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CANADA  
MEDICAL & SURGICAL  
JOURNAL.

A Monthly Record of Medical and Surgical Science.

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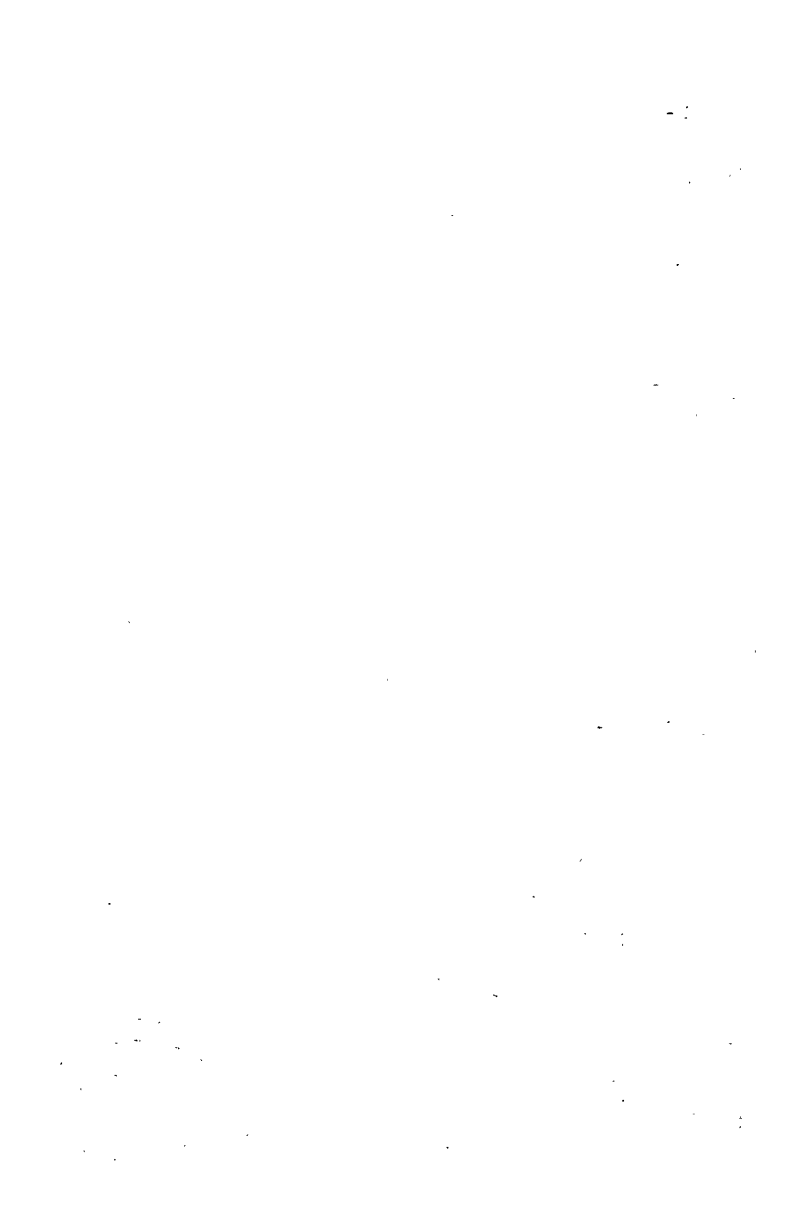
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# CANADA

# MEDICAL & SURGICAL JOURNAL

**AUGUST, 1887.**

Original Communications.

ON SOME FORMS OF HYSTERIA.

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

We are all fully alive to the freaks and vagaries of that strange disease, *Hysteria*, and, in anomalous cases, should be on the alert for the detection of this underlying element. The usual manifestations of hysteria are so striking, so well understood, and so easily recognized, that when they exist, they give an impress to the symptomatology that cannot escape the medical observer. But when these are wanting, the symptoms may very easily be, and often are, mistaken for those arising either from *organic* disease of the nervous system (central or peripheral) or from disease of very various organs and structures. It is, too, a matter of common observation that persons suffering from the graver forms of hysteria may never have presented any of the common manifestations just alluded to, and this valuable aid to diagnosis is frequently wanting. This point is worth establishing, because it is within my experience that the absence of a history of globus, or of convulsions or fainting attacks, or retention of urine, etc., is often brought forward as an argument against the hysterical hypothesis in a doubtful case. To reach a satisfactory diagnosis in these cases, it is of special value to consider the whole of the symptoms together, taking in the entire picture made by these, and studying them from the standpoint of their possible explanation as a whole—for the anomalous

character of the entire group of symptoms often forms the strongest argument in favor of hysteria : and mistakes are often made by want of due consideration of this procedure, where any two or three of the symptoms, taken apart from others, might readily indicate an entirely erroneous conclusion.

As hysteria is pre-eminently a disease of the female sex, it is mainly amongst girls and women that we are so apt to suspect its existence. That it occurs amongst boys and men will be admitted by any medical man to whom you put the question ; but you will generally find that the cases they have seen are limited to perhaps one or two in which the common phenomena—emotional fits, or globus, or palpitation—have occurred. So rare is it to observe hysteria gravior in the male. But it does show itself sometimes, and may then be the source of grave alarm on the part of both friends and medical attendants. I have met with several examples of the kind within the past year, and to illustrate this point, select two cases from the hospital record :

CASE I.—E. P., aged 31, telegraph operator, admitted 27th September, 1886, complaining of spitting blood, severe vomiting, and diarrhœa. Family history good. Patient has always enjoyed good health until 4th July, 1884, when, whilst on a sea voyage, was suddenly thrown from his berth, striking his head against a marble wash-stand. Remained unconscious for half-an-hour, and no bad effects followed until twenty days after the accident, when he had a fit, described as follows : Unconscious ; frothing at the mouth ; tongue bitten ; limbs quiet. Fit lasted half-an-hour, after which he felt tired and sleepy. These fits came on every second day about 11 A.M., and were preceded by a feeling of "wishing to be alone." The fits continued for three months, and at the end of this time patient entered a hospital in Dublin, where the surgeons decided to trephine, but patient objected to this, and he was given small doses of calomel for two hundred consecutive hours. The result of this treatment was severe ptyalism and complete cessation of the fits. Has had no recurrence since. Nine months later had occasional attacks of cholera for two months whilst in Marseilles. In December

1885, began to complain of an easy, painless, non-paroxysmal cough, generally worse in the morning, attended with a small amount of greyish-colored and tenacious sputa. In the intervals of coughing, patient spat up bright red, frothy blood, varying in quantity from a teaspoonful to three tablespoonfuls, and, he says, as much as 20 ounces upon one occasion. Had night sweats; no diarrhoea; lost flesh somewhat. Remained in a hospital in Paris for two months, where, under the use of the hot hammer and blisters to the chest, he improved very much, and returned to England. Three months later, through having "caught cold," patient had a return of the above symptoms in about the same degree of severity. He now entered the Brompton Hospital, where, under treatment (cod-liver oil, porter, and nourishing diet), he improved so much that at the end of five weeks he left the hospital able to resume his usual occupation. Shortly after there was a return of all his previous symptoms in a slighter degree, and he entered the Victoria Park Hospital. Here, under a similar course of treatment, he improved much in health and strength, and continued to do so until 26th September, 1886, when after just arriving in Montreal was seized with, he says, a severe attack of diarrhoea, stools being watery, yellow, and streaked with blood, the passage of each stool being attended with a good deal of pain and tenesmus; complained also of abdominal cramps and vomiting, the ejecta consisting of food taken. Had a slight attack of spitting of blood. No cough nor thoracic pain. These symptoms were preceded by chills and feverishness. Upon admission, these were the symptoms complained of by patient, but upon examination, the stools passed were quite normal in appearance, and he had no attack of vomiting.

*Examination.*—Of average height; weight 118 lbs.; sparely, though well-built; anæmic: dark complexioned; skin warm and moist; muscles not wasted; no evidence of injury to head; no evidences of syphilis; nails not incurvated; tongue pale and moist, coated in centre with slight white fur, edges indented. Pulse 84, regular, and of good volume. Respirations 18, regular. Temperature 99°. Physical examination of the heart and lungs is negative. Examination of the larynx by Dr. Major

reveals nothing abnormal. Dr. Johnston's report upon the sputum (?) is as follows: "A dark-brown fluid, odor aromatic, contains traces of food, a considerable number of fat globules, and numerous epithelial scales, also a few mold filaments; not examined for bacilli, as none of the usual elements of sputum were found; no blood-cells to be seen in specimen." Urine 52 ozs., very pale color; no deposit; 1022; no sugar, no albumen.

During patient's stay in the hospital his chest was frequently examined, with negative results; the spurious expectoration was subjected to rigid examinations, with the same result as that at first arrived at. He was closely watched for these attacks of spitting of blood, but never could he be caught in the act. The symptoms complained of disappeared upon admission; his appetite was good, the bowels regular, slept well, gained in weight, and nothing unusual developed until 30th October, when, at 2 P.M., he was seized with violent and excessive pain in the umbilical region, and upon examination, even the slightest touch caused excruciating pain and made him cry out. The position assumed was as follows: Recumbent posture; left arm held closely to the body and forearm flexed to a right angle; fingers of left hand strongly abducted from the median line and semi-flexed; the left thumb was firmly adducted and flexed to a right angle. The fingers and thumb were easily straightened, but soon flew back to their original state. The act of moving the fingers apparently pained him very much. The right upper extremity was not at all affected. The lower extremities were markedly rigid and extended. Feet extended and all the toes pointed forwards except the left great one, which was bent backwards and almost touched the dorsum of the foot. Unexpected tickling or pinching the lower extremities would cause the existing rigidity to pass off and the legs would suddenly be drawn up. When attention is drawn to it, no amount of tickling or pricking with a pin would cause any starting of the extremities or give evidence of pain. Patient wrongly locates the site of any touch or irritation. Sight and hearing unaffected. Pulse 60, regular; respirations 18; temperature 98°. This condition continued for about one hour, and at the end of this time had

resumed his natural state. In the evening of the same day had a similar attack; but in addition to the foregoing symptoms, there was, as he said, "complete inability to see any objects or even to distinguish light from darkness"; the sense of smell and taste were also absent, as he did not give the slightest evidence of perceiving a strong solution of ammonia held closely to the nostrils, nor of tincture of assafoetida placed on the tongue. Patellar reflex was present, and to a marked degree on the left side. Pulse 70, regular; respirations 18; temperature 100°. Patient said he had a fit during the night of a character similar to those he had when in a hospital in Dublin. Next day all that remained of his symptoms was analgesia above the right eye, over an area of 2×3 inches. His gait had also changed, for when walking he placed the right foot in advance of the left and rested on the right whilst the left was lifted in a rigid state close to the other foot. At times when walking in this manner he would tend to fall to the left side. Two days later all symptoms had entirely disappeared and the gait was again quite natural. Patient left the hospital next day.

Now this is a curious medical history. It consists, briefly, in "fits," said to have been cured by calomel; repeated hæmoptyses and a cough; diarrhœa for several months; return of alleged hæmoptysis; the colored fluid shown not to have come from the lungs; sudden onset of spastic contractures in limbs; analgesia; sudden disappearance of the same; sudden and temporary interference with the special senses. It involves manifest incongruities which are not to be explained except upon the ground of hysteria. Our observations on this patient whilst in hospital showed that he possessed in a marked degree many of the mental characteristics with which we are especially familiar in women who suffer from this malady, viz., a keen interest in their own medical case—a craving for a corresponding interest on the part of those around them—a readiness to furnish details concerning symptoms—close observation of all treatment and its apparent effects—a proneness to exaggerate or even falsify in order to increase the sympathy they so long for. Further enquiries, too, developed the fact that this man's moral sense

had become very obtuse. He had made fraudulent representations to certain persons with reference to financial and other matters, and had succeeded in committing some petty acts of "swindling." A knowledge of this might, perhaps, have been taken as invalidating the case entirely and caused one to say that we were dealing with no disease at all, but with deliberate simulation only. I did not take this view of the case, and I think that a consideration of the details given will convince any one that a real disease of the nervous system was present. The most important observation bearing out this idea was that pertaining to the curious and rapidly-developed spastic phenomena with associated sensory disturbances, a condition which it would take a *very* clever imposter to evolve out of his inner consciousness. I would note the assistance derived here from microscopical examination of the bloody fluid alleged to have been spat up. Dr. Johnston knew nothing of the case—simply getting the specimen in a numbered vial along with several others from the hospital. He, you will have noticed, repudiated it as a specimen of sputum at all, which fully confirmed suspicions already entertained.

The next case, also in a male, presents very different features :

CASE II.—J. W., aged 20, admitted October 10, 1884, with high fever, delirium and cough. He was found to have been ill for thirteen days with symptoms indicative of pneumonia, and physical examination showed the usual signs of consolidation of the apex of the left lung. During the next two days he remained quite ill. Temperature  $101^{\circ}$  to  $103^{\circ}$ ; pulse 120. Delirious at nights, no sleep, and required constant watching. On the 13th defervescence took place; the morning temperature being  $98^{\circ}$ , and the pulse 68. The note of this day, however, says: "Will not put out his tongue; refuses to open his mouth for a drink of milk; will not answer any questions." And the remark significantly follows: "Except for this mental condition, is evidently much better." I may merely say that, as regards his affected lung, the process of resolution proceeded rapidly. No further elevation of temperature occurred, and he began to sleep a little at nights. It was on the days subsequent to the

13th that we observed the special symptoms indicative of the nervous disorder. On the 14th, the note describes him as "a little more rational, and willing to speak and to explain his feelings and other symptoms." On the 15th, "had a good sleep last night, is quiet and fairly rational." On the 16th, "has fallen into a lethargic condition, which is rapidly deepening, so that he is roused with considerable difficulty. By loud speaking can be made to protrude his tongue (which is dry). Lies quite still on his back, with occasional twitchings of the hands and a moderate talkative delirium. No change in the pupils. Urine passed in bed." On the 17th, "a good night; bright, asked for his dinner; spoke quite briskly at the mid-day visit. Soon after relapsed into a soporose, semi-comatose state similar to yesterday. Can only be aroused momentarily with difficulty." On the 18th, "a repetition of the same thing; a good night; a bright forenoon, and at 1 P.M. a relapse into an apparently insensible condition." At this time no shouting, shaking or violent pinching succeeded in arousing him, and no answer of any kind could be obtained from him. Late in the afternoon he was again quite wide-awake. 19th, less stupor and delirium. 20th, "Eats and sleeps well; quite lively and intelligent; no attacks of stupor." From this time his convalescence was uninterrupted.

We learned from the nurse, during the days of his *stupid* attacks, that these might come on and go off perhaps twice or three times during the course of the day. That the condition varied remarkably we had sufficient evidence from what we ourselves observed. The most usual condition was fair intelligence in the forenoon, rapidly or even suddenly changing to a state of apparently profound lethargy and stupor at about 1 P.M. Another point was that on these days he knew his friends when they came to visit him, but talking to them made him extremely excited, and he cried profusely—so much so that the nurse was twice obliged to send them away.

