication.

Not the least important point of the management of the disease, in my opinion, consists in the maintenance of the vital power by judicious feeding and, when the symptoms require them, by the administration of stimulants.

Further experience is needed as to the value of a combination of the iodide and bromide of potassium with ergot, as well as of Calabar bean, which is the latest remedy that I have heard of. The last named agent, owing to its power of diminishing the reflex power of the nerve centres and, perhaps, suspending the conductivity of the motor nerves, may be expected to prove useful in allaying the painful spasm of the muscles.

It is a matter of much interest to myself why a disease which appears to have been observed, but not separated from other fevers, in Europe, either in particular countries or widely diffused ever since the fourteenth century; which was first recognised in the United States and some parts of Canada in the beginning of this century; and which has continued to recur from time to time in various localities, and frequently over very large areas in the neighbouring Republic; which of late years has been seen in the Eastern Townships and at Ottawa, and which during the past winter has been prevailing in the City and State of New York, in Chicago and Detroit, Indianapolis, and in some parts of western Canada, should have visited our city now for the first time, or should be now recognised by us for the first time. In our present

ignorance of the etiology of the disease I can offer no sufficient explanation of its manifestation amongst us this Spring. Let it be noted, however, that there has been an unwonted prevalence of zymotic diseases in epidemic form during the past winter. I need not mention the wide diffusion of small-pox and the unusual prevalence of erysipelas and puerperal fever, and the extensive epidemic of measles.

It is a pleasant reflection, however, that this fatal disease, "cerebro-spinal fever," as a rule, is limited in its outbreaks to a small section of a population, and, unlike cholera, has not a marked tendency to be diffused far and wide along the great lines of communication in a country.

MONTREAL, 3d August, 1872.

Notes of Three Cases Cerebro-Spinal Fever. By JOHN REDDY, M.D., L.R.C.S.I., &c., Physician to the Montreal General Hospital, &c., &c.

(Read before the Medico-Chirurgical Society of Montreal.)

Case I.—On the 22nd April, 1872, I was sent for to see M. F., a lad aged nine years, of small stature, residing in Acqueduct street, near railway crossing. His mother gave me the following history: He had been at school the day previously, and while there, said that he had received a hurt in the calf of his right leg from a form he had been sitting upon. He complained several times since then how much it pained, and occasionally caused him to cry. When at dinner to-day he had but little appetite, and towards its close was seized with severe vomiting, immediately followed by a shivering fit, and a few hours afterwards he complained of very severe pain in his head, so that he had to be carried to bed. I saw him at 5 p.m.; he was then lying bent up in bed, face flushed, with a peculiar pinched appearance; pulse 84; temperature 99; a patch of Herpes near the angle of his mouth, a second on the chin, and one on the neck—right side; at intervals of four or five minutes he constantly cried out, "Oh! my head," which was very hot, and what, at the time, I considered peculiar; he would hardly allow me to touch it or any part of his body, ever so gently, without complaining that I had hurt him; general hyperæsthesia existed; his tongue was clean, though not moist; pupils were regular, but somewhat intolerant of light; bowels had been freely opened in the morning, and his urine appeared normal in appearance and quantity; his sleep since the commencement has been of a disturbed character.

I ordered his feet to be placed in a mustard bath, a bladder of

ice to his head, and a mixture to be given him every two hours containing small doses of Tr. Aconite, with Liq. Ammon Acetat.

23d.—Spent a restless night, tossing about, crying with pain in his head and all over the body; pulse 94; temperature 99; face not flushed, but a regular sardonic grin is manifest; his neck quite flexed; back and spine partially; his legs, thighs and abdomen are thickly studded over with a fine purpuric rash. I recognized now the case to be one of Cerebro-Spinal Meningitis—the first I had seen.

I ordered him a mixture: R Bromid Potass, ζ ss; Iodid Potass, grs. xxiv; Ext. Belladonna Dur., grs. ii; Syrup Aurant, ζ ss; Aquæ ad., ζ ij. A dessertspoonful every fourth hour; bladder of ice to be kept to his head and spine; milk and beef-tea as much as he desired.

5 p.m.—Pulse 92; temperature 92 2-5; no change of any importance. Ordered the treatment continued: to preserve the urine.

24th.—Pulse 92; temperature 102 2-5; pains in the head and all over the body, very severe during the night; his neck is much more flexed; complains of severe pains through his temples and through the eyeballs; sclerotic rather congested; pupils regular; bowels costive. Ordered a senna aperient; continue other treatment; four leeches to be applied to each temple; milk and beef-tea as he can be got to take them; examined urine; is a little darker than natural; does not contain albumen.

25th.—Pulse 90; temperature 100 1-5; pain in the head not so severe, but has great pain all over abdomen, not wishing it touched; had a free motion early in the morning; keeps his eyelids closed all the time, not wishing to look at light; had only four leeches applied to his left temple; his father felt timorous applying them to the right.

26th.—Pulse 100; temperature 100 2-5; had a very bad night; in much pain and sleepless; declines, occasionally, to take nourishment and is very irritable; he will not allow the ice to be changed he is in such a hurry to have it kept applied; the purpuric spots are gradually disappearing; he appears in a very precarious state.

7 p.m.—He became suddenly very much worse, screaming with pain; he was seen, in consultation with me, by the late Dr. Fraser, who recommended the Binodide of Mercury with Belladonna as an ointment, to be rubbed to the neck and spine, and to pursue my present plan of treatment.

(I desire to note here that the Dr. informed me that within a period of two months he had treated two cases of Cerebro-Spinal Meningitis successfully.)

27th.—Pulse 100; temperature 102 1-5; no improvement; could

not bear the ointment rubbed in, as he could not bear to be touched. I ordered it to be spread upon stripes of linen, and thus applied to nape of neck and spine, under the ice. I also had half-drachm papers of the Camphorated Mercurial Ointment placed in the arm-pits and groins, to be repeated every six hours; eight papers ordered.

28th.—Pulse 104; temperature 102.5; appears very weak; the ointment was removed in three hours from spine and nape of neck, producing merely slight redness; he sleeps but little, and that of so disturbed a nature that I ordered a chloral mixture—10 grains, to be repeated in half an hour, by a half dose, if sleepless.

5 p.m.—Seems very much improved: the chloral had a very good effect; he is taking his nourishment much better.

7th May.—His state has varied frequently since last date, but from that period his neck and spine have been gradually assuming their natural state; he appears to be very weak, but convalescence is gradual; he has often sharp and sudden attacks of pain all over, which as quickly subside, especially if excited; he still keeps his eyes rigidly shut. Ordered his mixture to be stopped, which he has taken hardly any of the past two days; to give him a teaspoonful of brandy and water every three or four hours, and as much nourishment as he can be got to take; I find, on making him open his eyes, the right pupil is quite contracted, and the left dilated to its fullest capacity.

14th.—Had been doing well till to-day, when he was suddenly seized with vomiting, pain in the head and bowels, and partial flexion of his neck again; pulse 120; temperature 105.25; urine dark-coloured; bowels regular; no cause can be assigned; I again placed him on the Bromide of Potassium mixture.

15th.—Pulse 110; temperature 100; seems better, but weak, and cannot sleep. Ordered to give him the Chloral mixture when necessary; continue nourishment and brandy, which seems to agree well with him.

4th June.—About three days after the relapse the pains gradually subsided, and his neck became relaxed, and from that time till this date he suffered from a low fever, and often from sleeplessness, requiring occasional doses of Chloral, which always agreed well with him; his treatment consisted chiefly of small doses of brandy often repeated, milk and chicken broth.

24th June.—He was able to sit up in bed, and has a good appetite; he appears blind of his right eye, the pupil being rigidly contracted, while in the opposite eye it is largely dilated.

10th July.—Visited him to-day; he can walk about the room, and would remind you of one suffering from Locomotor Ataxy;

when you tell him to stand with his feet approximated, or to walk with his eyes shut, he would instantly fall; he only suffers occasionally from constipation, which is easily regulated by senna tea.

7th August.—I examined him with the ophthalmoscope: right eyeball soft, pupil contracted, unaffected by light; left ball about natural, pupil dilated; with oblique light, in right eye complete cataract exists, with shrivelled appearance of lens, dotted on its upper and inner margin with pigment; left eye red reflex; disc appears natural, and vessels pretty regular; no atropine used. A few days afterwards Dr. Howard also examined, who says: "I have but little to add to what you have made out." Right eye chiefly posterior capsular cataract, softened eyeball; left eye no affection of lens; some congestion of capillaries of the fundus of the optic disc; slight tortuosity of retinal veins, and indistinctness of the arteries; vision somewhat impaired; reads Snellen's XX at seven feet.

It is a fact worth recording that the left temple had four leeches applied to it at the time when he complained of pains there and through the eyeballs. That is the side in which vision now exists.

Case II.—14th May I saw a case, in consultation with Dr. Trenholme, in Roy Lane, a girl 6 years old, had been ill five days before I saw her; she had suffered with intense pain in her head and general hyperæsthesia, and was now suffering; her neck and spine were very much flexed; her pulse was rapid; her pupils very much dilated; the case had been early recognized; her symptoms had been, at the start, vomiting and rigors, followed by pains all over the body; constipation, also existed; she had had ice freely applied to the head and spine from the commencement, and small doses of Castor Oil relieved the bowels; she had plenty of milk given as nourishment; we agreed to put her on the mixture of Bromide and Iodide of Potassium, with small doses of Extract of Belladonna. A few days after this visit the Doctor left for England, requesting me to take charge of the case. She continued to improve daily, and on the 10th June was able to sit up; her appetite good. I have seen her twice since that, and the only remnant of the disease left, (if it may be called so,) her pupils have remained largely dilated; her eyesight was not impaired at any time.

Case III.—On 6th August was sent for to see H. H., aged 26, about four feet six inches high; man of strong mind, living on Commissioner street, near Montreal House. His mother states that two days previously he had excited himself a good deal by running quickly, and came home overheated and very tired, seemingly quite exhausted; that night he vomited frequently; took shivering fits, could not sleep, and complained of pain in his head and

all over the body; his appetite was quite gone, and his bowels confined; he gradually grew worse, and when I saw him this afternoon I easily recognized his disease; lying on his left side; neck and spine quite flexed; head hot and skin dry; said his head pained him exceedingly; could not touch any part of his body without causing him intense suffering; pulse 88; temperature 99; tongue clean; marked risus sardonicus; on his legs, thighs, arms, and partially over the abdomen, dark, raised, purpuric papulæ existed, and both legs were covered with one large purpuric effusion, like large jam marks; he constantly moans with pain. Ordered him the following mixture: R Bromid Potass, ʒij.; Iodid Potass, ʒii.; Ext. Belladonna, grs. iij.; Syr. Aurant ʒss.; Aquæ ad., ʒvi., ʒss. every four hours. Ice to head and spine.

7th.—Pulse 100; temperature 100 1.5; tongue clean; bowels were opened early in the morning; slept but little since I saw him last evening; pains unaltered; takes medicine or food with difficulty, as the very effort makes his suffering greater; he lies on his right side to-day, and his legs and arms are rigid; he talks incoherently. Continue his treatment. I also directed the following pill to be given every fourth hour; Pulv. Opii., gr. ii.; Calomel, gr. ¼.