To recapitulate the facts of this case: A delicate, slim young man, aged 20, nervous-looking, contracts pneumonia and arrives here at the height of that disease, delirious; typical deferrescence occurs, and the case (*quoad* the pneumonia) follows a

normal course towards resolution. But, instead of our patient presenting the calm aspect and cheerful face of the ordinary pneumonic convalescent, we find him continuing to talk incoherently, even in the daytime, lying in a limp fashion on his back with his eyes shut. Next day found in a deep stupor, lying quite still and breathing quickly like one asleep. Then, again, he is found wide-awake and quite chatty. The sight of friends excites him and makes him weep. This condition passes off in a few days, and he is well.

The facts detailed are, I think, sufficient to warrant the diagnosis made—the hysterical condition assuming here the form of lethargy, and having been induced by the debility resulting from the acute disease.

I was recently consulted concerning the son of a gentleman in a neighboring town. The lad, aged 16, having been suffering from toothache and swelled face, became suddenly apparently insensible, remaining so several days and causing much anxiety. He then began to rouse up at intervals and appear rational, going off again in a short time into the same lethargic state. At other times he would talk and sing to himself, paying no attention to what was going on around him, and they feared his mind was giving way. I received full particulars from his medical attendant, and, replying, gave a favorable prognosis, because I looked upon the case as an odd form of hysteria in an adolescent. He was subsequently brought to the city to see me, and from my examination I was still further convinced that this was the true explanation of it. He quite recovered and continues well.

The paralyzes of hysteria are always interesting. The diagnosis is often sufficiently obvious, but sometimes it is beset with many difficulties. It is notoriously *the* disorder, of all others, which offers to the charlatan and the faith-cure people the most attractive and the most lucrative field. Some time ago a lady whom I had previously treated for functional aphonia began to complain of certain indefinite pelvic symptoms, and finally lost power to a considerable extent in both lower extremities. I advised a stay in the city (she lived some distance away) for



the purpose of trying the effect of isolation from sympathizing friends and massage. This was not done, however, and her friends took her instead to New-York. Here (perhaps unfortunately) they consulted a very eminent gynæcologist. He pronounced the verdict that it would be necessary to remove the ovaries. This terrified her, her friends refused their consent, and she remained bedridden and hopeless of any relief. Just then a bright light of the "faith-cure" or "healing by prayer" community happened along. He found, on enquiry, that she had any quantity of "faith," and he was therefore able to promise everything. Surely enough, she walked in a couple of days, and after a few weeks returned home satisfied that with her a real miracle had been wrought. Her feelings of gratitude took the form of a "statement" contained in a small pamphlet headed "modern miracles," which was no doubt widely circulated and of which I received a copy. Being a very clever lady, her "statement" tells most eloquently of her rapid descent into the confines of the valley of the shadow of death, and of her rescue therefrom by the hand of an angel in the garb of the "faith-cure" man. It might be mentioned, *en passant*, that this ministering angel was not above the sordid meanness of accepting the very handsome fee of \$1,000 presented to him by his grateful worshipper. This lady is now quite well and likely to remain so, having subsequently married the man of her choice, whose temporary defection was probably the cause of the entire trouble.

It is quite justifiable to take a leaf out of the book of the "faith-curiers." Positive and dogmatic statements go a long way with patients of this kind, and the employment of some visible means perhaps assists in bringing about the desired restoration. This plan was adopted in the following cases with the happiest results :—

CASE III—*Hysterical Hemiplegia*.—T. S., aged 16, servant, admitted to hospital 8th November, 1886, complaining of weakness of left arm and leg, and pain in the left side of head and neck. Three days previous to admission patient began to complain of a dull, aching, continuous pain in the forehead, not worse at any particular time. Had sensation of chilliness and slight

attack of epistaxis, Took to bed at once, and next day suffered from weakness in left arm and leg, which gradually became worse until admission. Enjoyed good health until two years ago, when on waking up one morning found her left arm and leg completely paralyzed. These members were very tender and painful, and of such severity as to cause her to cry out whenever touched. Sometimes the right arm and leg would become clonically contracted for a few minutes, whilst the left arm and leg would be at rest. Was quite conscious all the time. Facial expression and power of speech were not affected. Patient remained in bed until last Christmas, and at this time made some improvement, so much so that she was able to go about by the aid of crutches, and one month later was quite well. The treatment consisted in the application of liniments to the affected parts. Began to menstruate at 13½ years of age; has always been irregular, intervals between the periods varying from fifteen days to six weeks. Appetite has been good; bowels irregular. Slept well. Patient says she has been subject to fits of laughing and crying.

*Upon admission.*—Complains of a dull, aching, continuous pain, localized in the forehead; of numbness and weakness of the left arm and leg; and of inability to lie upon the left side. Patient is of small stature; her features are of an Indian type (her father is chief of an Indian tribe and her mother a French-Canadian); is dark-complexioned; wears a heavy, angry expression upon face; face is symmetrical; assumes the dorsal decubitus, but, forgetting herself, turns over to the left lateral. Pupils active and equal. Tongue moist and clean, and protruded in the median line. Power of flexion, extension and abduction of upper arm, extension of forearm and hand grasp of the left side apparently very weak. Whilst conversing with her she forgets the weak condition of the muscles of the upper extremity, and raises her hand to brush her hair back. Flexion and extension in left leg slightly weaker than that of right. Muscles of affected parts are well developed and firm. Tactile sense intact throughout, though analgesia is present to a slight degree in left arm and leg only. Reflexes normal. When walking,

patient limps on the left leg, keeping the foot strongly everted, and puts it down to the ground as if afraid of hurting herself.

A faradic current was daily applied to the affected limbs, and she was encouraged to rub them several times every day with a liniment. She was told that this would cure her in a few days. At each visit careful enquiries were made as to the regularity with which she had carried out her treatment. The weakness of the limbs steadily improved, the gait shortly became natural, and she was discharged quite well in a fortnight.

CASE IV—*Hysterical Paraplegia*.—M. H., aged 22, servant, brought into the hospital upon a chair complaining of inability to walk.

*History of the case*.—Until day previous to admission patient enjoyed good health, when, upon awaking in the morning, she found herself quite unable to move her legs. Later on in the day, with assistance, got out of bed, but her knees suddenly gave away, thus precipitating her to the floor. Returned to bed and remained there until brought to the hospital. Was quite conscious. No perverted sensation. Complained of severe and continuous frontal headache, described by the patient herself as “boring” in character; it is not worse at any particular time. Upon the morning of admission to the hospital she said her voice had suddenly become weaker, and at times she completely lost it. Also complained of palpitation, with tenderness under the left mamma. Has no vesical or rectal disturbance. Menses are irregular in their appearance, small in amount, and each period is generally preceded by pain.

*Examination*.—Patient is a healthy-looking and well-nourished female; takes a great deal of care to describe fully and dwell at length upon her complaints. The breathing during this time is quite tranquil, but when attention is drawn to the painful spots the respirations immediately become quickened and somewhat sighing in character. Voice is weak; inclined to whispering. Lower extremities are extended and the feet are in a natural position. Skin is warm and moist. Muscles not wasted. Says she cannot move the legs at all. The plantar reflexes, if suddenly tested, causes slight withdrawal of the feet. Tactile sense is

normal. Marked analgesia in the lower extremities from the feet to as high as the knees. Pressure over and below the left nipple causes patient to wince, but with the attention misdirected these points are no longer tender. It was now insisted upon, that the patient should get up and try to walk, and this she did, but her gait was staggering; the heels were placed firmly upon the ground, the toes extended, and the plantar arches much elevated; her eyes were kept fixed upon the ground; at times she would appear as if about to fall, but this was generally done when she was well within reach of good support. Examination of the larynx by Dr. Major was negative in its result. Heart and lungs negative. Urine 54 ozs.; very pale, acid; specific gravity 1015; no sugar, no albumen. Four days later the analgesia had entirely disappeared, the painful spots no longer present, and the voice quite natural, but her gait had changed. Now patient's walk may be described as follows: Walks on the ball of the great toe of right foot, the heel is raised from the ground, the left foot is placed in advance of the right, and whilst resting upon it, the right knee-joint suddenly gives away; but patient soon regains the upright position and continues to walk as before. She was given some bread pills, had electricity applied, and used a stimulating liniment. In about two weeks the gait was quite natural, and all pains and aches had disappeared. The patient was now discharged from the hospital.

The same precaution was taken here to impress this patient from the outset with the idea that her case was quite curable; that she would soon regain the power of her limbs; and to insist upon her following certain prescribed directions very carefully.

CASE V—*Hysterical Vomiting*.—H. S., aged 27, servant, admitted complaining of vomiting and of pains in the abdomen, legs and head.

*Previous history*.—Enjoyed good health until six months ago, when one morning, whilst lying down, patient was suddenly seized with a sharp pain in the left lower axillary region, extending throughout the body, aggravated by deep inspiration, and coughing. Vomiting set in, and for the first time. The attacks were aggravated by ingestion of food, but would also occur inde-

pendently of any food taken. There was no dysphagia. The food was rejected about an hour after it was taken. The ejecta consisted of what was eaten. Even fluids could not be retained. Never had hæmatemesis. No pain after eating. Had no desire for food. Suffered from insomnia. From these attacks of vomiting, which have continued ever since in a greater or lesser degree, patient has lost much in weight and strength. About this time patient began to suffer from what she calls fits, described as follows: The aura consisted of a sense of fulness in both ears, and accompanied with a loss of hearing. This would last about half a minute, then patient would become unconscious and fall down anywhere, on one occasion cutting left eye, and, again, on another occasion, whilst in one of these fits, received a black eye. These fits are not attended with any tonic or clonic contractions of any of the muscles of the body. No frothing at the mouth. Has never bitten the tongue whilst in one of these fits. The duration of a fit is from a few minutes to one or even two hours. Has had as many as two fits in one week. Says that cold water, if thrown upon her face, always brought her to her senses.

Patient is a married woman and the mother of four children, all enjoying good health except the eldest, a boy aged 8 years, who is subject to fits such as his mother suffers from.

*Family history.*—Mother and four sisters died of consumption. One brother, at 13 years of age, had fits similar to those patient suffers from for fifteen years, and died from their effects.

*Present history.*—At present patient complains of vomiting, of pains in abdomen, legs and head, and of fits. The attacks of vomiting consist in almost everything being ejected from the stomach within half an hour to an hour after the ingestion of food. The ejecta, upon examination, are found to amount to half a pint at any one time of clear, transparent mucus fluid, acid in reaction; the microscope reveals detritus of food; no blood corpuscles; no sarcinæ. Suffers no pain after the ingestion of food; no dysphagia. Complains of anorexia, constipation and insomnia. The pains in abdomen, legs and head are very indefinitely located in these regions, their site being very change-

able and their character altered from time to time—at one moment being dull aching, and the next minute sharp and shooting. Patient says she is kept awake by these pains, and they are much increased by movement and examination. The only relief to the vomiting and pains was the frequent use of morphia.

*Examination.*—Patient is of average height, anæmic-looking, not well nourished; muscles soft and wasted; skin warm and moist; assumes the dorsal decubitus; evidences of recent injury to left eye, no scar seen. Patient is very restless; keeps turning her head from side to side; rubs abdomen with the right hand; respirations all this time becoming quickened, shallower and sobbing in character. This having apparently reached a climax at the end of one minute, the patient begins to cry, stops rubbing the abdomen, and turns to the right side, all this time apparently suffering very severe pain. Shortly after this the patient sat up in bed, eructated a large quantity of gas, and vomited about half a pint of thin, clear, watery-looking fluid. She now lay down in bed apparently exhausted, the respirations being rapid and sobbing in character. Pulse 80, full and regular. Respirations 36. Temperature 97°. Tongue moist and covered with slight fur in centre. Abdomen full, not distended; tenderness, amounting to hyperæsthesia, generally distributed, but more marked in right and left iliac and epigastric regions. This hyperæsthesia disappears entirely when patient's attention is elsewhere directed. No tumor made out. Liver and spleen normal. Nothing unusual in the position of the extremities. Muscular power is good. Gait natural. Tactile sense everywhere present. Analgæsia is limited to the left leg from the ankle to knee-joint. Reflexes slightly exaggerated. Heart and lungs normal. Urine 58 ozs., pale in color, acid; specific gravity 1012; no albumen, no sugar.

For the next forty-eight hours the attacks of vomiting were incessant during the daytime, but always ceased at night. Patient ejected all food taken during the day, but at night the food left at the bedside partially disappeared.

The evening after admission patient had one of her usual fits, and it is described as follows: Is quite conscious and answers

all questions quite correctly. The respirations are rapid (38 per minute), shallow and sobbing. The arms are extended and the fingers firmly closed, both arms shaking as if patient had a chill. The lower extremities are natural in position. No disturbed sensibility. This condition lasted for about two minutes, and then patient assumed a quiet state. Pulse during fit was 72, full and regular. From this day until exit (6th December) patient had no return of the attacks of vomiting nor of the fits, and she improved very much, the appetite returning, sleeping well, and the bowels regular. The treatment consisted in giving her a placebo—viz., peppermint water.

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### FATAL INJURY TO CHEST, COMPLICATED BY A RARE FORM OF DISLOCATION.

BY ED. EVANS, M.D., SEAFORTH, ONT.

July 12th, was called to see Wm. O'K. A beam of timber 40 feet long and 12 inches square had fallen on him, pinning him to the earth. On this being removed, he was able to walk a short distance. Patient was found sitting in a chair, leaning on left elbow, with head bent forward to the right. He was very pale, and his hands were cold. Pulse 76, and strong. Respirations 26, gasping and painful. Voice weak and speaking difficult. On removing shirt, a large emphysematous swelling occupied area about lower angle of right scapula; over this area was evidence of a severe bruise. On manipulation, distinct crepitus could be got in the seventh and eighth ribs of right side, and anterior portions of them were easily depressed, causing patient severe pain. Site of fracture was under the emphysematous area. On percussion (which could be but imperfectly performed), there was no dulness over lung. Auscultation gave larger bubbling râles over the site of fracture, limited in area. There had been no hæmoptysis on my arrival, but it began soon after and persisted for about five hours, never very profuse.

The application of a chest bandage, rather firmly applied, afforded some relief, and so it was left on. I gave him a hypodermic of morphia gr.  $\frac{1}{4}$  and atropia gr.  $\frac{1}{100}$ , and ordered appli-

cations of ice to side. An hour afterwards, auscultation revealed bubbling râles over a much larger area of right lung. Hæmoptysis was more profuse, and the cough, short and hacking, had become very distressing, and the pulse faster and rather unsteady. I therefore ordered the ice to be sedulously applied, absolute rest to patient and avoidance of speaking, and gave a dose of ergot (to be repeated) and also a sedative for the cough. He was now pretty free from pain, and remained so during the night. There was dislocation of the right sterno-clavicular articulation *upwards*. (In Ashurst's "System of Surgery" there are said to be only twelve or fourteen such cases on record.) The head of the bone could be fairly well defined in the supra-sternal notch, and the sternal tendon of the sterno-mastoid was tightly notched over it, forming quite a distinct prominence. It was easily reduced by drawing the shoulder outward and backward, while the head of the bone was pressed into position. No apparatus was applied, and it remained well in position till death. The shoulder was driven inward and forward by the beam.

Next morning patient said he had passed the night fairly well. The cough was still troublesome, constant, hacking and feeble. Was spitting very little clotted blood. Respirations 30; temperature 99°; pulse 80, and steady. Patient said he felt pretty well, but he was restless, anxious and talkative. Chest was tympanic on percussion. Auscultation, few râles were heard; breathing was blowing, except over upper third. A peculiar whistling sound was also heard, especially on expiration. Patient continued nicely till 12 A.M., when he became pale, livid and cold, and breathing became faster and more oppressed. When seen at 8 P.M., patient was pale and weak; could not speak above a whisper, and then only a few words. Respirations 56; pulse 120, weak and thready; temperature 99°. The whole of right lung was full of large bubbling râles, as was also the upper part of left lung. Patient died at two o'clock that night, thirty-six hours after injury, attendants saying "he smothered."



QUARTERLY RETROSPECT OF OBSTETRICS AND  
GYNÆCOLOGY.

PREPARED BY WM. GARDNER, M.D.,

Professor of Gynæcology, McGill University; Gynæcologist to the Montreal  
General Hospital.

*The Operation for Total Extirpation of the Uterus through the Vagina* is growing in popularity and in success as regards primary mortality, and as a natural consequence its application is being extended to conditions hitherto incurable or treated with only partial success in other ways. The most recent contribution to the already very extensive literature of the operation is a paper by Leopold of Dresden in the last number of the *Archiv für Gynäkologie*, No. 30, Hft. 3. This able gynæcologist has operated forty-eight times, with only three deaths, a mortality of only 6.2 per cent., by a long way the best showing on record. Of these 48, 42 were for cancer, 4 for total prolapse, and 2 for extreme neurosis, in both of which castration had failed or only partially succeeded in relieving the symptoms. Of especial interest are those latter cases, because of the recent application of the operation to them. The prolapse cases were instances in which the ordinary plastic operations had failed or were unsuited from great atrophic thinning of the vaginal walls. Two were cured and the other two had slight descent of the vaginal walls after a few months. In the two neurotic cases the appendages had in both been removed. In the first case there was complete relief from the symptoms for five months, when they returned, and to the right of the uterus, in the region of the ligatured pedicle, an exceedingly tender, moveable nodule of the size of a bean was discovered. The patient was so miserable as to be prepared to submit to any operation offering a chance of cure. The uterus and nodule described were removed without difficulty. Recovery from the operation easy and rapid. All the symptoms removed except a tendency to paroxysms of vomiting. In the second case, the symptoms were severe pelvic and sacral pain, the latter during defæcation, and hystero-epileptic seizures at the menstrual periods and also in the intervals. The patient was addicted to morphia, and suffered from partial and complete

lapses of consciousness. The uterus and ovaries were adherent. The uterus retroflexed, probably as a result of gonorrhœal oöphoritis and salpingitis. An attempt to remove the ovaries was unsuccessful, or only partially so. After two months, no improvement of the symptoms. The uterus and ovaries were now extirpated by the vaginal method. Recovery from the operation easy and rapid. After a course of treatment to overcome the morphia-habit the patient lost all her symptoms, and at the end of a year was in perfect health.

There is no one method of operating followed by all surgeons. The most important problems are shortening the operation and prevention of bleeding. The patients are mostly cancer cases, cachectic and debilitated, badly conditioned for bearing long anæsthesia and hemorrhage primary or secondary. Compression forceps meet the indications in some measure. They are much used in France, but very little in Germany, in the performance of the operation. Müller of Berne has used them in five cases. The vaginal vault is incised all round as usual, the bladder separated, and the Douglas pouch opened, but the uterus is not retroverted. The index finger is passed through the opening in the posterior cul-de-sac and hooked over the upper part of the broad ligaments, its point appearing in the peritoneal opening in front of the uterus. Along the finger first one blade and then the other is passed, and the instrument articulated and fixed. This is repeated for the other broad ligament. When fixed, the ligaments are divided and the uterus removed. The forceps are left *in situ* forty-eight hours and then cautiously removed. After the operation the vagina is washed out with a solution of salicylic and boracic acid and then tamponed with iodoform gauze.—(*Cent. f. Gyn.*)

*Dry Treatment in Gynæcology.*—This is the subject of a paper by Dr. Engelmann of St. Louis in the June and July (1887) numbers of the *American Journal of Obstetrics*. Dr. Engelmann has previously advocated the method he now describes in detail. By this treatment the author means “the treatment of female pelvic disorders, uterine, circumuterine and vaginal, by the use of powders and cotton-wool or jute in the

dry state, impregnated with the medicinal agent, or serving as a carrier for powders." Dr. Engelmann claims that it corresponds to the treatment, of late years found so effective in surgery. As advantages, the author claims that it is safe, immediate comfort is afforded, the effect produced is mild and continuous, rest is given to the pelvic viscera, it is clean and antiseptic, all the pelvic viscera are influenced, a variety of purposes can be accomplished by one and the same application, and it neither excludes nor interferes with other methods of treatment. It is especially as a substitute to the aggressive and dangerous practice of powerful intra-uterine medication and the indiscriminate use of pessaries that the author advocates this dry treatment. There can be no doubt that by a large section of the general profession the true import of evidences of endometritis of body or cervix is quite misunderstood. By many this endometritis is regarded as the essential feature of any case where present, whereas in the great majority it is the result of other conditions which, being the cause, ought to be attacked in order that such result may be removed. The powders used by Engelmann are bismuth, iodoform, boracic acid, borax, alum, tannin, oxide of zinc, soda and charcoal. For mechanical purposes, or as carriers, wool and plain cotton, less useful are jute medicated, medicated gauze and absorbent wool with corrosive-sublimate. Cotton may be impregnated with borax, iodoform, salicylic acid, carbolic acid, iodine, iron, tannic acid and alum. The remedies are applied through a speculum, bivalve or Sims', with a powder-blower to apply the powder to the vagina and cervix, and a long strong catch dressing forceps to carry the cotton, wool or other material into position. The powder used soothes, dessicates, astringes, or acts as an antiseptic, according to the selection made, while the tampon acts, if medicated, as a carrier of the remedial agent; mechanically as a support to hold in place the uterus, ovary or other part; as a compressor; as a stimulant and alterative to the tissues; as a splint to steady the parts, give rest, and keep them apart, preventing friction, and by absorbing the discharges, keeping the membrane dry and clean. For most purposes, Engelmann prefers sheep's wool to cotton on

account of its elasticity, which prevents it being flattened into a hard wad, as is the case with the latter, but as wool is often irritating, he makes the body of the tampon of wool and coats this with a thin layer of cotton. For most purposes he uses oval-shaped tampons of two sizes, the larger three inches long by one and a half in diameter, and the smaller two inches long by three-quarters of an inch. He prefers a number of small tampons to one large, as it is easier to adapt them to the purpose or object in view. For most purposes the patient is treated every second day, the tampons remaining 30 to 36 hours, when they are removed and the hot douche used once or twice prior to the next treatment. When the absorbefacient effect of iodine is desired, iodized cotton tampons may be used. Five per cent. iodized cotton is that usually employed, and unless blistering is desired, it is best to coat the iodized tampon with a layer of plain cotton. So with iron-cotton, when that is necessary.

*Pain and Insomnia from Gynæcological Causes.*—In a short paper in the *American Journal of Obstetrics* for July, 1887, Dr. H. R. Bigelow discusses this subject. In speaking of pain, he divides it into real and reflex. By the former he means actual pain, as neuralgia, rheumatism, and the pelvic pain of peri- and parametritis. In such conditions he strongly advocates urethran in 15 to 20 gr. doses, from which he claims to have repeatedly seen long and pleasant sleep induced in patients who resisted chloral, bromides and conium, or who could not bear opium. In such cases Dr. Bigelow finds urethran a real analgesic, as distinguished from hypnotics. It leaves no unpleasant sequelæ. For reflex or hysterical pain the constitutional indications must be met; persistent use of drugs is dangerous. For such cases he uses massage, cold alcoholic bathing, vigorous rubbing, electricity, and attention to hygiene. Bromide of potassium alone is worse than useless. For insomnia, while insisting upon the necessity of general treatment, such as massage, electricity, bathing and diet for a cure, he advocates paraldehyde very strongly. It is excessively volatile, and should be given in doses of 30 to 60 minims immediately after uncorking the bottle. It should be administered in brandy or whiskey.

When freshly made and administered as just directed it produces several hours of peaceful, refreshing sleep, without subsequent nausea or headache. The author orders electricity in the morning and massage at night. The form of electricity used is the faradic current, with the feet in a basin of warm salt water, in which one pole of the battery is immersed and the other applied to the back of the neck.

*Antiseptic Sponge-Tents.*—Dr. Porak, accoucheur to the Hôpital St. Louis, Paris, appears with rather a long article on this subject in the *Nouvelles Archives d'Obstetrique et Gynecologie* for June 1887. Recognizing the importance and value of dilatation of the uterus for diagnosis and treatment, and realizing, also, the well-known dangers from sepsis, Porak has made a number of experiments, the result of which he gives in this paper. He tried keeping the sponge-tents still invested with their encircling cord in certain antiseptic watery solutions of carbolic acid, corrosive sublimate, boracic acid and salicylic acid. He had a fatal case of retention of placenta, in which he used a tent soaked in five per cent. of carbolic acid. The death, he observes, might have been due to retention of the placenta, but his confidence in tents prepared in this way was further shaken by observing that they floated near the surface of the liquid, and that in all but the sublimate solutions the surface of the tents above water became mouldy. The action of alcohol, ether, benzine, etc., on tents soaked in them is in no way to cause them to swell, and only after long soaking in such liquids is their subsequent distensibility in water to any extent diminished. Tincture of iodine, however, profoundly affects sponge soaked in it, completely destroying the dilating power of compressed sponge. After many experiments, Porak found it the best plan to keep sponge-tents in an ethereal solution of iodoform. They may be kept in this solution for months without in any material way having their expanding power lessened, if the bottles be kept in the dark. The action of light is to decompose the iodoform and generate iodine, and if this proceed to any extent the dilating power of the compressed sponge is much impaired. The author observes, however, that prolonged contact

of the medicated sponge with the uterine mucosa will, in endometritis, be an advantage rather than otherwise, and if necessary, sponge so prepared may be left several days in the uterine cavity.

*Electrolysis in the Treatment of Uterine Fibroids.*—It will be remembered that Apostoli's method, by which he is able to use currents of an intensity of 200 milliampères and over, is the use of a large wet-clay electrode to the abdomen. For this dirty and disagreeable substance, Dr. Franklin H. Martin substitutes a concave metal plate, over which is stretched tightly a piece of animal membrane. The cavity thus produced is filled with salt solution through an opening in the metal plate. With this material 150 milliamperes of intensity could be attained by Dr. Martin. The author insists on the specific action of each pole on the tissues. At the positive pole coagulation and shrivelling take place, while at the negative fluidifying and breaking down result. The positive pole is to be employed for its specific action on the endometrium in hemorrhage from that membrane. Martin's methods, except for the material of the abdominal electrode, are thus the same as Apostoli's, and need not be here described.—(*Jour. Amer. Med. Assoc.*, Jan. 15, 1887.)

Additional and confirmatory evidence of the value of electricity in the treatment of fibroid tumors of the uterus continues to pour in from various quarters. In the *British Med. Journal* for the last six weeks have appeared letters from Dr. Playfair, Sir Spencer Wells and Dr. Althaus of London, Dr. Elder of Nottingham, and Mr. Skene Keith of Edinburgh, all expressing in varying degrees appreciation of the value of a treatment long known to be efficacious, but never so systematized as at the present time. To Dr. Apostoli of Paris is due the great credit of demonstrating the efficacy and safety of currents applied by methods which he has so ably worked out. To get any idea of the enthusiasm of this distinguished physician, one must have seen him as I did last summer at work in his clinique in Paris. One of, if not the very earliest descriptions of Apostoli's methods published in any medical journal on this continent is that conveyed in the translation of a paper of his in the number of this

JOURNAL for February of this year. Dr. W. Woodham Webb, one of Apostoli's assistants, has ably described the technique and scope of the treatment, and given cases illustrating what can be done by it. His papers appear in the *British Medical Journal* for June 18 and July 9 and 16 of the present year, and they may be read with much advantage by any one interested in the subject. The number for July 16th also contains an able and temperate editorial article on the same subject. Dr. Apostoli is to be present at the approaching meeting of the British Medical Association in Dublin and also at the International Congress in Washington.

### Hospital Reports.

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

*A Fatal Case of Sunstroke.* (Under the care of DR. R. L. MACDONNELL.)

(Reported by DR. KENNETH CAMERON, House Physician.)

T. K., aged 23, a wharf-laborer, on June 30th, while engaged in transferring lumber from a barge to the steamship Montreal, about 11.30 A.M., after being exposed for some time to the direct rays of the sun, was seen to fall forward, and on being picked up in an unconscious condition, was taken on board the steamship, where he had several attacks of vomiting. Cold was applied to the head and body, and croton oil administered by the ship-surgeon.

On being brought to the hospital in the ambulance, the following conditions were noticed during life: The patient, a tall, powerfully-built man, was in a state of profound coma; pupils closely contracted and unaffected by light; corneal and other reflexes absent; conjunctivæ reddened; breathing rapid, noisy, stertorous and labored; pulse rapid (140), weak and irregular; skin intensely hot and dry; face pale. Temperature: At 12 noon, 107.3-5°; at 1.30 P.M., 107.2-5°; at 2.30 (five minutes before death), 107.3-5°; at 2.40 (five minutes after death), 108½°. Vomiting occurred twice, the ejected matter being thin and watery, and of a greenish color. About an hour and a half before death there was relaxation of the sphincter of the

bowels, with copious thin, watery evacuations. Relaxation of the sphincter of the bladder was not noticed, as all the urine had been drawn off for examination. Urine: color normal, specific gravity 1026; no albumen and no sugar; contains ten grains of urea to the ounce. About every ten or fifteen minutes a condition of epileptiform convulsions occurred, chiefly clonic in nature, with occasionally a slight tendency to opisthotonos; these spasms lasted from a half to two minutes, and were followed by a period of rest of the muscles. Towards the end the intervals became longer and the spasms less marked. Death occurred at 2.35 from asphyxia, the last expiration being accompanied by a gush of greenish fluid from the mouth and nose. One minute after death all the muscles took on a condition of fibrillar twitching, which lasted about a minute.