5 p.m.—Pulse 100; temperature 99 2.5; no change for the better; spots somewhat faded; the patches on his instep have now changed color, like to simple erythema; the least touch worries him, on that account his attendants find it difficult to administer either nourishment or medicine; his mind wanders a great deal; he sings and laughs alternately.

8th.—Pulse 100; temperature 98 3.5; tongue moist and creamy; bowels free; passed no urine since midnight; he appears dull and not in much pain, unless in the neighbourhood of his spine or neck; there is no hypogastric fulness; spots have nearly all faded from his body, and the insteps present now their natural appearance; rigidity of arms and legs also gone; takes nourishment better.

5 p.m.—Pulse 130; temperature 101 1.5; skin hot and dry; arms and legs slightly rigid again; his bowels have been opened twice through the night, but he has passed no urine; seems to suffer little or no pain, but is listless and lies quietly; drew off 1½ pints of urine; slightly acid; sp. grav. 1,020; color of dark sherry; contained about 10 per cent. of albumen; under the microscope a few epithelial cells.

9th, 10 a.m.—He seemed to be doing better till 2 o'clock this morning, when he suddenly grew worse; all his muscles are relaxed; his neck and spine are free; at either angle of mouth

two large Herpetic patches have appeared; his pulse 130; temperature 105.3-5; the respiration abdominal; he died at 2:50 this p.m. A post-mortem would not be granted.

877 ST. CATHERINE ST., MONTREAL, 16th August, 1872.

Case of Cerebro-Spinal Meningitis—Recovery. By GEORGE ROSS, A.M., M.D.

On the 19th May last I was called to see Mary Ann McC., aged eight years, whom I found lying in bed, in a dull, apathetic condition, from which she could with difficulty be aroused, and immediately dropping off asleep as soon as she had returned a short, monosyllabic answer. The history of the attack was the following: Six weeks ago she had measles, but very mildly, and for some weeks past had been considered quite well. Yesterday morning she appeared to be unusually well, and in the afternoon played about out-doors for several hours. On coming home in the evening she complained of severe headache, and very shortly after vomited. During the night following the vomiting continued incessantly and with considerable retching, and great complaint was made of violent frontal headache. After each fit of vomiting she became drowsy and remained so until the stomach was again disturbed. Her mother tells me she noticed that during the past two days she voided no water until evening, and then only a small quantity, although she would make frequent efforts to empty the bladder. At present the child lies in a dull, stupid condition; face pallid; often cries out "oh my head"; vomited bilious matter soon after my entrance, and the same occurred four or five times whilst I was with her; pupils unequal; right more dilated than the left; the irides, when fully exposed to the light, keep alternately contracting and expanding; skin extremely hot; pulse, 140; no retraction of the abdomen; tongue coated with thick, dirty, brownish fur; bowels costive. I now looked upon the case as one of commencing cerebral meningitis, and consequently ordered the head to be raised on pillows, and all the hair removed, and a bladder of ice applied, and the feet to be bathed in mustard-water immediately; spoonfuls of rice water only to be taken, and a powder of Calomel, gr. iv., and Scammonii, gr. viii., at once administered, and to be repeated in two hours if required, and the following mixture: ℞ Pot. Nit., Pot. Brom. aa., ʒiiss.; Syrup, ʒj.; Aq., ʒiv. One dessertspoonful every three hours.

20th May.—Still drowsy; vomiting continues; temperature, 102; pulse intermittent, 130; moans and complains of her head; answers rationally, but is a very slow at responding.

Ordered enema of castor oil and turpentine, and lime water with milk.

21st.—Vomiting less; pulse very intermittent and cannot be counted; no delirium or convulsion.

22nd.—Very restless and irritable; right pupil much dilated; complains of great intolerance of light; vomiting ceased; pulse 130; more steady.

Ordered blister to nucha, and calomel, gr., j., every three hours, instead of the mixture, which it was extremely difficult to get her to take.

23d.—Is very restless and uneasy, and makes constant moaning complaint of pain in the neck and legs, especially the left. My attention having been thus directed to the neck, I found that the head was greatly drawn back, the sterno-mastoid and trapezius muscles being quite prominent and hard. She screams violently upon the least attempt being made to raise the head from the pillow. The ham-string tendons are rather tense and are immediately tightened up upon any attempt being made to flex the legs. Temperature, 102° ; puls, 140. On either side of the neck is seen a peculiar, oval, purplish patch, of about the size of a half dollar, deeply congestive in appearance, and only partially disappearing on pressure. The edges of these patches were not defined but gradually shaded off.

24th.—Stiffness and rigidity persist in the neck and in the legs; the patches on neck not so marked; intelligence clear but very slow in perception; there is constant murmuring and complaint of pain in neck and legs alternately; hardly any of the head; cannot be induced to look at the light; cannot bear to be touched without crying out and great excitement; pupils moderately dilated and sluggish; no vomiting, but takes food freely; pulse, 135, and very weak; temperature, $102\frac{3}{5}$.

Ordered a small quantity of port wine in addition.

25th.—Passed a bad night, screaming with pain, at intervals, in different parts, especially back of neck, right thigh and knee and right elbow; general intelligence seems better; answers questions much more readily; will look up and will draw up the legs slowly when told to do so; the muscles of the back of the neck remain very hard and tense, and the head is thrown completely backwards; there is apparently no spasm of any other muscles; pulse, 144; temperature, $102\frac{1}{2}$.

Ordered enema of castor oil.

It will be unnecessary to give a further detailed report of this case, suffice it to say that from this date all the severe symptoms gradually abated; the tension of the affected muscles became

daily less; the pains slowly subsided; sleep was obtained; the tongue cleaned; and after a tedious convalescence, lasting over seven or eight weeks, she has finally completely recovered, and is now in the enjoyment of excellent health.

I may mention that I had diagnosed the case as one of cerebro-spinal meningitis before hearing of the cases occurring in the practice of Dr. Gardner, but his having happened to mention to me his observation of this rare disease served much to confirm me in the view I had taken of this case. The early symptoms pointed clearly to the head, and I believed at first it was really true acute cerebral meningitis, and treated it as such; but the subsequent symptoms, above described, soon led me to suppose that the coverings of the cord were involved as well.

Case of Cerebro-Spinal Meningitis—Fatal in Thirty-eight Hours. Occurring in the Practice of Dr. W. E. BESSEY, Montreal.

Saturday, May 25, about 6 a.m., was called to see a boy aged ten years, who had been taken suddenly ill during the night with vomiting and convulsions, but who, up to the previous evening, had always enjoyed the best of health and spirits.

I found him quite insensible, breathing rapidly and sometimes spasmodically; pulse very quick—140, not full but tense; action of heart tumultuous, but indicating no lesion within itself; head very hot; also the skin of surface generally, except extremities, which are below the normal temperature; frequent muscular twitchings, with sudden jerkings of extremities and great restlessness; pupils contracted; tongue covered with a greyish fur over centre; fringed with a border, deepest along left side and at the tip; of an erythematous appearance; considerable retraction of head was also observable, but not amounting to opisthotonos; the slightest movement or handling exciting restless movements or muscular twitchings.

History up to that hour was given to me as follows: About 2 a.m. the companion who slept with the lad was awakened by his cries and struggling, which amounted to violent kicking and jerking of the extremities, throwing back of head, and in a few minutes, becoming quieter, vomiting set in.

The family, who were aroused immediately, resorted to the use of a warm bath with good effect, and also administered a dose of castor oil. The vomiting did not continue.

Ordered cold to head and nape of neck, with heat to extremities, and the following every three hours:

R Potass. Bromide, $\mathfrak{z}\text{iv}$.

Ammon Bromide, grs. 80.

Liq Ammon Acet, $\bar{5}$ i.

Tr Aconit rad, gtt. xvi.

Aqua, ad, $\bar{5}$ iv.

Two teaspoonsfull every three hours.

Visited patient again at 9 a.m.; was quieter, but still insensible, breathing more regular; pulse same.

11 a.m.—Patient now much quieter; pulse, 120; perspiring freely; has had free motion of bowels; subsultus tendinum still present.

1 p.m.—Pulse, 116, falling steadily; muscular twitchings not so frequent; general muscular relaxation taking its place; insensibility still continuing—not so profound; there has been mutterings of incoherent sentences; has taken several swallows of milk at times in last three hours; perspiration continues profuse.

4 p.m.—Patient seems completely prostrate; action of heart feeble; pulse small and frequent; extremities cold; features pinched; in fact, everything denoting speedy collapse.

Attributing this sudden and extreme change in the condition of my patient to the aconite used, I stopped the remedy and ordered Spirits Ammon Aromat, mxv., every ten minutes, (in water,) with warm applications to general surface and extremities. A teaspoonful dose of Essence of Beef every hour, if swallowing continued good.

7 p.m.—Found patient much better; pulse, 120; breathing natural; no muscular movements; no hypersensitiveness; pupils less contracted; temperature of body normal; resting quietly, except rolling head from side to side, and slight muttering; skin moist.

Ordered Bromide to be given again every two hours, omitting Tr. Aconite rad

26th, 7 a.m.—Found patient much better; had passed a quiet night; slept a little towards morning; woke up about half-past five in the morning quite sensible, and (as the family supposed) almost well, but very weak for all he had gone through; has taken freely of milk and water, with a little broken cracker; pulse, 96—regular; pupils normal; tongue coated with brown fur, still red at tip.

1 p.m.—Was called to see patient, who, I was told, had continued rational in morning until 9 a.m., talking with the family, and knowing everybody; then fell into a quiet sleep and slept until eleven, during which time he began to perspire profusely, and a petechial eruption appeared greatest upon the legs, arms and chest. At eleven he awoke with screaming and violent con-

vulsive movements of extremities; body thrown backwards; eyes fixed and staring.

Warm bath had again been resorted to with but little benefit. Doubled doses of Bromide, giving them every two hours. Ordered ice to head neck and spine, with hot pediluvia. These measures had the effect of entirely removing, in a short time, the convulsive manifestations, which was succeeded by a state of collapse, accompanied by a cyanotic condition of the surface, denoting impending dissolution. Pulse very feeble and frequent, and patient insensible.

Requested a consultation with Dr. Howard, who saw him at 3 p.m. with me. Patient was now in a state of profound collapse. Ordered stimulants to be given freely; mustard poultices to spine and nape of neck; heat to be applied to general surface; brandy and water was given every ten minutes, but with no perceptible effect; mustard applied to spine and back of head; general warmth, &c., but all to no purpose; the patient sank and died at fifteen minutes past four p.m., in a state of complete collapse; after death the general cyanotic appearance subsiding into large purple spots, the petechial rash still remaining as it had made its appearance.

Requested a post-mortem, but found the friends seriously opposed to it. Renewed my application a second time without success, as I was desirous of seeing for myself what local lesion there could be to give rise to such violent symptoms, and especially was I anxious to observe whether or not we had meningitis with effusion, as some assert and others deny its presence in such cases.

Case of Pelvic Abscess. By FRANCIS W. SHERRIFF, M.D., Huntingdon, Quebec.

On the 19th February, 1872, I was called to visit George Malcomb, of Hendersonville, aged 18. His place of residence was ten miles from Huntingdon. Says that about three weeks ago he was wrestling in a blacksmith's shop, and that he was thrown and twisted round, striking an iron plough with his back, and severely injuring his knee-joint. He felt no bad effects at the time from the fall, except in his joint, which rendered him lame, and that he had drawn several cords of wood since his accident. About a fortnight ago he began to complain of pains in his hypogastrium, and was confined to bed. Had been seen by two medical men, but was always growing worse. Complains now of severe pain in his hypogastrium, accompanied with hiccough and vomiting. States that for several days he has had no passage from his bowels, and

makes water frequently and in very small quantities at a time. I now examined the abdomen, and found the lower part painful on pressure, and swollen as in retention of urine. I introduced a catheter easily, and withdrew only about a teaspoonful of urine. Thinking there might be scybalæ in the colon I now pushed a long flexible tube into the anus, with the intention of giving him an enema. The tube would only go up a short distance when it doubled upon itself. I withdrew it and introduced my finger, and found a soft fluctuating tumour filling the cavity of the pelvis, and pressing upon the bladder and rectum. I at once determined that there must be an abscess, and resolved to open it in the morning. I ordered emollient poultices to be applied over the abdomen, and gave him an opiate. His pulse was 90, of good strength, and his voice good.

20th.—Consulted with Dr. Cameron of this place, and he fully agreed with me as to the necessity of immediately opening the abscess by the rectum. I accordingly introduced along my finger a grooved exploring needle, and pierced the tumour two and a half inches from the anus. Instantly, thin, foetid pus began to run off freely. Fearing that the opening I had made was not large enough, punctured the swelling with a large trochar. About a saucerful only, escaped. The lad became very pale and very cold, and it was some time before he recovered his strength. He had passed a pint of urine altogether since I had seen him the day before. I had desired him to make water into one vessel, and keep it, so that I might ascertain the quantity. Continue the anodynes and poultices.

22nd.—Feels better; the abscess has discharged freely; can now retain his urine for the usual time, and has had a stool; pulse 85; tongue furred; eats little; has slept well; has no pain; gave him an enema with long tube, which I introduced eight inches; can still feel the swelling in the rectum with my finger. Gave him a zinc and carbolic acid wash, to be injected into the rectum twice a day; also, two half grain podophyllin pills, and extract hyosciamus.

24th.—Has had rigors; pulse 75; cannot pass his urine; has pain and swelling in his hypogastrium. Gave him a turpentine enema with long tube, and afterwards pressed away his urine by his hand. Visited him every day, and was always able to empty my bladder by hard pressure until the 28th, when I used a catheter and removed a quart of yellow offensive urine, which gave him much relief.

29th.—Again used catheter and removed about the same as yesterday. For the last three days he has been taking iodide of

iron and quinine, and also pancreatic emulsion in milk. This latter constituted his whole food, as he would eat nothing.

1st March.—Had to visit him during the night to draw off his water, and again in the evening. In my last visit I showed him how to use an elastic catheter himself, and I may here add that he was under the necessity of using it until the 13th April. He also, to-day, began to complain of pain in his hip, and on examination there was much appearance of inflammation and hardness. Medicines and wash were continued, with the addition of opium suppositories introduced into the anus. Poultices to swelling.

2nd.—Abdomen tympanitic; pulse 100; temperature 100; swelling in nates more prominent. Continue the poultices.

3rd.—Saw him at 2 p.m. and opened abscess on hip. A large quantity of thin fœtid pus was discharged, accompanied with gas, which showed that it communicated with the rectum. Gave him a turpentine enema, which caused great discharge of fœces and gas. The tympanitic swelling was immediately relieved. Pulse 120; countenance pale and haggard. Medicines continued.

8th.—From inclemency of weather I have only visited my patient once since last record. Found him very feeble; pulse 111. I found respiration rapid; bowels regular, and discharging matter freely. Removed a large mass of dead fascia from wound, and connected it with another opening which had formed since last visit. Has hectic fever, with perspiration. Continued the medicines, with opium pills internally. Wounds to be washed regularly with red-wash and carbolic acid. Ordered oysters and porter in addition to his regular diet.

9th.—Was visited by Dr. C. Marshall, who reported that he had to remove more dead fascia. Pulse 132; temperature clean; abdomen tympanitic; relishes the porter, and had slept well from the opium.

11th.—Saw him yesterday and to-day. Pulse 90; wound has a more healthy appearance; bowels tympanitic; urine scanty and red.

I may here mention that since the opening in the hip was made, fœces, air and injections have passed freely through, and continued to do so until the opening contracted.

12th, 14th and 16th.—Saw him on each of these days. Bowels continued tympanitic. Enemas were given with long tube, which brought away hardened fœces. Pulse 90; tongue clean. Appetite improved. Continued to use quinine, &c., and opium suppositories.

18th.—Examined per anum and found internal opening about two inches upwards. Passed his urine once naturally.

23rd.—Still improving. Continue the opium, wash and quinine.

27th.—Wound on hip has been discharging masses of foetid stuff like decayed fascia. Pulse 100; emaciation increasing; feels better, and appetite improving.

April 5th.—Has been seen by Dr. J. Morrison and myself three times since the 27th. Looks better, and has the appearance of having gained weight. Has no control over his sphincter ani, and consequently passes his stools involuntarily. Has discharged a large quantity of pus along with his urine, more particularly if his bowels are opened at the same time. Has little pain on pressure. Tongue clean; pulse 78. Wound much lessened in size. Gave him Infusion Matico with Nitromur Acid. Opium continued both by mouth and anus; also, the wash to wound.

10th, 13th and 16th.—Was visited by Dr. J. Morrison or myself in these days. Very ill on the 10th from eating raw apples and drinking buttermilk. Still improving. Has ceased to use catheter. Bowels rather confined. Gave him the following pill with decided advantage: Podophyllin, gr. iv.; Sulph. Quinine, gr. xvi.; Ext. Hyoscyami, ℥i., ft. pil. n^o., xxiv.; one three times daily.

19th.—Looks and feels better. Eats well. Stools still involuntary. Wound on hip much better and still discharges pus.

25th, 30th and May 6th.—Continues to improve. No pus passing now with urine.

May 13th.—Still improving. Goes outside. Fistula nearly closed. Pus still discharged per anum. Pulse 98. Has good appetite. Prescribed Citrate of Iron and Strychnine. Wash to be injected into fistula.

18th.—Visited my patient, accompanied by Drs. Morrison and Marshall, with the intention of cutting the fistula. After putting him under the influence of chloroform I introduced a director the full length into the sinus, and, with my finger in the rectum, failed to discover an internal communication. With a blunt probe I tried to discover an opening nearer the anus, but could not. I now desisted and directed the wash to be continued, and the iron and strychnine mixture.

He was seen on the 23rd for the last time as a patient, and was then improving rapidly. I did not see him from that time until July, when I made a careful examination and found that the sinus had healed up firmly, and that he had recovered the power of the sphincter ani, and could now retain his feces. He has now gained flesh and strength, and has been able to do his share of road work. I may mention that during his long and painful illness he has not used more stimulants than about one pint of brandy and two bottles of porter.

The distance travelled by Dr. Morrison and myself in visiting this patient amounts to 70 miles.

Hospital Reports.

MEDICAL AND SURGICAL CASES OCCURRING IN THE PRACTICE OF THE MONTREAL GENERAL HOSPITAL.

Case of Idiopathic Tetanus. Under the Care of Dr. DRAKE. Reported by Mr. H. W. HOCKRIDGE.

June 25th, 1872.—E. A., Canadian, aged 17, admitted into the Montreal General Hospital at 9 a.m. Patient is a sewing girl and, according to her statement, has "always been rather weak and delicate"; also thinks she has been nervous; but previous to this has enjoyed her usual standard of health. The menses did not appear until she was over sixteen, but received no medical attendance, and has never taken any medicine, other than slight aperients occasionally. Her father, an Irish Protestant, is a strong, healthy man; her mother, a Canadian, but of German descent, died about six years ago of cancer. She recollects no injury, recent or otherwise; none of the family were ever similarly affected; she has never been exposed to the heat of the sun, or to any sudden vicissitudes of temperature; patient appeared to have been a girl of very reserve temperament, caring little for society, but fond of the pursuit of light literature; as far as could be ascertained she has always been perfectly moral in her habits; she was taken yesterday morning with severe choking pain in the throat, headache, and stiffness of the neck and jaws, accompanied by inability to swallow; she went to work as usual but returned during the day; this morning she visited Dr. Drake, who immediately diagnosed the case and sent her to the hospital; on admission she could move her jaw very slightly, but was unable to swallow; during a spasm there was great rigidity of the muscles of the neck; the sterno-mastoids and masseters were strongly contracted; muscles of the abdomen contracted and very tense; angles of the mouth elevated; brows corrugated; *ala nasi* contracted, giving an expression of frown to the countenance; trismus and risus sardonicus were well marked; muscles of the extremities perfectly flaccid.

1:30 p.m., pulse 106, regular and full; temperature 99.4-5 °C, in left axilla. 1:50 p.m., ordered an injection, per rectum, of four ounces beef juice every hour, with *ʒj.* Chloral every two hours, and to have Ext. Belladonnæ plaster to the spine, with an ice bag

over it. 2 p.m., application of the ice produced several spasms. 2:30 p.m., frequent spasms, biting her tongue very often; kept the handle of a knife between her teeth to prevent it. 3 p.m., had an injection of four ounces beef juice, which was followed by several spasms, after which she fell asleep. 3:30, sleeping soundly. 4 p.m., pulse 96; temperature 97 2.5 °C; had another injection of four ounces Beef Juice and ʒj. Chloral; slight spasms. 4:30 p.m., sleeping; roused at intervals by minor spasms. 5 p.m., awake; says her throat is a little better; can now swallow a little Beef Juice with comparative ease; had another enema of four ounces beef juice and fell asleep. 5:30, sleeping; respirations abdominal, 40 per minute; considerable opisthotonus. 6 p.m., pulse 90, regular; temperature 97 °C; injection of four ounces Beef Juice and ʒss. Chloral, which produced severe spasms. 7 p.m., had another injection of four ounces beef juice, with ʒss. Chloral; any attempt to move or disturb her in any way is accompanied by very severe spasms; does not retain the whole of the injection. 7:30, sleeping soundly. 8 p.m., pulse 98; temperature 97 4.5 °C; sleeping; no spasms for the last half hour. 8:45 p.m., slight spasms. 9 p.m., had another injection of four ounces beef juice and ʒss. Chloral, but did not retain more than half of it; thoroughly under the influence of chloral; has severe spasms when roused; visited by Dr. Drake, who ordered the next ʒss. dose of Chloral to be omitted if she slept, and appeared well under its influence; has had no fecal motion of the bowels since her admission, nor passed any urine. 10 p.m., sleeping soundly; pulse, 78; temperature 97 2.5. Dr. Chipman, Assistant House Surgeon, passed the catheter and drew off about six ounces of urine; but a severe spasm coming on he desisted, and did not empty the bladder. 11 p.m., sleeping still; had no injection at this hour; aroused at intervals by minor spasms. 12 p.m., pulse 90, weaker but regular; temperature, 96 4.5 °C; attempted to make an injection of beef juice, but it was immediately rejected. Visited by Dr. Roddick, House Surgeon, who ordered the Chloral to be stopped until 4 a.m.