Treatment employed was an ice-cap to the head, sponging with ice-water every hour; administration of antipyrine in two doses of gr. xxx each without any effect; hypodermic injections of ether and mustard blisters to the chest; and inhalations of chloroform during the spasms.

*Past history.*—According to his brother's statements, the patient arrived in this country from Ireland three weeks previously, and had found steady employment. He had always enjoyed perfect health, never having been known to have suffered from any illness. He had never been a heavy drinker, but had been accustomed to take liquor. It was not known if he had taken any before he was taken sick.

*Family history* good; no history of any nervous or pulmonary disease. Post-mortem could not be obtained.

#### MONTREAL'S RECORD.

OBSERVATIONS TAKEN AT M'GILL COLLEGE OBSERVATORY—JUNE 30.

Time.	* Barometer.	Thermometer.	† Humidity.	Weather.	Wind.	
					Direct'n.	Vel.
3.00	30.108	70.4	..	Clear .....	SW .....	28
7.00	30.137	71.2	62	" .....	SW .....	20
11.00	30.094	81.4	63	" .....	SW .....	18
15.00	30.055	84.7	60	Cloudy .....	SW .....	14
19.00	30.029	79.0	58	Clear .....	SW .....	16
3.00	30.044	74.5	54	Fair .....	SW .....	20

Height above Sea Level, 187 feet.

\* Barometer reduced to sea level and to temperature of 32° Fahr.

† Humidity relative saturation being 100.

Maximum temperature of the 30th was 86.3.

Minimum temperature of the 30th was 68.5.

Total mileage of wind on the 29th was 558; greatest in one hour 34.



## MONTREAL GENERAL HOSPITAL AND MONTREAL DISPENSARY.

### GYNÆCOLOGICAL CASES UNDER CARE OF DR. ALLOWAY.

CASE I—*Endometritis Polyposa*.—Aged 45; married fifteen years, nine children, youngest two years of age. States that for some three or four years past she suffered from periodical attacks of severe uterine hemorrhage lasting for two or three months continuously at times; the hemorrhage would then cease for probably two months or more, when it would again return. She became of late very anæmic, weak, and suffered much from pain in back and side, so much so that she would be compelled to remain in bed for days at a time.

*Examination*.—Uterine hemorrhage present; uterus retroflexed, fundus low down and excessively tender to touch; uterus easily replaced, however, with repositer, depth 8 cm. Cervix lacerated bilaterally, hypertrophied and cystic. No myomatous involvement.

This was a case of cervical laceration, subinvolution, descent of uterus in pelvis, retroflexion and endometritis polyposa, occurring in this order of sequence.

Treatment consisted in replacing uterus forwards and thoroughly curetting the endometrium with the sharp instrument, removing large quantities of sessile vegetations of various sizes and then washing the cavity out with 1-2000 solution of the mercuric bichloride. This case recovered her blood and strength so much during the following four or five weeks that she would not, for the present, have anything further done.

CASE II—*Endometritis Polyposa, with exhaustive hemorrhage*.—Aged 46; married eighteen years, eleven children, youngest child three years of age. Complains of severe bearing down pains in back and sides. Profuse leucorrhœal discharge when not losing blood. States that she will lose blood per vaginam for three months continuously, becoming thoroughly exhausted and bloodless. The hemorrhage then gradually ceases, to give place to a profuse purulent leucorrhœa.

*Examination*.—Cervix lacerated bilaterally to the vault of

vagina. Both segments of cervix everted, eroded, cystic and much hypertrophied. Uterus 7.5 cm. in depth and fundus deeply retroflexed and tender to the touch. Pelvic floor relaxed and parts low down.

Treatment consisted in replacing uterus and thoroughly curetting the endometrium with the sharp instrument, removing large quantities of villous growths, some of them as large as split peas. This case is interesting, in that I had to repeat the curetting three times within the last twelve months. Each time there was removed a quantity of the same growths, and after each operation the patient improved in health for a few months, then new growths would form and give rise to hemorrhage and a profound state of anæmia. These growths have been examined and pronounced benign. The uterine walls in no part contained a myoma. The organ was simply subinvolved. There is, however, in such cases retroflexion as a factor of much importance. It causes a passive congestion by interfering with the circulation; as a sequence of this, we have a general increased tissue growth, and especially of the endometrium, giving rise to a papillomatous formation or thickened soft mucosa, with enormously dilated blood-vessels and hypertrophy of the mucous glands. (*Olshausen, De Sinety.*) In these cases, unless we rectify the position of the uterus, remove or repair the lacerated cystic cervix, we will not prevent the recurring hemorrhages. These two cases are somewhat similar to some of those published by Dr. Woodham Webb as cases of uterine fibroids and treated by electricity after the method of Dr. Apostoli of Paris. (*British Med. Journal*, July 9th, 1887, p. 62.) I do not think, however, that Dr. Webb is justified in reporting the cases referred to as fibroids upon the one symptom of excessive hemorrhage with an intra-uterine depth of 7 and 8 cm. Neither do I think the reported successes of the electrical treatment in such cases are as satisfactory as that which we obtain from curetting, replacement and plastic operation on the hypertrophied cervix. Evidently extensive laceration of the cervix is not favorably regarded in France as a cause of subinvolution and hemorrhagic endometritis.

The following few cases represent a type of pelvic inflamma-

tion in a large number of women seeking relief at my clinic ; and are interesting from the rapid relief they receive from the form of treatment adapted, known as "*uterine massage*":

E. L., aged 26, unmarried ; menstruates sometimes every three weeks, sometimes every five or six weeks. Looses a good deal, and generally lasts ten days. The dysmenorrhœal pain at each period is so intolerable that she now wishes to be relieved or die. The constant iliac and back pains have brought on a distortion of her figure, in that she walks with a crippled stoop, and is unable to stand or walk erect. There is a profuse purulent leucorrhœa (uterine), intense tenderness and rigidity of pelvic floor. A general fixity of pelvic contents. The fundus of uterus turns forwards ; the cervix extensively eroded. Frequent and painful micturition and painful defecation. When walking there is a peculiar dread of making a false step in anticipation of causing pain. In three weeks treatment by iodine to the vaginal vault, and massage, all pain disappeared. She menstruated almost without knowledge, and the flow lasted but four days. The uterine catarrhal discharge had quite disappeared. Erosion was healing, and the pelvic floor freely and painlessly moveable. To support the pelvic floor a large Hodge pessary was now introduced, and patient returned to her household work. The history of this girl told that she has been a sufferer for several years.

M. B., aged 28, married three years, no children ; menstruation every four and sometimes every six weeks. Flow lasts from three to four days, accompanied with most severe dysmenorrhœal pain, during which she is confined to bed. There is the usual constant back and side aches and dyspareunia. On examination there is found excessive tenderness of pelvic floor, and an especially tender point in the parametric tissue immediately behind the supra-vaginal cervix. On raising the pelvic floor there is pain experienced throughout the pelvis ; uterus ante-flexed ; cervix high up, looking down vagina. This excessively tender spot alluded to in the history of this case is a very common symptom in pelvic inflammation, and often remains when all other points of tenderness have disappeared. It

is the "parametritis posterior" of Schultze, or "utero-sacral cellulitis" of other observers. Inflammation occurring just here causes cicatrization of the utero-sacral ligaments and contraction just about the isthmus, and brings about the most severe form of dysmenorrhœa and sterility, with "pathological ante-flexion" of the uterus. In this way we get an "antero-lateral flexion" of either side, or drawn backwards still in anteflexion. Pathological anteflexion due to utero-sacral cellulitis is a most important affection and not often recognized; it is not seldom due to mismanaged abortions, and of septic origin. It is frequently found in virgins and multiparæ, and may in some cases be due to zymotic diseases of childhood. Freund of Strassburg has recently described a similar affection of this tissue producing the same results, but differing from that described, in that it has no acute stage. He calls it "*Parometritis Chronica Atrophicans Circumscripta et Diffusa*." His researches are very valuable, inasmuch as they show the advantage of such treatment as I have been describing and the utter futility of the mechanical treatment with pessaries. This patient was confined to bed on hot water injections for a week, and then iodine and massage treatment put into practice. She passed the following period without pain sufficient to speak of. The next menstruation was absolutely free from pain. She has improved markedly in general health, and will, in September, have divulsion performed to relieve the stenosed condition of the cervix and favor the occurrence of pregnancy.

C. F., aged 31, married, no children; menstruation profuse, occurring every three weeks and accompanied with severe dysmenorrhœal pains. She complained of neuralgic headache at times, culminating in severe and continued attacks of retching. On examination, parts were so excessively tender and rigid that very little could be determined beyond evidence of chronic pelvic inflammation. The uterus was rigidly set in the pelvic floor, with the fundus lying retroflexed in the well of the pelvis. Cervix small, congested, and os discharging glairy mucus. This woman was a type of a bad case of chronic pelvic inflammation, with thickening of the pelvic peritoneum and œdema of connec-

tive tissue beneath it. She would not come into hospital, so was treated with iodine and massage as an out-patient. Treatment began June 1st, and she was discharged cured July 9th. Her condition then exhibited freedom from pain during manipulation of the uterus by the bimanual. Perfect mobility of pelvic floor and of parts resting upon and composing it. Marked restoration of general health and appearance. An air-cushion was introduced to support the pelvic floor.

The following case was one of *Procidencia Uteri, with Supravaginal Elongation of Cervix*:

Mrs. F., aged 52, married thirty years, eleven children. The monthly return hemorrhage still continued, which was sometimes profuse, and would last for seven or eight days. The cervix had been badly lacerated bilaterally and cicatrized partially at the corners. The lips of the os were everted and covered with deep irritable ulcers discharging pus. The sound passed seven inches from the os to the fundus. *Both fornices were obliterated*, and the vaginal walls were completely outside the vulva. The fundus uteri could be palpated in the pelvis behind the pubis, and with the fingers in the vagina could be felt a long, thick, cord-like tube attached above in the pelvis by the uterine ligaments, and being drawn out below by the inversion of the vaginal walls. (The perineum, of course, had been completely destroyed.) The patient was put on carbolized hot douches for three weeks. By this time the ulcers on cervix had healed, the uterus had considerably contracted, and the vaginal walls and bladder had assumed their normal position. A modification between Schroeder's and Marckwalde's operation was performed on the cervix, and colpo-perineorrhaphy at the same sitting. The result, after a lapse of two weeks, was very good. The uterus measured two inches; the vagina and perineum were restored and firm.

## Reviews and Notices of Books.

**A System of Gynæcology by American Authors.**—  
Edited by MATTHEW D. MANN, A.M., M.D., Professor of  
Obstetrics and Gynæcology in the Medical Department of  
the University of Buffalo, N.Y. Vol. I. Philadelphia :  
Lea Brothers & Co.

Ever since it was announced some years ago that an American system of gynæcology was projected, the profession has been eager in anticipation of the result. It has been slow in coming, but now at last we have the first volume, of 789 pages, including an index of authors and of subjects. The work is written by a number of authors, the various articles being assigned each to a gentleman specially qualified to deal with it. As all our readers know, this plan of book-writing has been much resorted to in our times, and we are bound to say that the result has been approved by the profession. There is this important difference between this and other recent systems of surgery and practice, that, as the name implies, all the contributors to this work are American. We therefore have reason to expect that we shall be specially enlightened upon American opinions and methods. In this first volume we are not disappointed. The contributors are chiefly of the younger and rising class of gynæcologists. The work opens with a historical sketch of American gynæcology, in which Dr. Jenks surely does full justice to the contributions of his countrymen, from McDowell and Marion Sims down to the present time. Then come the Development of the Female Genitals, by Dr. Garrigues ; the Anatomy of the Female Pelvic Organs, by Dr. H. C. Coe ; the Malformations, by Dr. Garrigues. To Dr. Grandin of New York is entrusted Gynæcological Diagnosis, while Dr. Dudley of Chicago has charge of the General Consideration of Gynæcological Surgery. Dr. Skene of Brooklyn writes on General Therapeutics ; Dr. W. Gill Wylie on Menstruation and its Disorders, a subject on which the distinguished author has already written, and on which he is quite at home. The chapter on the important subject of Sterility is written by Dr. Reeves Jackson of Chicago. The concluding

chapters of the volume are : Diseases of the Vulva, by the Editor, Dr. Mann ; the Inflammatory Affections of the Uterus, by Dr. Palmer of Cincinnati ; Subinvolution of the Vagina and Uterus, by Dr. Reamy, Cincinnati ; Periuterine Inflammation, by Dr. R. B. Maury of Memphis ; and Pelvic Hæmatocele and Hæmatomata, by Dr. Ely van de Warker, Syracuse. We had almost forgotten the important subject of Electricity in Gynæcology. As our readers all know, this agent has never been so much employed in the treatment of the diseases of women as at the present time. In the light of the recent work by Apostoli and others, our hopes from this powerful therapeutic agent are rapidly becoming realized. Dr. A. D. Rockwell writes on this subject. His large experience is an ample guarantee of the way that the work has been done. The work of Apostoli of Paris and Engelmann of St. Louis get their share of attention.

We have examined more or less carefully most of the articles in the volume, and we are bound to say that the great majority are most satisfactory, while some are excellent. The illustrations are numerous, and consist of woodcuts and colored plates ; of the former nearly all are copied from other sources, and a number are merely diagrammatic. Every practitioner interested in gynæcology ought to possess this work, while to the specialist it is indispensable. Like everything from the great Philadelphia Lea publishing house, the paper, type and binding are of the very best.

**A Practical Treatise on Obstetrics.** Vols. III and IV (four volumes).—By A. CHARPENTIER, M.D., Paris. Illustrated with lithographic plates and wood engravings. New York : Wm. Wood & Co.

These concluding volumes of Charpentier's book are even more interesting than the previous ones. Volume III takes up the Pathology of Labor, and gives an unusually good account of the various forms of maternal and foetal dystocia. Upon these points it is almost encyclopædic, and will be found useful as a work of reference, especially as our ordinary text-books dismiss the subject in a couple of chapters. The volume concludes with a short account of ergot and its uses. Charpentier adopts Pajot's law :

“As long as the uterus contains anything, be it child, placenta, membranes, clots, never administer ergot. We reserve it, therefore, for uterine inertia after the termination of the third stage of labor. First empty the uterus of its contents and then give ergot.”

Vol. IV discusses obstetric operations and the pathology of the puerperal period. Though full of information, this volume will probably be less helpful to the practitioner than might be expected. The teachings are essentially those of the French school, and differ in many points from English and American usages. Dr. Grandin's notes are here frequent and lengthy (in one case about six pages); they form a valuable commentary on the text and help to bring the subject fairly well up to date.