June 26th, 12:30 a.m.—Changed the ice bag; followed by a few spasms; awake and supped a little beef juice and milk; complains of "a lump" in her throat. 1 a.m., still waking and taking a little beef juice and milk at intervals; swallows pretty well; complains of great thirst, and on taking a little ice water it produces severe spasms, but the same effect is not observed after taking the beef juice or milk; speaks tolerably well, and is perfectly conscious. 2 a.m., pulse 90, weak and regular; temperature 98 2.5 °C; sleeping a little, but wakes at intervals in spasms.

3 a.m., waking, but dozing at intervals; spasms less frequent and not so violent; takes half ounce beef juice and milk alternately, every half hour, without much difficulty; talking freely, and seems a little better. 4 a.m., pulse as before; temperature 98 4-5 °; took ʒss. Chloral by the mouth; dozing a little for the last half hour. 4:10 a.m., fell asleep. 5 a.m., sleeping soundly. 6 a.m., sleeping; had one considerable spasm this last hour; pulse 90; temperature 98 1-5 °. 7 a.m., sleeping still; has had no spasm for the last hour; Opisthotonus not so marked. 8 a.m., awoke; took some beef juice and milk; complains of pain in the heart, and over the region of the sternum; says the "lump in her throat is not gone"; few minor spasms; pulse and temperature as before. 9 a.m., sleeping soundly. 9:55, violent spasm; renewed the ice-bag, which roused her; took half ounce beef juice; asks for milk; gave her milk with ice, which she swallowed pretty easily. 10 a.m., pulse as before; temperature 98 °; considerable minor spasms; speaks a little at intervals; says "the knife between her teeth is too thick"; Opisthotonus not so marked; frequent minor spasms until 10:30, after which she slept until 11 o'clock; tongue dry. 11 a.m., pulse 92; temperature 98½ °; frequent spasms; tried to swallow some milk but could not. 11:30 a.m., took a little milk and beef juice; violent spasm! frequent minor spasms until noon. At noon, pulse and temperature as before; small spasms. Visited by Dr. Drake who ordered—

R. Chloral, ʒij.

Syr. Tolut., ʒiss.

Aquæ ad., ʒij.

Tablespoonful every four hours.

12:30 p.m., violent spasms; 12:40, took some milk and beef juice, which was followed by a violent spasm; removed the ice bag. 12:50 a.m., slept till 1:20, when she was roused by a spasm; renewed the ice bag, which caused a violent spasm; marked opisthotonus. 1:30 p.m., took her medicine; small spasms. 1:40 p.m., sleeping. 2 p.m., pulse 90; temperature 99 1-5 °; sleeping still; no spasms. 3 p.m., sleeping; two slight spasms, followed by one very severe; respirations abdominal. 4 p.m., pulse as before; temperature, 98 °; awoke and took some beef juice and milk. 4:15, slight spasms. 5 p.m., waking; talks tolerably well; complains of pain in her heart and throat; spasms not so frequent and violent for the last hour. 6 p.m., pulse and temperature as before; took her medicine, which was followed by violent spasms; marked opisthotonus; changed the ice bag, which produced a severe spasm; if her tongue be touched by anything it is immediately followed by a temporary spasm. 6:30 p.m., visited by Dr.

Drake, who ordered her medicine to be taken every three hours, and to take all the nourishment she could. 7 p.m., sleeping; aroused immediately by small spasms. 8 p.m., awoke and asked the nurse to take her to the closet; lifted her on the night chair; she had no stool, but passed a little urine. 9 p.m., took her medicine, followed by a violent spasm; complains of her legs getting stiff; marked opistholonus. 9.30 p.m., sleeping; small spasms at intervals. 10 p.m., pulse 90, regular but weak; temperature 97 °; sleeping; aroused at intervals by severe spasms. 11 p.m.; visited by Dr. Roddick, House Surgeon, who ordered her an enema of a pint of soap and water, and as she was sleeping soundly, and appeared thoroughly under the influence of Chloral, he considered it judicious to omit the next dose. 11:45 p.m., severe spasm. 12 p.m., pulse 96; temperature 97 4-5 °; tongue dry; sleeping; roused by frequent spasms, which are more severe than before. 12:15 p.m., severe spasm; very marked opisthotonus.

June 27th, 1 a.m., very severe spasm; noticed that the spasms are decidedly more violent and prolonged. 1:30 a.m., violent spasms. 2 a.m., pulse 102—weak; temperature 99; violent and prolonged spasms; complains that she wants to cough, but cannot. 3 a.m., pulse 108; temperature 99 2-5; frequent and severe spasms; skin hot and covered with perspiration; at the termination of the spasms patient seems exhausted. 3:30 a.m., sleeping a little at intervals.

4 a.m., pulse 120; temperature 99 4-5 °. 4:10 a.m., had the most violent and prolonged convulsion that she has had up to this time; features were excessively distorted; both eyes strabismic; right, externally upwards and outwards; left, upwards and inwards; countenance very livid during the spasm, assuming a pale, purplish tint towards the end; jaw firmly clinched; extremities remarkably stiff and rigid; muscles of the abdomen excessively tense, and felt like a piece of board; opisthotonus never more marked since her admission; patient almost literally resting on her head and heels; she was for fifteen seconds without a respiration; pulse was imperceptible; thought she was "going," and sent the nurse for Dr. Roddick, House Surgeon, but she was scarcely out of the ward when the heart's action was again apparent, and when the Dr. came she was partially revived, though extremely weak and exhausted; Dr. Roddick immediately ordered an enema of four ounces beef juice, with one-half ounce brandy, and to have a mustard sinapism applied to the chest for half an hour, and also to take ʒss. Chloral.

4:20 a.m., pulse uncountable; temperature 102 4-5 °; respirations abdominal—67 per minute; skin covered with perspiration.

4:30 a.m., had another fearful convulsion of the same character as the preceding. 4:45 a.m., part of the injection came away; sleeping. 5 a.m., sleeping still; pulse 140—small and irregular; temperature 102°; respirations 60 per minute; feet feeling cold; countenance blanched. 5:30 a.m., pulse 132—weak and irregular; temperature 100 3/5°; had another extremely violent convulsion, similar to the former. 5:40 a.m., took a teaspoonful of brandy; at the end of the spasms patient is excessively weak and exhausted; she speaks a little at times, and has perfect consciousness; injection coming away. 6 a.m., pulse 140; temperature 101°; another awful convulsion, accompanied by the same phenomena as the three preceding; this is the fourth violent spasm since 4 a.m. 7 a.m., pulse as before; temperature 101 4/5°; sleeping at intervals; occasional minor spasms. 8 a.m., pulse 138; temperature 101 1/5°; small spasms at times; took a little beef juice and milk; patient is very weak and depressed; says, "I'll never get over it." 9 a.m., pulse 132; temperature 100 1/5°; a slight spasm. 9:15 a.m., Dr. Boddick ordered her ʒss. Chloral. 9:45 a.m., sleeping; roused occasionally by minor spasms. 10 a.m., temperature 102°; pulse 128; calm sleep; minor spasms at intervals; respiration abdominal—44 per minute. 10:30 a.m., slight spasms. 10:40 a.m., took a little milk, which was followed by a temporary spasm; slight moisture on the hands and upper extremities; feet warm. 11 a.m., occasional spasms; temperature 102°; pulse 124; sleeps calmly until noon.

Noon, pulse 120; temperature 101°; swallowed two table-spoonsful of milk tolerably well. 12:30 p.m., several spasms of a mild character. 12:45 p.m., took a little milk. 1 p.m., pulse as before; temperature 100 4/5°. 1:10 p.m., strong spasm. 1:20 p.m., swallowed a tablespoonful of milk. 1:30 p.m., took ʒss. Chloral, and three table-spoonsful of milk, followed by three small spasms. 1:45 p.m., very violent spasm; countenance livid; spasms are assuming a jerking or hiccoughing character. 2 p.m., violent and prolonged spasm, accompanied by an appearance of choking; pulse 120; temperature 100 2/6; marked opisthotonus. 2:20-30 p.m., several severe spasms; crying; breathing laboured, accompanied by a peculiar moan. 2:50 p.m., severe spasm, in which patient doubled her right leg back on her thigh; respirations 44 per minute, followed by a jerk at the end of each. 3 p.m., pulse 108; temperature, 100 2/5°; sleeping. 3:15 p.m., violent spasm. 3:20 p.m., another strong spasm; tried to swallow some milk but could not. 3:30 p.m., violent spasm. This forenoon she has complained frequently of pain in her heart, at the same time passing her hand over the exact situation of the heart. 4 p.m., pulse 120,

weak and irregularly intermittent; temperature 100 1-5 °; visited by Drs. Drake and Roddick, who, on learning that she took so little nourishment, and did not retain the injections, suggested feeding her through the nose. Dr. Drake took a gum-elastic catheter and introduced it through the posterior uares, into the œsophagus. Dr. Roddick keeping her jaws apart by means of a knife-handle; but before he succeeded she took a very severe spasm, so that the Dr. was obliged to withdraw the catheter. Dr. Drake considered the convulsion so violent in character as to render this method of supplying her with nourishment impossible. This spasm was precisely similar in character to the one she had at 4 o'clock this morning: the patient being, as on that occasion, from 15 to 20 seconds without a respiration. 4:30 p.m., patient partially recovered from the spasm, though excessively weak and exhausted; gave her a teaspoonful of brandy and beef juice. 5 p.m., ordered a hypodermic injection of 1.50 gr. Atropine, and to take grs. v. Sulph. Quinine in Syr. $\bar{\text{E}}$ i., every four hours; removed the ice-bag. 5 30 p.m., gave her grs. v. Syr. Quinine, which produced a few minor spasms; patient is perfectly conscious; speaks a little occasionally; recognized her friends and asked for an apple; face is now flushed; renewed the ice-bag. 6 p.m., pulse 144; temperature 101 2-5 °; face flushed; sleeping a little at intervals; slight spasms. 6:45 p.m., a violent spasm; pulse as before; temperature 102 °. 7:15 p.m., four very violent convulsions immediately succeeding one another; examined by Dr. Roddick, who pronounced the bronchial tubes gorged with mucus; patient exhausted; respirations abdominal—54 per minute. 7:45 p.m., slight spasms occasionally; sleeping. 8 p.m., pulse 160; temperature 102 2-5 °; sleeping still. 8:25 p.m., changed the ice-bag; slight spasms. 8:40 p.m., took a little milk; breathing with a moan. 8:50 p.m., swallowed a teaspoonful of brandy; violent spasms; respirations 54 per minute. 8:55 p.m., pulse 1:6; temperature 101 2-5 °; small spasms. 9 30 p.m., had the hypodermic injection of 1.50 gr. Atropine. 9:55 p.m., took a little sip of Quin. Sulp., grs. v., in Syrup, $\bar{\text{E}}$ j.; this was followed by a very violent spasm; both eyes strabismised; right externally upwards and outwards; two minutes livid countenance; pulse perceptible though it could not be counted; very marked opisthotonus; eleven minutes after the spasm her pulse could not be counted; temperature 103 °. 10:25 p.m., had an injection of four ounces beef juice, with one ounce brandy; pulse 116. 10:35 p.m., minor spasms; swallowed a little beef juice. 10:40 p.m., perfectly conscious and speaks a little: heard the hospital door-bell ring; says, "there's the bell for dinner." 10:45 p.m., spasms; sleeps until

11:15; two violent spasms; pulse gone; then uncountable; temperature after spasm 101 3-5 °; part of injection came away. 11:30 p.m., remainder of injection came away; three very sudden and jerking spasms; pulse 120. This day ends by five severe spasms of a jerking or hiccoughing character.

June 28th, 5 minutes past midnight.—Six successive spasms; three spasms suddenly and in immediate succession; she called for water; gave her a few sips; then five severe momentary spasms immediately followed. 12:20 a.m., pulse as before; temperature 101 3-5 °; frequent and violent spasms. 12:40 a.m., six severe spasms in succession. 12:55 a.m., three violent spasms. 1 a.m., several violent spasms in immediate succession; hypodermic injection of 1-50 gr. Atropine, followed by several severe spasms; pulse 130; temperature 103 2-5 °. 1:15 a.m., continual and rapid succession of severe spasms; there were two or three minutes inter-followed by six or seven severe and prolonged spasms, without any interval until 2 a.m., pulse as before, very thready; temperature 103 1-5 °; continued severe and prolonged spasms every two or three minutes. 3 a.m., pulse imperceptible; temperature 103 2-5 °; continued spasms of the violent type before mentioned. 3:30 a.m., pulse perceptible and upwards of 160. 4:30 a.m., had an injection of 4 ounces beef juice, with 1 ounce brandy, which was followed by a violent jerking spasm; strabismus, right eye external upwards; twenty seconds without a respiration; pulse imperceptible. 4:40 a.m., frequent violent jerking spasms, with hissing through her teeth; said, "I'm going." 4:50 a.m., another violent convulsion, with strabismus as before; continual succession of short hiccoughing spasms until 5 a.m., pulse 150; temperature 103 °. 5:25 a.m., after a prolonged continuance of short, jerking spasms, followed another fearful convulsion, characterized by all the phenomena of the preceding, though, perhaps, to a more intense degree; called for ginger ale and beer; very marked opisthotonus. 5:30 a.m., continued heavy, short jerks, with heavy breathing. 5:50 a.m., another severe spasm; upper and lower extremities both extended to the utmost; Opisthotonus never more marked; patient raised her trunk quite up from the bed, supporting herself on her extremities. Gave her a teaspoonful of beef juice to moisten her mouth, which produced a spasm. Patient is perfectly conscious; says, "I'll never get over it." 6 a.m., temperature 101 °; pulse not countable; continual jerking, moaning spasms; severe hiccoughing spasms every two or three seconds, asked for water; gave her a few sips, which brought on a severe hiccoughing spasm. 6:30 a.m., patient seems exhausted by the frequency and violence of the spasms; surface covered with per-

spiration. 7 a.m., spasms for the last half hour have been continued, but less violent in character; subdued moaning breathing; had an hypodermic injection of 1-50 gr. Atropine; pulse a thread; temperature 102°; short jerking or hiccoughing spasms; breathes with a moan. 7:10 a.m., Opisthotonus very marked. 7:20 a.m., Opisthotonus as before; the jerking, hiccoughing breathing continued. 7:45 a.m., moaning; patient is perfectly sensible. 8 a.m., temperature 105 4-5°; respirations very gentle and subdued; there is no hiccoughing or jerking; countenance pale, but placid and serene to look on; continued until 8:10 a.m., when death terminated the scene; pupils dilated. 9:45 a.m., temperature 101°. 10:55 a.m., temperature 100 $\frac{3}{4}$ °.

At her bedside it was stated by one of her friends, that about two weeks ago she was returning home from work one evening, when it came on to rain very heavily, and wearing a new hat, that she did not wish to get spoiled, took it off and carried it under her cloak; got a thorough drenching, from which she caught a severe cold, and has not been well since. Why the patient refused to give this information on her admission is something very strange and unaccountable, and seems to throw some doubt on the validity of the assertion; inasmuch as it is not easy to conceive what legitimate reason she could have for concealment; but since it has been proved that some parts of her statement deviated very materially from what was really the case, we cannot, in this particular instance, adhere closely to her testimony.

“SECTIO CADAVERIS” SEVEN HOURS AFTER DEATH.

June 28th, 3 p.m.—Removed the Spinous processes of the Vertebral Column; found blood fluid all through; muscles of the back infiltrated with blood; Opisthotonus well marked, toes turned in; great effusion of blood between the bone and Dura Mater in the Vertebral Column.

Removed the Brain and Spinal Cord down to Cauda Equina; on removing the Calvarium there was nothing particular to notice; the Dura Mater appeared healthy; veins were very full; great number of Pacchionian bodies along the Longitudinal Fissure; the Arachnoid presented an opaque, milky appearance, which extended from one convolution to another; the veins were injected.

Surface of the Brain presented, generally, a healthy appearance; *Puncta Vasculosa* were more than usually numerous.

Interior of the Brain.—Brain substance was found to be firm and healthy on dissection; the Left Ventricle was found empty; the Choroid Plexus and Corpus Striatum healthy; of the Thalamus Opticus and Right Lateral Ventricle there was nothing to remark; Fifth Ventricle was small.

Veluminterpositum healthy; brain sections were healthy every way; the vessels on the floor of the Fourth Ventricle were injected.

Spinal Cord.—

Sectio Thoracis.—On opening the Thorax the Pericardium was found to contain about ʒiiss. of fluid. In the external edge of the Lower Lobe of the Right Lung was discovered a hard nodule, with softening in the centre, containing a purulent deposit. The Pleura was covered, externally, with numerous little patches of fibrinous effusion, which could be scraped off by the finger nail. It was also dotted over with what appeared to be light-colored lymph. The Right Lung was partially emphysematous. A similar nodule to that found in the Right Lung was discovered in the Upper Lobe of the Left Lung.

Heart.—Right side, Ante-Mortem clot. A quantity of light-colored lymph, devoid of color in the centre, was found extending along the Pulmonary Artery. The Tricuspid and Semilunar valves were perfectly healthy. Left side, Post-Mortem clot. Firmly contracted, empty and perfectly healthy.

Uterus.—Normal.

Ovaries.—Congested; containing a large number of small cysts. Cystic disease of both right and left ovaries.

Liver, Kidney and Spleen.—Healthy; normal.

Syphilitic Ecthyma—*Rapid Cure under Large Doses of Iodide of Potassium.* Under care of Dr. D. C. MACCALLUM. Reported by Mr. D. CARMICHAEL.

B. M., aged thirty-five, country—Ireland, was admitted to the Montreal General Hospital on the 5th July, 1872, suffering from an ecthymatous ulcer, situated on the inner ankle, near the inner malleolus of the left leg.

History.—Is a married woman and the mother of seven children; has always enjoyed good health, until about one year and four months ago; at that time she became pregnant, and during the first month of her pregnancy an eruption made its appearance on her legs and thighs, evidently syphilitic in character, as she mentions that she contracted chancre from her husband. She remained pregnant for six months, when she miscarried. She states that the child was dead, and appeared as if putrid from disease. After she had recovered from her miscarriage she went under treatment for the eruption, which had been gradually growing worse, and an ulcer appearing on the inner side of the left ankle for the first time. The treatment was continued till the eruption had disap-

peared and the ulcer healed. She continued well for some time, and on the 25th March, 1872, was admitted to hospital, the eruption and ulcer having again appeared in the same situation as before, and being considerably worse in character. Under treatment she recovered in about four weeks, and was discharged from the hospital on the 4th May, 1872. In about a week or ten days after her discharge from hospital the eruption appeared again. This time she went under treatment of a physician. Little benefit was derived, and on the 5th July, 1872, she was again admitted to hospital.

July 14th.—*Present Condition.*—General surface of the body is pale, and suggests a condition of anæmia, but she complains of nothing except an ulcer situated on the inner malleolus of the left ankle, which presents the following characters :

It is reiform in outline ; as large in character as a cent piece ; unhealthy looking towards the centre, this part being occupied by a large, greyish white deposit, which occupies the greater part of its surface, and around the margin of this patch some unhealthy granulations are seen springing up ; towards the edge of the ulcer it presents a more healthy appearance, the granulations being small, firm and bright red color, and the periphery is surrounded by a margin of healthy looking, new skin. Above the inner malleolus, and on the inner side of the ankle, also, are numerous pustular looking spots, bluish in appearance, and a scab covering the surface of some of them. She mentions that they fill with matter, then burst ; an eschar forms ; this is shed and the surface left, ulcerates. Scattered all over the lower extremities are numerous coppery-hued spots, but they do not take on an ecthymatous action.

Ordered Pot. Iod. grs. x., every four hours. Lotio Nigra, to be applied to the ulcer with lint.

July 15th.—Condition much the same ; ulcer is improving in appearance, and the pellicle of new skin around the periphery is extending, and the cavity of the ulcer is contracting.

July 18th.—Has been in much the same condition for the past three days, but is improving ; complains of pain beneath the right nipple, but it was only transitory, nothing abnormal being detected ; ulcer looks smaller and more healthy looking. She continues on the Potas. Iod. and Lotio Nigra.

July 21st.—Ulcer is healing rapidly ; and at least half of its surface is closed ; a blackish looking pellicle covers the healed surface, and the edges are bordered by healthy looking, new skin ; general health good.

July 24th.—Ulcer still continues to make good progress, and the

greater part of the surface is healed, the blackish looking pellicle still occupying the central portion.

July 27th.—Ulcer almost entirely healed, with the exception of a small portion, not much larger than a pea; general health good. but complains of weakness.

July 30th.—Discharged from hospital cured.

Severe Punctured Wound from a Bowie-Knife, extending into the Pelvis, and separating the Coccyx from the Sacrum—Sloughing of cellular tissue along the track of the wound—Recovery.
Under the care of Dr. D. C. MACCALLUM. Reported by Mr. JAMES C. CAMERON.