The illustrations are the weakest part of the work; though the publishers deserve great credit for the way in which they have placed a standard foreign work at such a low rate before the American public, yet a slight increase in cost would have enabled them to make it artistically pleasing, and would have greatly enhanced the value of their work.

**What to do in Cases of Poisoning.**—By WM. MURRELL, M.D., F.R.C.P., Lecturer on Pharmacology and Therapeutics in the Westminster Hospital, &c. First American from the fifth English edition. Edited by FRANK WOODBURY, M.D. Philadelphia: Medical Register Co.

It is quite impossible for even the most learned practitioner to have a clear idea of what should be done in every case of poisoning. No doubt every student has the symptoms and treatment of the more common poisons at his finger-ends before he graduates, but this knowledge is not of a permanent character, as every practitioner knows who has had much experience.

Again, the number of new agents, medicinal and otherwise, of this class that are being constantly introduced and used either accidentally or purposively is constantly increasing.

Dr. Murrell's work, which has now reached its fifth edition, deals with the whole subject of poisons in a thorough, yet concise manner. It is a work that should be in the library of every practitioner.



**A Compend of Electricity and its Medical and Surgical Uses.**—By CHARLES F. MASON, M.D., Asst. Surg. U.S. Army. With an Introduction by CHARLES H. MAY, M.D., Instructor in Ophthalmology, New York Polyclinic. Philadelphia: P. Blakiston, Son & Co.

This small work is one of the series of Medical Briefs published by P. Blakiston, Son & Co. It deals with the various forms of electrical currents used in the treatment of disease. In such a small compass it is surprising how much important matter the author has been able to discuss. In addition to a reference of the more important physical laws underlying the proper use of electricity in therapeutics, we have a short account of the mode of application, together with the indications and contra-indications to this important agent. To the busy practitioner, who from want of time is unable to read the larger textbooks, this little work will be found to be a fairly efficient and reliable guide.

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### Society Proceedings.

#### MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

*Stated Meeting, March 25th, 1887.*

J. C. CAMERON, M.D., PRESIDENT, IN THE CHAIR.

*Culture of Tubercle Bacillus.*—DR. JOHNSTON called the attention of the Society to a new method of cultivating the bacillus of tubercle, and exhibited several cultures.

*Extirpation of the Kidney.*—DR. WM. GARDNER exhibited a kidney removed by lumbar incision. The patient, aged 56, of intemperate habits, had been complaining since 4th Dec. last (three and a half months), when she took suddenly ill with rigors, fever and pain in right lumbar region. The symptoms were acute and severe—severe rigors, profuse sweating, severe pain, frequent vomiting, and continued so till the operation. The urine contained pus at intervals, and micturition was frequent and painful. The patient was very fat. On examination, a diffuse, very tender, ill-defined swelling in the right lumbar and hypochondriac region. No fluctuation. On percussion over the

swelling, intestinal note. Exploratory abdominal incision over the swelling. Parietes enormously thick. Omentum extremely fat. By palpation the tumor was now ascertained with tolerable certainty to be the kidney. The abdominal incision was closed and the kidney, containing half a pint of pus, was removed by the lumbar incision. No calculus or any other cause for the suppuration could be found. The patient was watched in hospital for two days before the operation, when the secretion of urine was almost *nil*. For the first twenty-four hours 40 ounces were secreted and passed naturally; for the next twenty-four hours none at all. On the third day she was distinctly soporose. A small quantity of urine passed in bed. The same on the fourth day after the operation, the day she died. Just before death four ounces was drawn off by the catheter. No autopsy allowed.

*Discussion.*—DR. JOHNSTON said the kidney seemed to show a condition of chronic hydronephrosis, accompanied by an acute nephritis. The collection of pus did not appear of long standing; there was no pyogenic membrane.

DR. SHEPHERD could not quite agree with Dr. Gardner's treatment of this case. Nephrotomy seemed to be called for in this case, not nephrectomy. He did not think a nephrectomy should ever be performed without a previous nephrotomy, as no seriously diseased kidney could be shelled out readily. The history seemed to point to pyonephrosis, and the large amount of urine passed after the operation might be due to a collection outside the injured kidney.

DR. TRENHOLME referred to a similar case occurring in his practice. There was a cyst in the neighborhood of the kidney, which he tapped and drew off about two quarts of fluid. Patient's symptoms were greatly relieved, but the cyst returned, and on again tapping three pints were obtained. The patient gradually got worse, however, and the post-mortem examination showed an obstruction of a valvular nature in the ureter, near the hilum of the kidney.

DR. GARDNER, in reply, stated that the case was not an easy one to diagnose, as the panniculus adiposus was so thick the

nature and situation of the tumor could not be satisfactorily made out. The patient was desperately ill, and the operation was undertaken as a last resource.

*Extirpation of the Uterus.*—DR. GARDNER exhibited a uterus he had removed a week before. The patient was 47 to 50 years old. Menses ceased two years before; occasional hemorrhages continued. No serious pain, but a constant discharge. The case was then regarded as one of sarcoma. The operation was easy. Dr. Johnston concluded, however, that it was carcinoma. The tumor was in the form of a series of outgrowths in the cavity of the uterus.

DR. TRENHOLME congratulated Dr. Gardner on the success of his operation, and said, with regard to extirpation of the uterus for malignant disease, that while he had performed the operation some seven or eight times with much immediate success, yet in all cases the disease rapidly returned. He now no longer regarded the operation with any favor.

*Laparotomy.*—DR. TRENHOLME exhibited a cyst, about the size of an egg, removed from a patient 19 years of age, confined of her first child eleven months ago, since which time she has been ill. Previous to her accouchement she had enjoyed good health, but was attacked with a severe pelvic arthritis and peritonitis three days after she was delivered of her child. Her present state is one of constant suffering, with pains in body and general nervous and gastric derangement. Temperature varies from 99° to 101° and 102°; pulse from 100 to 140. Lips and teeth exhibit usual feverish conditions. On examination, find a tumor level with Poupart's ligament filling a good part of pelvis on right side. Tumor was dense and strongly adherent to wall of pelvis; not perceptibly moveable, and somewhat nodular.

*Operation.*—On opening cavity of abdomen, the mass was found to coalesce with surrounding structures, and at no point was it at all possible to separate the mass. The specimen shown to-night was situated between the bladder and the uterus. As operation could not be completed, the abdominal wound was closed. The patient bore the operation well, but on the fourth day a profuse and foetid flow began to escape from the abdomi-

nal wound, and as the state of pulse, high temperature, etc., gave little hope for continuance of life, the patient returned to her home in the townships. She bore the journey (120 miles) well, and at the end of two weeks was rather better than when she left the city.

Dr. Trenholme remarked that this was the fourth serious case of abdominal section he had had in succession, all of whom, he was glad to say, had so far recovered. One was a solid cyst of left ovary (8 lbs.); one a suppurating cyst of left ovary (12 lbs.); one a dermoid cyst (4 lbs.), and the present case.

*Case of Nephro-lithotomy.*—DR. SHEPHERD related the case. He said:—

The following case is of interest, not only on account of the large size of the stone removed, but also because the question of the comparative merits of nephrotomy and nephrectomy is raised in such conditions of the kidney as existed in this case. The patient was sent to me by Dr. J. R. Johnston of Spring Valley, Minnesota, with a letter stating he suspected the man was suffering from stone in the kidney. The history of the case and condition on entrance I quote from the Hospital Report:

“W. C., aged 26, was admitted into the Montreal General Hospital on the 18th of October, 1886, with a history of long-continued pain in the left lumbar region and pus in the urine.

“*History.*—Family and personal history good. Seven years ago he first noticed that small quantities of blood were passed in the urine at the end of micturition; four years ago, blood was mixed with the urine, giving it a smoky appearance. Has seen no blood in his urine for two years. During the last seven years he has been troubled with continuous pain, not always very severe, in the left loin, occasionally radiating downward to the crest of the ilium. He occasionally has periods of very severe pain lasting for some two or three weeks, after which he is comparatively well; of late years these periods of pain have not been so frequent, and when they do occur the pain is of a sickening character and causes morning vomiting. Sudden movement, as sneezing and coughing, brings on an attack of pain. Five years ago first noticed a whitish deposit in urine;

up to a few months ago this was quite small in amount, and was passed with the morning urine. No history of renal colic.

“*Present condition.*—Is a fairly well nourished young man, of medium size, and with an anxious expression of countenance; complains of dull, aching pain in left lumbar region, and immediately below the last rib, in the axillary line, is a very tender spot the size of a twenty-five cent piece. He says the pain radiates from this point. Urine has a specific gravity of 1.015, and contains 15–25 per cent. of pus. Some days there is only a trace of pus. At other times there is as much as 25 per cent. Urea,  $7\frac{1}{2}$  grains to an ounce. Amount of urine daily excreted, 40–50 ounces.

“By external examination no tumor or fulness can be detected on the left side.”

On the 28th of October he was put under ether, and the abdomen thoroughly examined by both Dr. George Ross and myself, but no tumor could be made out. The left loin was carefully explored with the long needle of an aspirator, but failed to reach either pus or a calculus. It was concluded, from the history of the case and the symptoms, that a stone probably existed in the pelvis of the left kidney; so, after consultation with my colleagues, I decided to cut down on the left kidney by lumbar incision, and explore it.

*Operation.*—October 30th, the patient being under ether, was placed on his right side, with a hard pillow under the right lumbar region, and a horizontal incision was made close below the last rib of the left side, commencing at the edge of the erector spinæ muscles, and extending downward and forward for some five to six inches. After dividing the muscles of the abdomen, the quadratus lumborum was reached, the lumbar fascia divided, and the kidney searched for; the lower end was felt at a considerable depth, in fact, it could be barely reached with the fore and middle fingers of the right hand, so the opening in the loin was enlarged by an incision at right angles to the first, making the wound a crucial one. A long needle was introduced into the kidney, and a calculus was immediately felt. The kidney being steadied by pressure from without, I made an

incision down to the stone in the long axis of the organ, of some three inches. Through this incision an immense stone could be felt with the finger, but owing to its great fixity and large size it could not be dislodged. Whilst endeavoring to remove the stone, I accidentally ruptured a large artery, which ran to the lower end of the kidney, and was, no doubt, a supernumerary renal; the hemorrhage was profuse, and I immediately introduced one hand into the wound, and so prevented further bleeding, while with the other I managed to catch the bleeding vessel with a pair of long artery forceps. The stone proved too large to be grasped by a lithotrite, and too hard to be broken by a cutting forceps. I attempted to break it with a chisel and mallet, but failed, because of the difficulty of getting fixation of the kidney. The incision in the kidney was now further enlarged, and the stone gradually separated from the kidney tissue with the finger; even now, owing to the prolongations into the calices, the stone could not be removed. With considerable difficulty I managed to free the lower end of the stone which blocked the entrance of the ureter, and lifting it up, requested Dr. James Bell to grasp it with a pair of large lithotomy forceps; this was done, and the stone was brought away after the expenditure of considerable force. On examining the removed stone, it was seen that there were a couple of projections on it, one of which appeared to have been freshly broken off; so the hand was again introduced into the wound and a large fragment removed from a calyx; other smaller pieces were also removed. As the patient had been already an hour on the table, and was becoming weak from shock and loss of blood, no further exploration took place.

During the operation not a single drop of pus was seen; none apparently surrounded the stone, which was quite closely embraced by the surrounding kidney substance. So far as naked eye appearances went, the part of the kidney seen was perfectly healthy. At one time, I thought it would be necessary to remove the kidney, as it seemed impossible to remove the stone without it, but the very healthy appearance of the portion of the organ seen (the lower end), and the absence of pus,

determined me to persevere, and, if possible, remove the stone and leave the kidney till the condition of the other could be ascertained. At no time during the operation could the kidney be brought to the surface, and the operation had to be performed by feeling more than sight.

After washing out the wound thoroughly with a 1:2000 solution of corrosive sublimate, and introducing a large drainage tube, the wound was brought together with silk sutures, and dressed with sublimate jute pads. At the close of the operation the patient was in a fairly good condition, and did not show much evidence of shock; and, although he had lost a considerable amount of blood, his pulse was full and strong, and not more than 80. The weight of the removed stone and fragments immediately after the operation was 4 oz., 7 drachms. It measured  $3\frac{1}{2}$  inches in length, and 9 inches in circumference, and consisted entirely of triple phosphate.

After the operation, which took place at 2 P.M., the patient did not pass any urine till noon next day, when he voided  $7\frac{1}{2}$  oz. As there had been a great deal of oozing, the wound was dressed next day. Temperature,  $101^{\circ}$ . Pulse, 120. He still had vomiting from the ether.

Nov. 1. He passed 32 oz. of urine which was free from pus and blood.

For some time the patient progressed slowly toward recovery; his temperature ranged between  $98^{\circ}$  and  $100^{\circ}$ , and the amount of urine from 25 oz. to 50 oz. daily. The wound, which was not very sweet, and from which came large quantities of urine, gradually healed, and the tube was removed in the early part of December. He now began to have high and irregular temperature, with some sweating; from the 10th to the 25th of December his temperature ranged from  $98^{\circ}$  to  $102^{\circ}$ , and for several days after reached, in the afternoon, as high as  $104^{\circ}$ - $105^{\circ}$ . Fearing that some collection of pus was forming about the kidney, I re-opened the wound, introduced my fingers, and explored the pelvis of the kidney, but without result, except that a few flakes of calcareous matter were brought away. It was now decided to cut down and remove the kidney, but the

patient quite unexpectedly took a turn for the better, and improved so much that, in the early part of January, he was able to go about the ward, enjoy his meals, and gain flesh. The sinus in his right loin never healed, but continued to discharge large quantities of urine with a small amount of pus. At this time my service at the hospital having expired, I only saw my patient occasionally. His temperature was for several days quite normal, and then for a time would range as high as  $101^{\circ}$ . The amount of urine varied from 30 oz. to 40 oz. daily. I saw him early in February, going about, and apparently in fair condition. On the 10th of February he suddenly became jaundiced, his temperature rose to  $102^{\circ}$ , and he had severe sweatings. I saw him, and examined his side carefully, but could discover no evidence of any collection of pus about the wound, and the amount of urine reached 40 oz. daily. The fistulous opening in his side discharged urine freely, and a very small amount of pus stained the dressings. He gradually became worse, and died comatose on the 14th of February, three and a half months after the operation.