J. C., aged 17, was admitted to the Montreal General Hospital June 29th, 1872.

Condition.—He was brought to the hospital about 4 o'clock in the afternoon, under the influence of liquor, and bleeding profusely from a wound produced by a bowie-knife in the hands of an Italian pedlar. Upon examination, a wound was found in the fissure of the nates, running transversely, about three inches in length, and so deep as to allow the finger to be introduced its full length into it. The wound was directed forwards and upwards, indicating that the course of the knife was from below upwards; and upon further examination the coccyx was found to be completely severed from the sacrum, and hanging loose in the pelvic cavity. The alarming hæmorrhage proceeded from an artery of considerable size, the bleeding being sufficient to saturate all his clothing from that part down. The pulse was rapid and weak, probably from loss of blood.

Treatment.—The edges of the wound were brought together by three silver sutures carried as deep as possible through the soft parts, so as to bring the lower edges of the wound together. Cold applications of ice externally. Internally, wine, beef-tea and milk liberally.

This treatment was continued for several days with a view of supporting his strength and keeping down inflammation.

July 3d.—On making the daily visit the patient was found to be much worse, complaining of severe pain in the abdomen; slight pressure did not cause much uneasiness; but, upon firm and deep pressure being made, he complained loudly, and referred the pain to the lower part of the abdomen; so much so, that it was feared that inflammatory action was being set up in the pelvic cavity; the bladder was much distended, and it was found necessary to draw off his urine; the pulse was then 110; temperature in axilla 101 °;

poultices were ordered over the abdomen, and medicated with Carbolic Acid over the wound; internally, Pulv. Doveri, grs. v., Hydrarg Amm. Chl., grs. iij. To be repeated every four hours.

July 24th.—Urine drawn off again last night and this morning; there was considerable difficulty in passing the catheter; parts tender; obtained great relief from the poultices; is quite feverish and weak; great tenderness on deep pressure; pulse 92; temperature in the axilla 102 1.5 °.

July 11th.—Under treatment, he seemed to be gradually gaining, and the symptoms of pelvic complications disappearing; the temperature came down to 100 °, and the pulse to 90; but to-day there was a marked change for the worse, so that at 8:30 p.m. his pulse was 130 and the temperature 105 1.5 °; the heat of surface was intense, dry and pungent; great restlessness; is in a semi-conscious state, wandering and delirious; the symptoms were so alarming that it was thought necessary to have his deposition taken; he was given large doses of Liquor Ammon. Acetatis and stimulants. In about an hour after the administration of the Ammonia he was found bathed in a profuse perspiration, and felt somewhat easier. Beef-tea, milk and wine were given regularly at night.

July 12th.—The alarming symptoms of last night have abated, and he feels somewhat better; pulse 110; temperature 101 4.5 °; shewing a fall in temperature of 3 2.5 ° in 12 hours. He was ordered to-day, Pulv. Dover, grs. x., every 4 hours; poulticing the wound to be discontinued, and, instead, Carbolic Acid dressings, with an injection of Carbolic Acid Wash, 1 x 30, into the wound twice a day. At 8 p.m. pulse 120; temperature 102 1.5 °.

July 16th.—Has gradually improved; takes nourishment well; temperature has ranged from 101 to 102 1.5 °, and the pulse from 100 to 120.

July 31st.—Very much improved; the wound is granulating nicely; Carbolic Acid dressings discontinued; Red Wash substituted.

August 4th.—Discharged, quite recovered. It may be mentioned that some difficulty was experienced in keeping his bowels regular. Owing to the peculiar situation of the injury, any straining was extremely painful, and even the passage of the fœcal matter, almost without effort, was attended with considerable uneasiness. The pus, which was discharged from the wound in large quantity, was peculiarly foetid and disagreeable.

Amyloid Degeneration of the Kidneys—Pleurisy—Epistaxis—Edema of the Lungs—Ammonæmia—Death. Under the care of Dr. D. C. MACCALLUM. Reported by Mr. HENRY BROWN.

J. M., a well-developed young Irishman, aged 28, was admitted into the Montreal General Hospital on the 8th July, 1872, under the care of Dr. McCallum, with well marked symptoms of Chronic Bright's disease. He had been employed on a canal boat, and had been occasionally exposed to the cold; also, habitually using spirits, but not a hard drinker. On the 8th of May he was seized with pain in the stomach and loins; at the same time he noticed that his abdomen was swollen. Three days after the œdema shifted to the legs, arms and face, and about the 15th June his eyesight began to fail, and continued until the 8th July, when he could not read the largest print; his urine diminished in amount; at the same time he increased in weight some twenty pounds in two months. His previous history was that of health, with the exception of a slight gonorrhœa in Europe, and yellow fever in the West Indies, in July, 1869. Being admitted, his urine was examined and found to contain a large amount of albumen, sp. gr. 1,005, quantity normal and pale yellow. He had, also, a mitral systolic murmur and percussion showed hypertrophy of the left ventricle. He was ordered Tinct. Ferri. Mur., ʒij.; Liq. Amm. Acet., ʒij., Aq. ad., ʒvi. a tablespoonful every four hours, and 1 oz. gin.

10th.—His urine was examined again and found to contain uro-hæmatin and fibrinous casts of the uriniferous tubes; the patient is very restless and cannot sleep; œdema shifts from face and upper extremities to scrotum and lower extremities; bowels constipated, and he appears much excited; pulse 96.

12th.—Urine diminished in quantity; sp. gr. 1,005; no change in quantity of albumen; the patient is very restless and cannot be kept in bed.

14th.—Bowels more regular; the scrotum and lower extremities very much swollen, and he vomits his food and medicine; pulse 100; distressing dyspnoea, and much excited.

15th.—More restless; cannot sleep; he remains out of bed; urine scanty, and no desire to micturate; sp. gr. 1,005; pulse 102, and no change in quantity of albumen.

16th.—Active delirium; wants to leave the hospital, and persists in sitting on the floor; bowels regular; pulse 108.

17th.—He was seized about 8 o'clock this morning with a violent pain in the right side, below the nipple; on being examined it was found that he had well marked symptoms of pleurisy; friction sounds plainly heard. He was ordered mustard sinapism to

be applied over the right side, and the following prescription: Liq. Amm. Acet. ℥ij., Aq. ad. ℥vi., ℥ss. Ter. die., also Pulv. Dover grs v., every 4 hours.

At 12 o'clock he had a convulsion which lasted thirty seconds; pulse 144; the pain in the chest continued throughout the afternoon and night, with dull, frontal headache and thirst.

18th.—This morning the patient is bathed in perspiration; urine slightly diminished in amount, and amber tint; sp. gr. 1,006; he feels easier, and vomiting ceased.

19th.—Œdema of both lungs, with bubbling rales; pulse 155; Œdema of scrotum diminished; urine examined again with microscope and found to contain crystals of triple phosphate and granular tube casts.

20th.—He rested very well through the night, and slept at times; less pain in right side, and friction sounds not so well marked; breathing freely and not so much excited; he has a slight attack of diarrhoea, and was ordered Pulv. Cretæ Co.

21st.—Diarrhoea stopped and Pulv. Cretæ Co. discontinued.

22nd.—Epistaxis, with considerable loss of blood; Liq. Ammon. Acet. stopped and Gallic Acid given in gr. xj. doses every 4 hours.

23d.—He complains of sore mouth and thirst; his tongue is dry, cracked and of a dark brown colour; his breath was examined by moistening a glass slide with Hydrachloric Acid and making him breathe on it for some minutes; crystals of Hydrochlorate of Ammonia were found when the slide was placed under the microscope.

25th.—He had another attack of epistaxis; Gallic Acid continued until 28th.

August 1st.—He is very weak and stupid, and refuses to take nourishment or medicine: he was ordered Mist. Ferri et Quinæ and persuaded to take it, and was continued until the

5th.—Albumen very much diminished, and urine contains a large amount of chlorides. On the 5th he had the last attack of epistaxis; his nose was plugged, but he pulled it out as soon as Dr. Roddick left the ward. Gallic Acid was ordered again in gr. v̄ doses.

8th.—The patient sits in a hooped-up position, and partly comatose; his urine was examined, and no trace of albumen could be found, but it contained a large amount of chlorides; sp. gr. 1,005, and pearl colour; Œdema slight and limited to the lower extremities; he has been comatose and quite unconscious for the last twenty-four hours. Died on the 10th August.

POST MORTEM APPEARANCES.

Œdema of both lungs; otherwise healthy.

Pericardium.—The membrane has a shaggy appearance from partially organized fibrinous exudation; the surface of the pericardium presents the appearance, when separated, of two ragged surfaces; the contents of the sac has a dark-red colour, giving it a hæmorrhagic appearances.

Heart.—The heart weighs 2 lbs. 6 oz.; its substance is soft and flabby, sodden with serum, and the muscles are discolored; the right ventricle and auricle are very much dilated; the left not so much; but extensive thickening of the walls of the left, being from $\frac{7}{8}$ to $1\frac{1}{4}$ inches thick; the valves were perfect, except a large sized nodule on the ventricular surface of the mitral.

Liver solid and congested.

Kidneys.—Right kidney weighs 6 ozs.; the surface is smooth, with the exception of a few granulations; the substance is of firm consistence, and the tunica albuginea loose and opaque; the cortical portion distinctly yellow and in excess; the pyramids small and charged with small vessels, giving it a reddish colour.

Left Kidney weighs 4 ozs., very firm, and of a dirty yellow colour; on section, the cortical portion is very small, only appears like a border around the pyramids; the surface is covered with granulations, and the tunica albuginea is thick, opaque and closely adherent. On section, both kidneys have a glistening appearance, and Iodine being applied, numerous bright red spots were seen, and on the subsequent addition of sulphuric acid those spots changed to a rusty violet or dark blue colour.

Albuminuria with Anasarca—Complete Disappearance of Both. Under the care of Dr. D. C. MACCALLUM. Reported by Mr. H. R. BIGELOW.

J. McB. entered the Montreal General Hospital July 10th, 1872, with Anasarca and a general appearance of diseased kidney.

Patient stated that he was 50 years old; born in Ireland; came to Canada in 1845; by trade a cabinetmaker; mother died about about five weeks ago of cancer in the breast; father died when patient was quite young; no brothers or sisters; about five days ago, when at work, noticed swelling in hands and feet; never had rheumatism or any serious disease.

On entering the hospital the patient was placed under the care of Dr. McCallum. An examination of the urine showed great deposit of albumen. No abnormal heart sounds or derangement of vision, but well marked cedema of eyes and lower extremities.

The patient was placed on half diet, and Quin. Sulph., gr. j., and Tinc Ferri Mur., m.x., ter die.

July 11th, 12th, 13th, 14th.—Patient manifestly improving.

15th.—Albumen in urine barely appreciable.

16th, 17th, 18th, 19th.—Continued improvement; no Anasarca.

20th.—Sp. grav. of urine 1,012; no trace of albumen; no tube casts; 80 ozs. of urine, of limpid colour, voided in 24 hours; no flatulency or indigestion; pulse normal; a slight pain in back relieved by application of hospital liniment.

21st.—No change.

22nd.—Patient to all appearances well.

23d.—Patient left hospital.

Reviews and Notices of Books.

Spermatorrhœa; its Results and Complications. By J. L. MILTON Surgeon to St. John's Hospital for Diseases of the Skin. Enlarged and Reprinted from the Original Papers published in the *Lancet* for 1852, and the *Medical Circular* for 1858. Ninth edition; 8vo., pp. 118. London: Robert Hardwicke, 192 Piccadilly. 1872.