The autopsy was performed by Dr. Wyatt Johnston, pathologist to the hospital, and the following is taken from his report: "Body jaundiced. In left lumbar region, a depressed cicatrix about two inches long, is seen with a sinus toward the centre, from which fetid pus can be squeezed out. On opening the abdomen, a large oval mass is seen in left lumbar and extending up into the left hypochondriac region. This mass has a quantity of fibrous exudation surrounding it, and is very difficult to remove, being firmly attached to the lumbar muscles, spleen, and vault of the diaphragm. The retro-peritoneal glands are acutely swollen, but show no signs of suppuration. The aorta and vena cava are not directly involved in the mass, and can be readily dissected off. Near the inferior extremity of kidney, two inches above the crest of the ilium, a small artery, one and a half inches long, running directly from aorta to kidney is seen; it is obliterated, apparently from a ligature. The fatty capsule of the kidney is densely infiltrated with fibrous tissue, and cannot be removed without tearing the kidney



substance ; the left kidney itself is greatly enlarged, and forms a fluctuating mass weighing nearly 1,000 grammes. On opening the pelvis, a little fetid pus escapes, and the sinus in the loin is seen to open into it. On palpation a small calculus mass can be felt towards the cortex in one of the calices of the kidney, the calculus is the size of a hazelnut and appears to be broken off in one spot. It is enclosed in a small pocket of pus. The ureter immediately below the pelvis of the kidney is completely obstructed and its walls are much thickened. On incising the kidney along its convexity it is found to consist in the upper portion of a series of large communicating sacs containing over ten ounces of fetid pus. These cavities do not communicate with the sinus or the pelvis of the kidney, but are completely shut off from the rest of the kidney by thick, fibrous walls, showing that the disease is of long standing. Within these sacs lie five or six irregular branched calculi, varying in size from a bean to a walnut. The lower fourth of the kidney contains a considerable quantity of healthy renal structure. Bladder and lower part of ureter normal. Right kidney double normal size and looks to be perfectly healthy. Liver shows numerous enlarged lymph glands lying beside the bile ducts, but bile can be easily expressed. Other organs healthy."

There is not the slightest doubt that this patient died of septicæmia due to the fetid abscesses in the upper end of the kidney. These could not be diagnosticated by external manipulation, and from the fact that the part of the kidney seen at the operation was healthy in appearance and contained no pus, the condition of its upper end was not suspected. So far as the operation itself went, it was successful, but one lesson may be learned from this case, viz. : that with a large stone in the pelvis it is almost impossible to have a kidney which has not undergone grave changes, and its thorough exploration by incision is indicated. Had there been pus around the stone and the kidney tissue not looked so healthy, I should have attempted to remove the kidney, but I had in my mind a specimen in the Museum of the Medical Faculty of McGill University, where

the pelvis of each kidney, in a man, is filled by an enormous stone, whilst the surrounding kidney structure is comparatively healthy, and where there was not a drop of pus or the sign of disorganization. In my case, however, although in the immediate neighborhood of the large calculus the kidney was healthy, yet the greater portion was composed of pus cavities containing stones unconnected with that in the pelvis. The kidney was placed so deeply and situated so high up that, with even the very extensive lumbar incision which was made, it could not be properly explored, and I very much doubt if it could have been successfully removed by the loin. Its removal, owing to the numerous adhesions to important organs and its location, would have been a matter of serious difficulty, if not an impossibility, even by abdominal incision, for at the autopsy by the combined abdominal and lumbar incision it was only by cutting freely the surrounding parts that its excision was accomplished.

In such a case incising the kidney in every part, evacuating the pus, and removing the calculi would be the proper procedure. Diseased kidneys which enlarge downward are much easier to remove by lumbar, and also abdominal incision, than those which enlarge upward, and are wholly under cover of the ribs.

There is another point about this case which is worthy of notice, and it is this: When a kidney is highly placed it may be enlarged so as to form a considerably-sized tumor, which cannot be detected by the most careful palpation, even when the patient is placed under ether. The failure to find the stone by needle exploration, before the operation, was due to the same cause—the high position of the tumor and its great depth.

In connection with this case I might mention one reported by Prof. Guyon, of Paris, which is very similar to the one narrated above. In Guyon's case, however, a distinct tumor could be felt externally. After cutting down on the tumor and incising it he found the pelvis of the kidney completely filled by an enormous stone with processes extending into the calices, these processes were cut off with forceps and the large calculus extracted with difficulty; after the removal of the smaller pieces, the pelvis of the kidney was explored with the finger and

sound, and no more stones could be felt. The patient died some two weeks after from hæmoptysis, and at the autopsy it was found that the kidney was so adherent to the surrounding parts that it probably could not have been extirpated. Several more stones were found in the upper end of the kidney in cavities separated from the pelvis by connective tissue. Prof. Guyon, in the course of his remarks on this case, states that here nephrotomy was preferable to nephrectomy, and that had the kidney been properly incised the other stones would have been found, that in such cases the kidney should be freely incised and every nook and cranny explored; he holds that if this were done in cases of calculous pyelitis nephrectomy would never be called for.

Formerly it was feared that free incision of the kidney would cause severe and dangerous hemorrhages, but experience has taught surgeons that the danger is an imaginary one, and that kindneys which are much disorganized may be incised without fear of bleeding, and that even in healthy kidneys the hemorrhage from incisions is easily and permanently controlled by pressure.

In such cases as the one above narrated, where the stone is of great size and the kidney is enlarged, the mere extraction of the stone in the pelvis should not satisfy the operator; he should thoroughly examine the kidney in every part by free incisions so as to be sure no calculus is left behind. External manipulation of the kidney is not sufficient to detect stone, and in such cases as my own, even exploration through the kidney pelvis would fail, without further incision, to detect calculi unconnected with that in the pelvis.

Up to a short time ago the largest stone removed by lumbar incision was under two ounces in weight. Lauenstein reports a successful case of removal of a large calculus (weighing 25 grammes and composed of the triple phosphates) from the pelvis of the kidney. He had to break the stone with a lithotrite before he could extract it. In his paper he states that it was the largest stone removed up to that time, though not the heaviest. Three months after the operation, the sinus in the

loin had completely healed, and when the article was written the patient was perfectly well.

Dr. John Neill, after relating a case of large renal calculus found after death, quotes from *Cyclop. Pract. Med.* the following case: "A remarkable instance of such calculus occurred in the person of a natural daughter of Sir Richard Steele. No nephritic symptoms took place until shortly before death, when severe pain was felt in the region of the right kidney, fever followed and speedily proved fatal. A calculus of oxalate of lime weighing  $7\frac{1}{2}$  ounces was found in the right kidney, which was so thin by absorption as to be reduced to a mere membrane. In this instance the stone could be felt, during life through the loins, inducing a belief that the kidney had become ossified (Catal. Museum of Royal Coll. Surg., London. Note by John Hunter)." In this case there was evidently but little suppuration, or the stone could not have been so easily recognized.

Mr. Victor Horsley, on Sept. 16, 1885, removed a stone weighing  $2\frac{1}{4}$  ounces from the pelvis of the kidney of a middle-aged woman; ten days after she was doing well. It was the largest stone removed from the kidney up to that time.

Mr. W. L. Brown reported a case before the Birmingham and Midland Counties Branch of the British Medical Association, in May last, where he had removed from the kidney by abdominal section a stone weighing 11 ounces. The kidney tumor occupied the right half of the abdomen and contained three pints of pus. The cut edges of the cyst were stitched to the abdominal walls and the cavity drained. The patient died suddenly eleven days after the operation from heart clot. So far as I know, the stone in my case is the largest ever removed by lumbar incision.

*Discussion.*—DR. BELL said that he had watched this case with great interest for some time, and considered the question of the best method of dealing with such cases a very difficult one. It would be impossible to drain so many pus cavities even if all the outlying calculi could be removed. Excision of the whole kidney would, perhaps, have given better results, though such an operation was scarcely indicated at the time.

DR. JOHNSTON said that the post-mortem showed that it would only have been possible to remove the kidney by resecting two or three ribs, so firmly attached was the mass about the kidney.

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*Stated Meeting, April 15th, 1887.*

T. J. ALLOWAY, M.D., 2ND VICE-PRESIDENT, IN THE CHAIR.

*Yeast Saccharometer.*—DR. REED showed a very neat and useful little piece of apparatus called the Einhorn's Yeast Saccharometer, for qualitative and quantitative estimation of glucose in urine. A full description and a woodcut of the apparatus appeared in the June number of this JOURNAL, page 644.

DR. RUTTAN referred to the recent introduction of alpha-naphthol and thymol as tests for the presence of sugar. These, if reliable, were far too delicate for clinical purposes, as the sugar normally present in the urine can be shown when the latter is diluted one to two-hundred. He also referred to the periodic absence of excess of glucose in diabetic cases when under proper diet, and stated that proportion of acetone and aceto-acetic acid is usually increased during these intervals. The iodoform test for acetone was probably the best, but required to be carefully made. Nitro-prussiate of sodium and sulphuric acid gives a fine rose-color with urine containing acetone. This reaction, however, has not been shown to be peculiar to acetone.

*Unusual Cases of Hysteria.*—DR. GEORGE ROSS then read a paper on some unusual cases of hysteria, which appears in full in the present number of this JOURNAL.

*Discussion.*—DR. STEWART said the first two cases described by Dr. Ross were interesting and very peculiar. While it may be wise, in acute symptoms in young persons, to give positively a favorable prognosis, there is no doubt many cases of paralysis of hysterical origin are perfectly incurable.

DR. SHEPHERD referred to the case of a young student who had hysterical vomiting, lasting for months, and resisting all treatment. He was so reduced in flesh that the transverse duodenum could easily be felt through the abdominal walls. He was sent home, there got better at once, and returned well and fat. He believed in a positive statement of cure in cases of

hysteria, and referred to a case of hysterical spine of long standing that had been cured by the faith cure.

DR. WILKINS felt convinced that one cannot be too dogmatic and positive in promises of cure in hysterical cases. He referred to a recent case in hospital of hysterical contraction of the muscles of one arm. The case was at first very puzzling, but when hysterical symptoms were made out, a certain cure was promised and the patient put under ether, and on recovering from the effects of the anæsthetic was completely cured. The mystery of what was done to them while under ether often effects a cure.

DR. REED said that real affections of the joints may occur with hysterical symptoms in the same patient. He referred to a case in the General Hospital where hysteria was diagnosed, and yet there was a real affection of the knee-joint.

DR. GEO. ROSS, in reply, said that it was very difficult, in chronic cases, to make a positive prediction. Charcot states that there are actual changes in the cord in many hysterical cases of a chronic character.

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*Stated Meeting, April 29th, 1887.*

DR. TRENHOLME IN THE CHAIR.

*Monobrachial Chorea, not post-Hemiplegic.*—DR. WOOD exhibited a case of monobrachial chorea, not post-hemiplegic, in a boy 15 years of age. Had variola in the winter of 1885-86. Discharged from hospital in January, 1886, with ulceration of right cornea; otherwise well. The attack of chorea began in March, two months after discharge, and has continued since. He never had paralysis, rheumatism, or any cardiac trouble, and now his general health is good. When asleep the choreiform movements cease, and he exercises a certain amount of control over them at will. Only when he attempts to co-ordinate his arm and hand muscles is the chorea very apparent. He cannot use his knife or fork at table, but can chop wood, move furniture, and do similar work. Pressure over the median nerve near the elbow controls the movements. He had been attending the public school, where the hours extend from eight o'clock in the

morning until five in the afternoon. He was kept at home during the past two months, and he has decidedly improved. Weir Mitchell says that cases of localized or limited chorea are not the result of embolism, but are generally due to acquired habits, and hence he calls such cases "habit chorea." Dr. Wood did not see how his case could be so classed.

*Discussion.*—DR. BULLER said this case was particularly interesting in view of the recent theories regarding the influence of eye lesions in producing general nervous affections. One physiologist claims that most nervous affections are traceable to ocular affections. The irritation of the ciliary nerve produced by a shrunken eye-ball has caused general epilepsy. Again, chorea has been traced to weakness of the ocular muscles; difficulty of co-ordination of the eye-muscles is productive of many nervous affections more or less severe. It is a common cause of nervous headache. Applying these general principles to the case exhibited, Dr. Buller called attention to the condition of the eye on the affected side; the patient was quite blind, the eye was shrunken, and there was infiltration of the cornea, though not excessively painful to the touch. He concluded that there was at least a possibility that this peculiar chorea was due to the irritation of the shrunken eye-ball. He suggested enucleation of the useless eye as a possible means of cure. The fact that the boy's condition improved after removal from school might be due to the relief thus afforded to the ciliary muscle.

DR. TRENHOLME referred to the use of arsenic in the treatment of chorea. As usually administered (three to five minim doses) he did not think it was of much remedial value, but he had obtained good results by gradually giving a large quantity. He made a practice of beginning with three minims of Fowler's solution three times a day after meals, increasing this to five minims and continuing the administration till the toxic effects were visible, then discontinue for a time. He usually preceded each meal with a dose of saccharated carbonate of iron.

*Pathological Specimens.*—DR. JOHNSTON exhibited some interesting specimens from a case of chronic hydronephrosis. The case occurred in the practice of Dr. R. L. MacDonnell. Dr. Johnston was unable to give the history of the case.

## Selection.

### The Summer Diarrhœa of Infants.—

We are approaching the great summer epidemic of the cities, from which more than two thousand infants perish every year in New York between the middle of June and the middle of September. The anatomical characters of this malady show it to be an intestinal catarrh or inflammation, due to causes dietetic and atmospheric, which exist in the cities in consequence of the summer heat. The statistics of each year indicate the importance of this malady, and how urgently measures are required to diminish its frequency and severity. The last annual report of the N. Y. Board of Health giving the vital statistics was made in 1875, since which time weekly bulletins have been issued. Notwithstanding the enforcement of sanitary regulations by the Health Board, the statistics of each year, so far as they are accessible, show that this disease is far from being controlled, and that it every summer largely increases the aggregate of deaths. The deaths from diarrhœa at all ages in the last three years in which annual reports were issued were as follows:—

	1883.	1874.	1875.
January.....	94	43	46
February.....	84	34	52
March.....	93	40	58
April.....	114	47	45
May.....	95	61	89
June.....	220	144	157
July.....	1,514	1,205	1,387
August.....	967	1,007	1,012
September.....	424	587	608
October.....	213	255	185
November.....	87	105	57
December.....	53	56	50

That nearly all who die from this diarrhœa are infants is well known by every New York physician, and this fact is repeatedly stated or implied in reports made by the Health Board. Thus, in their annual report for 1870, the Board state: "The mortality from the diarrhoeal affections amounted to 2,789, or 33 per cent. of the total deaths; and of these deaths 95 per cent. occurred in children less than five years old, 92 per cent. in children less than two years old, and 67 per cent. in children less than a year old."