There is no subject so likely to engross attention as that treated of in this little work. The function of generation is of such importance to most men that with many death would be preferable to impotence. It has always been a difficult matter to deal with, the natural repugnance of man to converse on subjects of this nature leading, in a great many instances, to impairment, if not total loss, of the procreative power. It is hard to say what is the duty of parents and teachers in the care and treatment of childhood and youth. It is difficult to determine or to decide how to act; whether to impart to children the knowledge of the procreative act, warning them plainly and honestly of the dangers of departure from virtue's path; or, on the other hand, to allow them to find out for themselves the mystery which puzzles most boys and, we doubt not, girls as well, so that, having no guiding principle of action, they are left to make havock of their future happiness and, perhaps, shorten, by vicious practices too easily acquired, their very lives.

The early impressions of youth become the guiding principles of the future man. He is instructed in his duty toward God and his neighbor, but too often the duty which he owes to his own individual person is a sealed book, to be opened and read with avidity in the many sensational works of the day, or the horribly

obscene books which are perused in secrecy, and which have such a demoralizing tendency.

The work before us treats of Spermatorrhœa as a disease. Some objections have been raised to placing this affection, which in many instances is a symptom of diseased action, under a special heading. To this we may urge that there are no symptoms, properly so called, which have not a defined cause. It is the aim and object of the practice of medicine and surgery to so connect cause with effect that by removing the one the other must cease. It becomes, therefore, a matter of minor importance, a mere play of words, to object to the classification of this affection under the distinctive heading of Spermatorrhœa.

This work consists of three chapters. In the first we have a brief history of the disease, together with an account of the present state of professional opinion on the subject of Spermatorrhœa. In the course of his remarks the author draws attention to the great prevalence of this affection; he says "that the disease exists to a very great extent, far greater than is generally thought; that it yearly reduces hundreds, if not thousands, to impotence and all its attendant ills: hypochondria, weariness of life, insanity, and so on; that not only every town, but every village could show victims to this neglected malady. are facts which, I feel assured, will not be disputed by those who have looked into the subject."

This being the case, and there are few men who have gone through life with their eyes open will dispute its accuracy, it becomes a question to determine a remedy, not so much for the disease existing, because our art and those who practise it scientifically are capable of affording individual relief, but at the present time preventitive measures are the rule. It is, therefore, the duty of the profession to look the subject fairly and squarely in the face, and not, by a system of false delicacy, abandon the victims of habits formed in early life to their fate.

The author points out that, as a general thing, professional men dislike to treat these cases, and he accounts for this from the fact that sound principles of the pathology and treatment of this affection are neglected in the class-room, so that a large proportion of practitioners are not qualified to afford relief. A most singular announcement is given as a fact, that at a meeting of the Medico-Chirurgical Society of London a statement, that Eunuchs could beget children, was allowed to pass unchallenged. If this statement be true, we must conclude that the phlegmatic Turk has too often been deceived in the keeper of his harem, which may

account, in the days of the past, for the occasional application of the traditional bow-string for apparent minor offences.

In the next chapter we have the pathology of this disease fully discussed. The author divides his subject into three classes, and although he fully recognises those affections of the urethra prostatic and bladder, attended with a discharge, as not being true Spermatorrhœa; yet, from the fact that their very existence exerts a disturbing influence, through the mind of the sufferer, on the virile powers, they are all described under one general heading.

In speaking of impotence, the author states "that the function of generation being the most truly remittent of all we are acquainted with, being liable to cease for years, or even for life, without any injury to health, may be supplanted by disordered innervation of some other part." From this we would infer that the author connects many of the ailments of life with the generative function, regarding the cessation of the latter with the development of the former. This, to our mind, is an error, as we know from observation that many affections of the general health will lessen if it does not entirely obliterate all sexual ability.

The author calls attention to sudden loss of power in persons in whom there exists a tendency to impotence, resulting from very slight causes, such as fractures, attacks of neuralgia, cerebral excitement, and long-continued fatigue. Cases are given in illustration which have come under the author's observation. The histories of these cases have been cut short in order to limit the size of the book.

In chapter third we have very fully discussed the subject of treatment. The author, at the outset, gives four rules which we think are applicable in the treatment of disease generally. He does not venture on any specific for this disorder. After considering various tonics, sedatives, and the remedial means in use in such cases, he passes on to the external applications, as the use of the hip bath, sleeping cool on a hard couch or the floor. He has found it advantageous to insist on light covering, and, although it is not mentioned, we should presume that early hours should be insisted on.

We come now to the mechanical means, such as the introduction of an instrument into the rectum, and worn there, so as to exert pressure on the urethra, and thus prevent the escape of semen. Next we have a collar with four sharp points looking inwards; this is applied before going to bed, and should erection take place the sufferer is awakened by the pricking sensation of the points; or, another on the same principle, but consisting of a double row of teeth, which lie flat in quiescence, but during dis-

tension of the ring the sharp edges are brought in uncomfortable juxtaposition with the erect organ.

This reminds us of a half cracked friend whom we knew a few years ago, who, from religious austerity, imagined it was a sin to suffer an erection even during sleep. He had a tin receptacle made, with a sharp rim looking inwards. This, he nightly placed on his erring bit of flesh and chained it to his thigh. It resulted in the formation of an ulcer near the root of his penis which took some time to heal. We cannot see the advantage of these means of cure, and should fancy that the mere fact of any application of the kind would rather tend to induce an erection than otherwise.

Another somewhat similar apparatus mentioned is the electric alarum. "The principle of it is that a ring placed on the penis is so made that when expanded by erection it completes an electric circuit, and so rings a small alarum bell placed under the sleeper's pillow, which speedily rouses him, however deep his slumbers may be." All these measures appear to us to be difficult of carrying out, and as the author truly observes, "Unless the patient is sufficiently resolute to submit to having his rest broken, any measure of this kind will be inoperative." The advantage of blisters is fully discussed; so, also, cauterization, stimulating injections, and the passage of bougies. The subject of suitable diet is likewise gone into, and the use of wine or spirits. In fact this little work covers, in a very small space, a large and important field of observation, and to those desirous of acquiring a scientific knowledge of this affection, together with its treatment, we most heartily recommend this excellent treatise on the subject.

Sciatica, Lumbago, and Brachialgia; their Nature and Treatment, and their Relief and Rapid Cure by Hypodermic Injection of Morphia.

By HENRY LAWSON, M.D., Assistant Physician to St. Mary's Hospital, and Lecturer on Physiology in St. Mary's Hospital Medical School. 8vo.; pp. 200. London: Robert Hardwicke, 192 Piccadilly. 1872.

We have received a copy of the above work and shall notice it in a future issue.

Syphilis: its Nature and Treatment, with a Chapter on Gonorrhœa.

By CHARLES ROBERT DRYSDALE, M.D., &c. 8vo.; pp. 165. London: Baillière, Tindall and Cox, 20 King William Street, Strand. 1872.

This little work has been received, but too late for notice in the present number of the JOURNAL.

CANADA

Medical and Surgical Journal.

MONTREAL, SEPTEMBER, 1872.

SEWER VENTILATION.

Our system of sewerage in the City of Montreal is tolerably good; that is, we have sewers sufficient in number and size to carry off house drainage, and our Corporation are making strenuous efforts to lay down larger drains in localities where, from the growth of the city, the old sewers were not sufficient for the purpose. But, while we are inaugurating a system of drainage which, after all, is none of the best, there is no provision for sewer ventilation except, indeed, the many gratings at the street corners which, acting as ventilators, give forth their deadly emanations, to the evident and serious injury of the air of the locality. Can we wonder at the large infant mortality under such a state of things? These tender plants, requiring all the fostering care of mothers and nurses to keep life in their bodies, subjected and exposed, from birth, to a system of gradual but continued poison.

The public should be educated to the fact that poison does not of necessity require to enter the stomach to develop its deadly effects; expose an individual to noxious vapours, permit him to take them into his lungs; expose his blood, which is sent to his lungs for purification, to, not the pure air which a merciful and all-wise God has created for us to breathe in, but to the foul stenches from the emanations of sewers, a creation of man, permitted, through his stupid blundering, to spread through and contaminate, and render pestiferous the atmosphere we are compelled to inhale.

If an individual has in his back premises a foul privy which affects the air of the neighbourhood, he would be subjected to police inspection, sanitary officers would throng around like flies near a honey pot, and he would be forced, and properly so, to remove the nuisance. We are not, surely, asking too much of our Corporation to request them to take the filth they have assumed and carry it out of our way without rendering pestiferous the air

we breathe. If there were no means of remedying the difficulty we should be forced to be content; but when we know that it requires simply a little engineering skill and expenditure of money to remove the evil, we can hardly be blamed for wishing to see the work inaugurated forthwith. We have heard of a number of schemes from converting house spouts into ventilators, to building special ventilators at the higher levels of our city at the same time trapping all our street sewers; but it appears to us that there is no earnest intention on the part of the city authorities to move in the matter.

We call special attention to this subject at the present time as disease and pestilence is abroad, and while other communities are earnestly working in improving their sanitary condition we, in Montreal, are allowing valuable time to slip by, and are not stretching a finger towards the required change. It is a subject which must sooner or later engage the attention of our Corporation, and in our opinion, in view of the possible chance of an invasion of epidemic cholera, every means should be resorted to to improve our sanitary state and thereby lessen the possible spread of disease.

MEDICAL QUALIFICATIONS IN JAMAICA.

A Bill has been submitted to the Legislative Council of the Island of Jamaica, purporting to alter the statute which already exists in reference to the registration of physicians and surgeons in actual practice in that island. In perusing that Bill, which is published in the *British Medical Journal* of July 27, we observe the following clause: * * * "so that licentiates of any college or faculty of physicians and surgeons, recognised in all parts of the Dominion of Canada, may be admitted to practice in this island." we cannot but express our wonder at the utter ignorance, shown by the framers of the Bill, of Canadian institutions and laws having reference to matters medical. We think it would be well for the Government of the Island of Jamaica to look into the subject ere they sanction such a Bill, as it would, in our opinion, undoubtedly lower the standard of the medical profession, in Jamaica, by placing it on the same level as that in some of the Maritime Provinces of our Dominion; where, if we understand aright, a person holding a diploma from any American college can obtain a governor's license which entitles the holder to practice in any part of the Dominion of Canada.

It may be urged that the Ontario Bill protects that section of the Dominion from encroachment, unless the person holding a governor's license submits to examination before their

Board; but we rather think that persons practising upon such qualifications in Ontario would do so under the same restrictions as those referring to practitioners holding a diploma from any university or college in Great Britain, and who do not choose to take out the License of the College of Physicians and Surgeons of Ontario. It was with a view of putting a stop to such irregularities that it was suggested by some leading members of our profession to secure a general Act for the whole Dominion. The measure has been before the profession for some four years, but there are so many conflicting interests that we feel certain that nothing will come of it. In the meantime we must protect ourselves in this Province of Quebec against the encroachment of other parts of the Dominion, since they refuse the right hand of fellowship, preferring to continue the old regime to the manifest lowering of the standard of medical education in our country.