The prevalence and severity of the summer epidemic in the cities correspond closely with the degree of atmospheric heat. In New York it begins in the month of May, in a few isolated cases, and cases become more frequent and severe as the weather grows warmer until July and August, when the diarrhœa attains



its maximum prevalence, and the cases are most severe and fatal. That atmospheric heat does not in itself cause the diarrhoea is evident from the fact that in the rural districts there is the same intensity of heat as in the cities, and yet the summer complaint does not occur. The cause must be looked for in the state of the atmosphere engendered by heat, where insanitary conditions exist, as in a large city. Observations show that the noxious effluvia, with which the air becomes polluted under such circumstances, constitute or contain the morbid agent. Thus, in one of the asylums in this city a few years since, on May 10th, which was an unusually warm day for this month, a very offensive odor was noticed in all the wards, which was traced to a large manure heap which was being disturbed in the vicinity of the Asylum. The previous health of the inmates had been good, but on this day four young children were severely attacked with diarrhoea, and one of them died. Many other examples might be cited, showing how the foul air of the city during the hot months, when animal and vegetable decomposition is most active, causes diarrhoea. Several years since, while serving as sanitary inspector for the Citizens' Association in one of the city districts, my attention was particularly called to one of the streets, in which a house to house visitation disclosed the fact that nearly every infant between two avenues had diarrhoea, and usually in a severe form, not a few dying. This street was compactly built with wooden tenement houses, on each side, and it contained a dense population, mainly foreigners, poor, ignorant and filthy in their habits. It had no sewer, and the refuse of the kitchens and bed-chambers was thrown into the street, where it accumulated in heaps. Water trickled down over the sidewalks from the houses into the gutters, or was thrown out as slops, so that it kept up a constant moisture of the refuse matter, which covered the streets and promoted the decay of the animal and vegetable substances which it contained. The air in the domiciles and street, under such conditions of impurity, was necessarily foul in the extreme, and stifling during the hot days and nights of July and August, as I had abundant opportunity to observe, and it was evidently the important factor in producing the numerous and severe diarrhoeal cases which were in these domiciles. In another locality, occupied by tripe dealers and a low class of butchers, who carried on bone-boiling at night, the air in the domiciles and street was so foul and loaded with impurities, that they could be distinctly perceived, not only by the smell, but also by the taste, for the disagreeable and peculiar taste produced by respiring this air remained in

the mouth a considerable time after making a night visit. In this locality infantile diarrhoea was very prevalent and fatal during the hot summer months. Similar instances showing the causative relation of foul air to diarrhoeal attacks abound in medical literature. Thus Murchison states that twenty out of twenty-five boys were affected with vomiting and purging from inhaling the effluvia from the contents of an old drain near their school-room. Infants who have less power of resistance are more liable to diarrhoeal attacks from inhaling noxious gases than are adults. In a populous city, with its crowded tenement houses and uncleanly habits of the laboring class, impurities of the respired air are, therefore, a potent cause of infantile diarrhoea during the hot months.

The exact nature of the agents in the atmosphere which produce the diarrhoea, whether they be entirely gaseous or partly microscopic organisms, is an interesting subject for inquiry.

The impurities which abound in the air of a large city through the action of atmospheric heat are very numerous. Among those of a gaseous nature are sulphurous acid, sulphuric acid, sulphuretted hydrogen; various gases of the carbon group, as carbonic acid, carburetted hydrogen, and carbonic oxide; gases of the nitrogen group, as the acetate, sulphide and carbonate of ammonium, nitrous and nitric acids, and at times compounds of phosphorus and chlorine (Parke). A theory deserving consideration is that certain gaseous impurities found in the air form purgative combinations. D. F. Lincoln, in his interesting paper on the atmosphere in the *Cyclopædia of Medicine*, writes in regard to sulphuretted hydrogen: "When in the air freely exposed to the contact of oxygen, it becomes sulphuric acid. Sulphide of ammonium in the same circumstances becomes a sulphate, which, encountering common salt (chloride of sodium) produces sulphate of sodium, and chloride of ammonium. The sulphates form a characteristic ingredient of the air in manufacturing districts." The sulphates we know are for the most part purgatives, but whether they or other chemical agents exist in the respired air in sufficient quantity to disturb the action of the intestines, even where atmospheric impurities most abound, is uncertain.

Solid impurities in the air of a large city, also, are very abundant, as one may observe by viewing a sunbeam in a darkened room, which is made visible by the numerous particles floating in it. These particles consist largely of organic matter, which often has been carried a long distance by prevailing winds. The

remarkable statement has been made that organic particles of African production have been found in the atmosphere of Berlin. Ehrenberg discovered fragments of animalcules of various kinds floating in the air—rhizopods, tardigrades, poly-gastrics, etc. Monads, bacteria, vibriones, amorphons dust containing spores are among the substances found in the air of a large city. The well-known hazy appearance of the atmosphere resting over New York city, when viewed at a distance on a sultry and quiet summer day, is due largely to solid impurities. These minute organisms floating in the air which we breathe have assumed great importance in the study of diseases, since microbes are now known to sustain an etiological relation to many diseases, the causes of which have till recent years been obscure.

Low organisms enter the system not only from the air which surrounds us, but in our daily food. Prof. Hensch, of Berlin, a distinguished authority in diseases of children, writes in reference to the causes of cholera infantum: "There is no doubt that high atmospheric temperature increases the tendency to fermentative dyspepsias, which are present in imperfectly nourished children at all seasons, and causes them to appear not only epidemically, but also in an extremely acute form, which is not frequent under ordinary circumstances. This would lead to the conclusion that in addition to the heat, infectious germs are present, which, being developed in great masses by the former, enter the stomach with the food." While, therefore, atmospheric heat, stated in a general way, must be regarded as the potent cause of infantile diarrhoea of the summer season, it probably produces this effect in part by its direct action, and in part by bringing into existence noxious agents, as gases and minute organisms, which irritate the gastro-intestinal surface, disturb its function, and produce fermentation in place of healthy digestion.

The second factor in causing the summer diarrhoea is the use of improper food—food which in its nature is unshitable for infantile digestion, or which quickly undergoing fermentative changes through the effect of summer heat, acts as an irritant to the intestines and causes diarrhoea. For infants under the age of twelve months, the mother's milk is, of course, as a rule, the proper food, since it is that which Providence provides, but in a great city, with its large laboring class, with multitudes of mothers poorly fed, over-anxious and over-worked in their endeavor to provide for large families, numerous instances occur in which maternal lactation is inadequate or impossible, and other food than breast milk must be provided. One not a resi-

dent would scarcely be able to appreciate the difficulty which is experienced in a large city in obtaining proper diet for infants, who, if they do not receive breast milk, should be furnished with that food which most closely resembles it in its chemical character. Animal milk having the closest resemblance should, therefore, form the basis, or be a chief ingredient in dietetic preparations designed for infant feeding, and, from its greater abundance, the milk of the cow must be employed rather than that of the goat or ass. But it is difficult to obtain cow's milk which is uniformly good and properly preserved. That from cows stabled in the city, or having a limited pasturage near the city, and fed in addition on a mixture of garden and distillery products, the latter often predominating, is usually deficient in nutritive properties, prone to fermentation, and, from microscopical and chemical examinations which have been made, it is often found to contain deleterious ingredients. If milk be obtained from distant farms, where pasturage is fresh and abundant, and in New York city this is the usual source of supply, considerable time elapses before it is served to customers, so that, particularly in the hot months of July and August, it frequently has begun to undergo lactic acid fermentation when it is served to customers. That dispensed to families in the morning is the product of the milking of the previous morning and evening. The use of such milk in the feeding of infants is a common exciting cause of the summer diarrhoea. These preliminary remarks relating to the etiology of this disease will help us to a better understanding of the important subject which we are about to consider, to wit, its hygienic treatment.

*Preventive Measures.*—The operation and the causes which produce this disease may, to a great extent, be prevented by the employment of the proper regimenal measures. Special pains should be taken that the air which surrounds the infant, and which it constantly breathes, should be as free as possible from noxious exhalations. Pure air may, to a great extent, be procured by personal, domiciliary, and street cleanliness. The apartments should be well ventilated during the hot months, without exposing the infant to currents of air; and the infant should be much of the time in the open air, in the day time, and to be taken to localities where the air has its maximum purity, as in the parks and outside the city limits. At the same time, direct exposure to the sun's rays should be avoided. Removal to the country, when practicable, for the purpose of obtaining pure air at night, as well as in the day time, is an important preventive measure, for at night the atmosphere of a large city is especially impure, and in the sleeping apartments, particularly

in the crowded tenement houses, where a majority of the cases of the summer diarrhoea occur, it is often stifling.

The infant, until the age of ten or twelve months, should be nourished at the breast, so far as the mother's health will allow, and her milk suffice. Earlier weaning, without the best and strongest reasons, should be discouraged, for those prematurely weaned are very liable to contract the summer diarrhoea. I never allow weaning if it be possible to avoid it in the summer months or immediately before them. If weaning in midsummer be necessary in consequence of sickness of the mother, or other cause, I advise the removal of the infant to the country, and its weaning there. In the pure country air, with fresh and suitable food, weaning in hot weather is much less likely to cause indigestion and diarrhoea than in the city. A common cause or inducement to sudden weaning in midsummer is the fact that the mother discovers that she is pregnant, but even in this condition I ordinarily advise her not to wean until after the heated term unless she will go to the country and wean there. It is better, I think, that she incur the double drain upon her system than the risks to the infant of weaning abruptly in the city when the weather is hot. The preferable way under such circumstances is to suckle at longer intervals, and make up the deficiency by artificial feeding.

It is evident that in endeavoring to prevent this summer epidemic more attention should be given to the milk supply of the cities than it has heretofore received. During the last three years Prof. Vaughan has detected and investigated a ptomaine, the tyrotoxin, which is liable to develop in cow's milk at the temperature of summer heat, when air is excluded from the milk, as in closed bottles or cans, and he thinks it not improbable that other similar agents will yet be discovered. Experiments with the tyrotoxin show it to be an acrid poison, producing the severe symptoms of vomiting and purgation, which characterize typical cases of cholera infantum. It caused the well-known milk poisoning at Long Branch from the use of milk seven or eight hours after the milking—in so short a time was it produced in closed cans, through the action of animal and atmospheric heat. The active agent in causing tyrotoxin to appear is, according to Vaughan, "either the butyric acid ferment, or some ferment, which is frequently developed along with the bacillus butyricus" (*Medical News*, June 18th, 1887).

Prof. Vaughan very properly says that, in order to attain the highest degree of success in preventing the summer diarrhoea, it is necessary to extend attention to the feeding and management of cows in the dairies, that no poisonous or noxious plants

should grow in the pastures where they graze, that their stables should be clean, and their udders washed before the milking, if they be at all soiled; that all cows which exhibit the least ill-health be excluded from the dairy. Prof. Vaughan adds, that "cows must not be fed upon swill or the refuse of breweries, or glucose factories, or any other fermented food \* \* \* must not be allowed to drink stagnant water, but must have free access to pure, fresh water \* \* \* must not be heated or worried." The milk should immediately after the milking be exposed to the air in open vessels surrounded with ice or cold, running water, and the temperature be reduced within an hour to 60°, and "no buyer should receive milk which has a temperature higher than 65° F." Only a brief sojourn in the dairying section is requisite to show how seldom such excellent advice is followed out, and when we see the perils which surround our infants due to the faulty milk supply, we are tempted to ask if the shops do not contain foods which are safer for their use. The masses must be made to understand the importance of watching more closely their milk supply, before we can expect to diminish materially the frequency and severity of the summer diarrhoea.

*Treatment.*—Notwithstanding the enforcement of sanitary regulations by Health Boards, and earnest and judicious advice given by physicians, the summer diarrhoea continues, and is likely to continue the annually-recurring and fatal epidemic of infants, desolating many families, especially in the laboring class. Since, as stated above, one of the chief factors in causing this disease is the use of improper food, it is necessary for its successful treatment that the diet be of the right kind, properly prepared, given at proper intervals, and in proper quantity. We cannot expect to prepare any food which will surpass in excellence the mother's milk, if she be in good health, be not over-anxious in regard to her infant, have sufficient sleep, and lead a quiet and regular life. But in a large city many mothers, especially in the laboring class, with their manifold household duties and constant and depressing struggle with poverty, find their milk insufficient, so that some substitute for maternal lactation is required. A wet-nurse may supply the place of the mother, if one can be obtained, who has sufficient milk, of the right age and of good quality, and who has the proper habits and mental traits. In New York city wet-nurses are often employed in wealthy families when the mothers are healthy and have abundant milk, and when their own health and happiness would be promoted by wet-nursing. The plea for the abandonment of the important duty of suckling and taking care of their own infants is that it would necessitate too close confinement at home and deprive them of social plea-

tures, and that the drain upon their systems from lactation would make them prematurely old. To such an extent are wet-nurses employed in wealthy families, that there is a scarcity of them for families who are in urgent need of their services. For the great mass of infants deprived of maternal lactation through their mothers' ill-health or other causes, the supply of wet-nurses is totally inadequate, and in the laboring class, where cases of infantile indigestion and diarrhoea are especially frequent, their employment, on account of the expense involved, is not to be thought of. Therefore, in a large city like New York, artificial feeding is necessary for the vast majority of infants deprived of the breast-milk, and how to feed such infants, as well as those who have reached the age when weaning is proper, is one of the most important problems which can engage the attention of the physician.

We have stated that the food of infants prior to the age of one year should resemble as closely as possible the mother's milk in digestibility and nutritive properties, and for this reason animal milk, and for convenience cow's milk, must constitute the principal part or form the basis of the food employed. The profession, as well as the laity, are greatly indebted to the labors of renowned chemists, from the late Baron Liebig to Professors Leeds and Vaughan of the present time, not to mention names more intimately connected with this journal, for the important aid which they have rendered in the matter of infantile feeding, and largely through their assistance many infants are now preserved in health who a few years ago would inevitably have perished from indigestion, mal-nutrition and diarrhoea. The most important help rendered by the chemists is, we have said, the artificial digestion of the substances used in feeding, by which the feeble digestive functions of infants are relieved to a great extent of the burden of digestion. The importance of this artificial digestion is seen as regards the change effected in milk. A principal reason why cow's milk disagrees with infants is, that its essential and highly-nutritive ingredient, casein, forms large and firm masses in the infant's stomach, curds which digest with difficulty, prove irritating by fermentative changes which they undergo, cause gastric distress and vomiting, and as they descend in the intestines produce colicky pains and diarrhoea. Human milk coagulates in flakes, which on account of their small sizes are readily acted on by the digestive ferments, and are quickly and fully digested. By artificial digestion or, as it is designated, peptonizing, the casein, so far as it is not fully digested, forms particles or flakes which are readily digested by the infant, causing no suffering or gastro-intestinal irritation.

But useful as is the peptonizing process for preparing milk, so that it is readily assimilated while its full nutritive properties are retained, it meets a serious drawback as employed in a large city like New York. Milk of the best quality, that which is most suitable for peptonizing, is obtained at a distance, where the pasturage is good and abundant, and in midsummer, when fermentation occurs quickly, milk several hours old when it is received is likely to have undergone some alteration appreciable to the taste so as to impair its quality when peptonized. This is a fact which we frequently notice in tasting milk.

The important advantage is claimed for one of the most recent of the infant foods, to wit, Carnrick's Soluble Food, that not only are the feeding, healthiness and cleanliness of the cows, which furnish the 50 per cent. of milk which it contains, under close surveillance, but the milk is peptonized in the country soon after the milking, after which its water is expelled by evaporation and its nutritive portion reduced to a powder. Peptonized milk reduced to a powder resists fermentation for a lengthened period, and may be advantageously used in infant feeding months after its preparation as a substitute for fresh milk when the latter is obtained with difficulty. But great as has been the improvement in infant feeding by the peptonizing of milk and the method of preserving it from fermentation by evaporating its aqueous portion, an equally important and useful improvement has been made in the predigestion of the farinaceous foods which are commonly employed with milk. The fact has long been recognized that bland and easily-digested farinaceous substances mixed with milk aid in preventing the casein from forming large and firm masses in the stomach by mechanically separating its particles. The proper admixture of such substances with the milk, therefore, appears to promote the digestion of the latter, while having nutritive properties they aid in the nutrition. But starch is digested with difficulty by young infants. In those under the age of three months, the salivary glands and pancreas, whose secretions are the chief agents in digesting starch, are almost rudimentary. To the late Baron Liebig the credit is due of bringing prominently to the notice of the profession the fact that starch can be predigested, so that it is readily assimilated by the youngest infant. According to the degree of change, starch is converted into the form known as soluble starch into dextrine, and by a more advanced change into glucose.—*Dr. J. Lewis Smith in Journal of Reconstructives.*



CANADA

# Medical and Surgical Journal.

MONTREAL, AUGUST, 1887.

## PUBLIC HEALTH.

Montreal, in common with many other cities of this continent, suffers from a high death-rate from preventable disease. We have passed through an epidemic of small-pox, and have witnessed a mortality greater than has ever happened in any modern plague. It was hoped that the dreadful lesson thus taught would have the effect of enlivening the people to undertake measures of sanitary reform, but we seem to be drifting back again into the old ways. No Board of Health for the Province has been, as yet, established. Thus Quebec stands alone in its complete disregard for the health of its people. More than a year ago a feeble health bill was passed by the Conservative Government at Quebec for the purpose, not of effecting any sanitary benefit, but *solely* to meet the exigencies of the political situation. To oppose the bill would estrange the English vote, while to put into force good health laws would offend the majority of the government support. So the government took a middle course. The English were pacified by the passage of the most feeble health bill a legislature could devise, a board of health was promised, all particulars arranged, and the bill became law. But the board was never appointed, and the promoters of the bill, those gentlemen who sat out so many dreary meetings in drafting it, have worked in vain. Then came the change of government, and with it some faint hope of improvement. Mr. Mercier was asked in the House by the member for Montreal West whether it was the intention of the government to establish the Provincial Board of Health, as provided for by the bill of last session, on which the Premier replied that the matter was "under the consideration of the government." Since that gracious reply was

made smallpox has again threatened us, diphtheria is prevalent in the province (we read now and again of prayers for the removal of the pestilence), ships with doubtful bills of health slip past our infectual quarantine stations and pass unobstructed to the harbor of Montreal, no vaccination to speak of is being done, fever is reaping its annual harvest, cholera is threatening us, and yet the "matter is under consideration."

And in the city itself things are almost as bad. It is no exaggeration to say that gross sanitary defects exist in most, nay, in the majority, of our houses. Original bad plumbing, leaking pipes, gaping drain-pipes exist in the houses of rich and poor alike. There is little doubt but that the beneficial effects of change of air are due not so much to the good qualities of the air of the country as to the escape from the poisonous home atmosphere. Most of our houses present many unavoidable faults, it is true; we cannot carry our drains outside the house nor can ventilation be carried out as satisfactorily as is done in more temperate climates, but we can exercise some care in keeping the drainage system in good order. We can take the trouble to see that the soil-pipe is of proper material and that it does not leak, we can see that it is ventilated, we can get rid of the old offensive pan-closet, and we can do what is possible to keep a fair current of air through the house. In fact we ought to do, before the disease comes, what many of us have to do after the mischief has been accomplished.

Latterly a number of citizens have clubbed together to form a Sanitary Association, following the example of several of the old country towns. By means of an annual subscription of \$10 an income has been procured sufficient to enable the Society to secure the services of a competent sanitary engineer, Mr. Henning of Edinburgh. The duties of this officer include annual inspection and report on the condition of the house of each member. In this way defects are detected soon after their development, and the stable-door shut before the horse is stolen. We heartily commend the action of those gentlemen who are responsible for the institution of this society, and advise all householders to become members, reminding them that a healthy mind in a healthy body cannot long remain unless both the mind and body are contained in a healthy home.

## THE CONDITIONS UNDER WHICH THE KIDNEYS FUNCTION.

An interesting and important series of experiments has been made by Dr. J. Munk to determine between the rival theories as to the secretion of urine: the filtration theory of Ludwig and the secretion theory of Heidenhain. According to the former, *blood-pressure* determines the rate of secretion; according to the latter, the *rate of flow* of the blood, and the secretion is effected not alone by the Malpighian corpuscles, but also by the cells of the tubules.

Munk carried out his investigations on excised, but living kidneys of dogs, through which defibrinated blood of the same animals was sent under varying pressures and at a temperature of 40°C. The blood of starving animals induced no secretion, while the latter was abundant when normal blood was used; but if to the blood of the famished animals was added one of the final products of digestion as found in the blood, as Munk puts it, such as urea, then secretion followed. As an increase of blood-pressure within the kidneys did not increase the amount of urine, while an augmented rate of flow increased the quantity proportionately, Munk pronounces in favor of the theory of secretion proper as against the mechanical theory.

When only solutions of common salt or blood-serum were passed through the kidney, no secretion followed. As any central influence from the heart or the nervous system was excluded, it is inferred that the unaided activity of the cells alone suffices for the work of secretion. A number of diuretics were employed with a view of testing whether they acted as stimuli centrally on the heart or peripherally on the renal cells. Digitalis proved a central diuretic; common salt a peripheral one. Urea, pilocarpine, saltpetre and caffèine acted in a similar manner, though less intensely. Pilocarpine, however, when introduced into the blood, increased the rate of flow through the kidney in a degree sufficient of itself to explain the accelerated rate of secretion; on the other hand, strychnine reduced the rate and the secretion in proportion to the diminished speed of blood-flow.

Certain syntheses had also been effected in the kidney; thus

from benzoic acid and glycol in the blood hippuric acid was formed after flowing through the kidneys. This result, however, had been achieved long before. In like manner from phenol and sodium sulphate were produced phenol sulphate. The blood corpuscles were not found essential for effecting these syntheses, though oxygen in the blood was indispensable.

We are inclined to lay some stress on these results, not alone for their inherent worth, but as tending to weaken faith in those mechanical views of physiology which now are somewhat prevalent. In a former number we called attention to Adami's investigations, from which it appeared that rate of flow and not blood-pressure was of the greater importance in determining the work of the Malpighian corpuscles.

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#### ANOTHER CASE OF ACCOUCHEMENT DURING HYPNOTISM.

M. Mesnet recently reported an interesting case to the French Academy of Medicine (*La Semaine Médicale*, 13th July, 1887). The patient was a young primipara, aged 22, from early youth easily hypnotisable. In the early stages of labor she bore her pains very impatiently; but when hypnotised, her sufferings ceased and labor went on without a murmur. She said "she felt the contractions coming, but did not suffer—she felt very well in that state." As the pains intensified she became uneasy, and during the expulsion period seemed to suffer greatly. Her cries, gestures, attitude and movements were the same as if she had been awake and conscious. Labor was normal, lasting six hours; delivery was easy, the uterus contracted well, no hemorrhage. She was wakened up half an hour after the termination of labor, and the disappearance of her abdominal tumor was the first hint she had that her confinement was over. Though she had seemed to feel the last expulsive pains so acutely, she retained no recollection of them whatever, and remembered nothing from the time she was hypnotised. This case affords a new and remarkable illustration of the effect of hypnotism upon the memory. While hypnotised she spoke freely, described her sensations, and during the last hour complained bitterly of pain; yet when awakened she remembered nothing. M. Mesnet says

that troubles of memory invariably occur in the series of hypnotic phenomena, and that consequently grave medico-legal questions might sometimes arise, for under certain circumstances child-substitution at the time of birth might readily be effected without the knowledge of the mother. He thinks that hypnotism can never become a general procedure in the practice of midwifery, for the state of the hypnotic individual is pathological, just as the hysterical or epileptic, and some dynamic functional or organic trouble may always be ascertained.

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### CANADIAN MEDICAL ASSOCIATION.

The twentieth annual meeting of the Canadian Medical Association, which takes place in Hamilton on the 31st of August and the 1st of September, promises to be one of more than ordinary interest. The following gentlemen will lead the discussions in the various subjects :

Dr. Grasett, Toronto. Surgery—Subject, “Obstructed Urinary Outflow.”

Dr. McPhedran, Toronto. Medicine—Subject, “Empyema.”

Dr. Eccles, London. Obstetrics—Subject, “Subinvolution of the Uterus.”

Dr. Stewart, Montreal. Therapeutics—Subject, “The Present State of Cardiac Therapeutics.”

The following papers are promised up to the present time :—

1. Dr. William Osler, Philadelphia—  
“The Cardiac Relations of Chorea.”
2. T. Wesley Mills, Montreal—  
“A Physiological Basis for an Improved Cardiac Pathology.”
3. Dr. Archibald Malloch, Hamilton—  
“Report on Twenty Cases of Tracheotomy in Diphtheritic Croup.”
4. William Gardner, Montreal—  
“A Year’s Work in Abdominal Surgery.”
5. Dr. Ryerson, Toronto—  
“Thalamic Epilepsy.”
6. Dr. F. Buller, Montreal—  
“Headaches in connection with certain Ocular Defects.”

7. Dr. Stirling, Montreal—  
 "A few points in the Etiology and Treatment of Conjunctivitis."
8. Dr. W. H. B. Aikins, Toronto—  
 "Detection of Typhoid Bacilli in Drinking Water."
9. Dr. R. L. MacDonnell, Montreal—  
 "Loss of Knee-jerk in Diphtheria."  
 "Aortic Aneurism—(a) Hitherto Unobserved Symptom.  
 (b) The Results of the Treatment by Iodide  
 of Potassium."
10. Dr. J. C. Cameron, Montreal—  
 "Some Practical Points in Aseptic Midwifery."

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AN ABDOMINAL PROTECTOR.—Dr. Codd, Surgeon Infantry School, Winnipeg, has devised what he calls an "abdominal protector," which is especially intended to be worn by mounted men making long journeys during the severe winters experienced in our North-West Territories. It is made of finely dressed lamb or sheepskin, and is to be worn inside the trousers and attached to the body by a waist-belt and thigh straps, being intended to protect the genitals as well as the lower portion of the abdomen. Having been furnished with a cut of the "protector," we feel safe in recommending it, especially to military men, and we have no doubt it will soon receive the attention and approval of the Militia Department.

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## Correspondence.

### EDUCATION AND MEDICAL EDUCATION.

To the Editors of the CANADA MEDICAL AND SURGICAL JOURNAL.

DEAR SIRS,—Many of the questions raised by "Observer" in his letter in your June number deserve serious consideration. Certainly "Observer" finds some high authorities on educational matters sharing his views. Prof. Farlow of Harvard, discussing the mental condition of students when they enter college, found it such that he makes the following strong statement: "The college instructor must still regard the student who studies under him as a *school-boy whose capacity for observing and investigating natural objects has been blinded by a one-sided course of instruction at school.*"

Again, a well-known biologist, Prof. O. C. Whitman, in an address before the American Society of Naturalists, remarks: "Our higher institutions of learning represent the creative and

directive factor ; and to them we must look, first of all, for the *supply of competent teachers*, and, in the second place, for the creation of that *healthy public sentiment* which will give support and protection to teachers and school-boards in carrying out desired reforms." (Italics mine.) "Colleges have their indispensable function—to teach elements. *But they can only highly serve us when they aim not to drill, but to create.* Any organization trained to provide merely what the uninstructed public ask for can never fulfil its highest function, which is to *create and direct*, not to adapt and conform."

I hope that ere long there may be such a medical school or schools in this country as can and will do this.

In an address delivered in May of the current year before the Anatomical Society, Prof. Humphrey said : "We are met together for the purpose of elevating the science of human anatomy, and placing, or endeavoring to place, the science of human anatomy on a level with, and in its proper relation to, the other branches of natural science, which I think it *has not for some time held, and which relative decadence is greatly to be attributed to the fact that it has not advanced pari passu with them.* Since the time of Hunter and Cruickshank, and Astley-Cooper and the Bells, human anatomy has lacked its proper interest, and has not held its own with the other quickly progressing branches of natural science. Hence it has come to be regarded as a merely practical subject, and its study to be merely a process of piling fact upon fact without due regard to the purport of the facts and the suggestions to which they should give rise." Such utterances from an eminent professor of anatomy of almost fifty years standing should commend themselves to all teachers of this subject ; and we must cordially agree with Professor Humphrey when he further states that "one of the greatest, perhaps the greatest, of defects in medical education, I might say in all education more or less, but in medical education especially, is the *heaping upon and oppressing the student's mind with a load of facts which he neither digests nor appropriates, and which he therefore does not retain.*" (Italics mine.)

To accomplish this, in addition to better teaching, there must also be for this and all other subjects a lengthening of the session.

A single month added *at once* would be a great improvement on the present crush and cram, with its consequent reaction and numerous other evils. Certainly, among other improvements, it would be very desirable if that portion of time which a student wastes in gossip and ill-directed or undirected work in the dissecting room could be saved for other subjects which are on short allowance as to practical work. The subject is large and one of vital importance. The views of Professors Farlow, Whitman, Humphrey and of "Observer" appeal to all thoughtful medical men; for it is to the profession as a whole that we must look for that sort of improvement that will be certain and deep, because springing from a profound conviction of its real importance, uninfluenced by any local, temporary or time-serving policy. I write to show that "Observer" is not alone, but in his views has the sympathy of the best thinkers and most successful teachers in all departments. That changes are needed and must come soon is the opinion of

Yours sincerely,

ANOTHER OBSERVER.

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### Medical Items.

—Mr. Savory has been re-elected for the third time President of the Royal College of Surgeons, England.

—Active steps are being taken to establish a Therapeutical Society in London. Strange that the unwise words of a great man should have been the means whereby this wise suggestion should have its birth. Sir William Gull, at the late meeting of the British Council for Registration, denounced what he was pleased to call the "drug" treatment of disease, and as result we are likely to have a special society from whose work we have no doubt great benefits will come.

—The English committee appointed to investigate into Pasteur's work on the prevention of hydrophobia have reported very favorably. They believe that it is certain that the inoculations prevented the occurrence of hydrophobia in a large proportion of those who underwent the operations. This report is hailed with great rejoicing by the many friends of the distinguished savant. Despite the great names appended to the English report, the question is far from being settled. This settlement can only be arrived at through long-continued and laborious researches.