MONTREAL GENERAL HOSPITAL—APPOINTMENT OF DR. ROSS.

The death of Dr. Fraser left a vacancy in the attending medical staff of the Montreal General Hospital; the duties of that office had been filled by the late Dr. Fraser during the past twenty-five years.

At the last quarterly meeting of the governors George Ross, A.M., M.D., was elected to fill the vacancy. We congratulate Dr. Ross on his appointment, and the governors of the hospital in having secured the services of a gentleman who, though young, is destined, if life and health be granted, to fill an important position in the medical and surgical staff of our city.

Medical News.

DIETETICS OF PHTHISIS.

In the discussion which followed Dr. William's late paper on the Effect of Climate, at the Royal Medical and Chirurgical Society, opposite statements were made with regard to the diet of the Icelanders; and subsequently Dr. Horace Dobell wrote to Mr. Thorlakur O. Johnsen, one of the few Icelanders in this country; to ask him for a detailed statement of the diet of the different classes in Iceland. Mr. Johnson is an excellent authority. The following in his reply, just received, which may be considered authoritatively to settle the question

“The population of Iceland may be divided, as regards diet, into two classes: the first class consists of clergymen, merchants, magistrates, doctors, and a few of the well-to-do farmers; the second class consists of farmers, labourers, and servants.—*Breakfast* Gruel made of milk and water, with rye or barley, dried codfish or cold mutton, butter and bread. During the summer and spring, the breakfast often consists of fresh fish, such as codfish, soles, salmon, or trout; afterwards, either gruel or coffee; and at some places eggs, especially eider ducks’ eggs.—*Dinner*: Nine months in the year, salt mutton and barley-broth three or four times per week. During the remaining three months—viz., September, October and November—fresh mutton with turnips. In the autumn, every farmer slaughters a number of his sheep, which he salts down in casks for consumption. This salt mutton is, as a rule, so salt that it has to be steeped in cold water twenty-four hours before it is boiled, and even then it produces scurvy and other diseases of the skin and blood, which is quite natural from the great want of vegetables. The other three or four days of the week the dinner consists of dried codfish, rye bread and butter, sometimes cold salt mutton or fresh fish, where it can be procured. This meal is always finished by coffee.—*Supper* is, as a rule, very light, consisting generally of gruel made from barley or rye, mixed with milk and water. Where milk cannot be procured (which is often the case, especially amongst the poorer classes who live on the sea-coast), coffee is generally the substitute. It is not an easy matter to enter into all details, for in some places the poorer classes are reduced to great hardships as regards food, especially in the spring, before ships arrive from abroad. A great many then eat young seals, also parts of the whale, which is called in the Icelandic *rangi*, and is, as a rule, a very favourite dish. In winter time, many have substituted tallow for butter, and in some cases raw oil, both seal and cod-liver oil. Amongst the poor farmers, a family consisting of seven or eight persons will live on nothing else but the milk from one or two cows, a few dried codfish, and perhaps a small quantity of rye, not tasting either bread or butter, coffee or sugar, for months; even the flesh of sharks has been eaten by the poor people, when driven to do so by hunger; and from that cause I have heard that leprosy still exists in a few cases. At all the fishing stations round the coast, where people principally depend upon the sea, fish is the staple article for food both for breakfast, dinner, and supper; and, when rye-meal gruel is not added, coffee will follow. In many places, coffee is drunk four times a day.—THORLALUR O. JOHNSEN.”—Mr. Johnsen adds in a postscript: “I have just had a letter from a friend of mine in

Reykjonik, stating that a young man in the Latin school, about 21 years of age, is dying from consumption."—*British Medical Journal*.

THE CURE OF CANCER BY ELECTROLYSIS.

At a meeting of the New York Pathological Society, reported in the *New York Medical Record*, January 2, 1872, Dr. Neftel presented sections of carcinomatous deposit removed post-mortem from a lady who had died in consequence of mammary cancer. About two years ago she noticed a hard and painful lump in the right mamma. This increased, and with the pain, extended to the axilla. These masses were removed by operation. Soon after the operation she had an attack of pneumonia, from which she did not recover until the lapse of several months. In the meantime the wound cicatrized, but the pain still continued, and extended down the arm of that side, making it almost useless. After several months she felt that the cicatrix became indurated, and from these there seemed to be a string of smaller lumps, which aroused the suspicion in Dr. N.'s mind that the disease had translated itself to some internal organ; she then insisted upon being treated by electrolysis, and the treatment was pursued, in conjunction with Dr. Bailey, of Albany. To the surprise of Dr. N., not only did the secondary tumours disappear, but the patient improved in general health. So marked was this latter effect that Dr. N. was inclined to believe that he had been mistaken in his diagnosis of internal metastasis. After several months tumors again showed themselves in the same locality; these were treated and likewise disappeared. Finally the cervical glands became affected, and she began to suffer from asthmatic attacks, in consequence of pressure upon the pneumogastric: these were succeeded by an attack of pleurisy, due to cancerous exudation, and she finally died delirious. At the autopsy, the liver, lungs, and cervical glands were found infiltrated with cancerous material.

In speaking of the effects of electrolytic treatment upon cancer, Dr. N. stated that he had reason to believe it would always be successful if employed before the disease had become constitutional.

CHOLERA.

This disease is said to be spreading in Russia and in India. In the former it is gradually extending from the eastern to the central and western portions. At Moscow it is prevailing in a most malignant form, and a few cases have appeared at St. Petersburg. It behoves the authorities of our principal seaports to exercise the greatest vigilance to prevent, if possible, its introduction into this country.—*Medical News*.

HEAT OF THE PRESENT SUMMER AND ITS EFFECT ON MORTALITY.

The temperature during the last week in June and the two first weeks in July has been almost unprecedentedly high, and with the result of largely increasing the mortality in our large cities, the principal victims being the very young and those of great age. The total number of deaths in Philadelphia during the week ending July 6th was 746, the largest number ever recorded here in any one week. Of these deaths, 512 were of children under five years of age, and 476 of children under two years of age. Cholera infantum claimed 274 victims, sunstroke 22, old age 20. In New York during the same week the mortality was even larger, having been 1,567, more than 100 per cent. greater than in Philadelphia, while the population of the former is only about 40 per cent. greater than that of the latter.

The mortality in Philadelphia during the week ending July 13th was 852, of which number 497 were infants under two years of age; 383 of them being under one year. Cholera infantum had 310 victims, sunstroke 68, old age 29. In New York during the same week the mortality was 1,056.

The heat in Philadelphia during the week ending July 20th was considerably lessened, and the mortality for the week was 587, being a decrease of 265 from those of the previous week. The deaths from cholera infantum were 210, from old age 14, sunstroke 10. From small-pox the deaths were reduced to only 6.

In New York the mortality was, during the same week, 961.

The extreme heat of the summer is not confined to this country. In Paris the heat was great, but the mortality had not increased at latest reports (28th June).

In India the heat has been, it is stated, (*Lancet*, July 6th), exceptionally great. At Allahabad, at latest accounts, it had reached 115 ° in the shade, while at Hyderabad it was 116 °.—*Medical News*.

TREATMENT OF HÆMORRHOIDS.

Hæmorrhoids, connected with prolapsus, were successfully operated upon by the application of nitric acid, some thirty years ago, by Dr. Houston of Dublin. The method found great favour at the time, but has been somewhat displaced by the ligature, and the section followed by the actual cautery. Billroth, of Vienna, has of late revived Houston's operation, and reports excellent results, especially in those cases where frequent and dangerous hæmorrhage had occurred.—*Lancet*.

Monthly Summary of Meteorological Observations taken at No. 26 Beaver Hall, Montreal, by THOS. D. KING:
JUNE, 1872.

Day.	Daily Mean Temperature	Daily Mean Humidity.	Daily Mean Barometer corrected to sea level.	Weather.	Quantity of rain in gallons per acre.
1	54.1	59.6	30.03	Rain	1,583
2	57.6	51.8	11	Clear	....
3	59.5	49.6	15	Clear	....
4	52.9	83.2	29.78	Rain	10,428
5	62.0	67.9	85	Clear	....
6	66.5	56.0	92	Clear	....
7	63.9	58.8	92	Rain	425
8	60.9	93.8	73	Rain	7,918
9	65.1	80.0	80	Rain	....
10	63.8	87.7	70	Rain	3,393
11	68.7	69.3	76	Cloudy	....
12	71.1	70.8	80	Rain	11,312
13	62.1	66.3	90	Rain	673
14	63.0	72.0	74	Rain	....
15	64.2	60.9	90	Clear	....
16	66.2	54.8	30.11	Clear	....
17	69.3	57.4	22	Hazy	....
18	69.7	57.4	25	Rain	....
19	70.4	69.2	18	Rain	2,488
20	76.3	69.3	17	Rain	10,858
21	81.2	66.7	10	Rain	....
22	74.7	50.6	17	Hazy	....
23	72.3	54.9	11	Hazy	....
24	72.8	54.1	04	Cloudy	....
25	72.5	65.5	07	Hazy	....
26	72.4	67.9	12	Cloudy	....
27	74.9	65.7	10	Clear	....
28	77.7	64.1	04	Rain	4,071
29	79.9	65.4	05	Clear	....
30	80.1	66.6	04	Clear	....
..
Mean.....	68.2	65.2	29.99	Total.....	53,154

JULY, 1872.

1	77.1	76.1	29.90	Rain	9,049
2	69.0	70.4	97	Cloudy	....
3	77.4	74.3	83	Rain	1,357
4	76.9	72.0	81	Rain	....
5	73.0	64.4	95	Clear	....
6	73.3	60.3	30.09	Clear	....
7	73.6	59.0	16	Clear	....
8	74.9	59.7	23	Clear	....
9	77.5	56.4	13	Clear	....
10	76.6	72.3	29.96	Cloudy	....
11	74.6	58.9	93	Clear	....
12	76.3	67.6	82	Cloudy	....
13	65.3	41.0	30.14	Clear	....
14	72.5	47.2	05	Clear	....
15	79.7	49.6	29.91	Hazy	....
16	82.9	62.3	81	Rain	....
17	80.0	69.0	89	Rain	....
18	70.8	89.9	93	Rain	....
19	73.3	46.7	30.00	Clear	....
20	70.5	57.4	06	Rain	2,262
21	67.9	80.2	29.90	Rain	13,574
22	66.2	59.6	85	Rain	4,071
23	66.8	59.5	96	Rain	....
24	68.6	59.0	94	Rain	....
25	68.0	56.0	30.11	Clear	....
26	63.0	84.0	29.81	Rain	26,016
27	64.4	64.1	97	Cloudy	....
28	61.6	64.6	30.05	Rain	18,098
29	61.0	89.2	03	Rain	2,714
30	65.1	53.6	30.06	Clear	....
31	65.0	52.3	30.01	Clear	....
Mean.....	71.4	63.7	29.99	Total.....	77,141