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CANADA

MEDICAL & SURGICAL JOURNAL

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Original Communications.

CRIME AND RESPONSIBILITY.

BY DANIEL CLARK, M.D.,

Medical Superintendent of the Asylum for the Insane, Toronto.

(Read before the Canadian Medical Association, at Quebec, August, 1886.)

Crime has been defined to be a violation of human law or the law of the state ; sin, a violation of the Divine law or the precepts of religion : vice is opposite to virtue, and is an offence against morality, or a violation of the moral law. Crime is especially the object of jurisprudence ; vice, of ethics ; and sin, of theology.

Responsibility is the capacity of discharging an obligation, or ability to be accountable for actions.

We must bear these definitions in mind in discussing the relation of crime to responsibility. Some classes of humanity must be held to be exempt from responsibility. 1st, The child of immature age. 2nd, The idiot with arrested brain-growth and dwarfed mental development. 3rd, The imbecile in whom the mental powers exist, but in a feeble and circumscribed condition. 4th, Various classes of the insane. 5th, The epileptic (not insane), when fits are coming on or leaving. 6th, The dipsomaniacal in the frenzy of drunkenness.

The two last classes are held in law to be responsible, whether conscious of their acts and the quality of them or not. Law says it cannot distinguish between the knowing act of an epileptic and that done unconsciously. It also says the drinking maniac is in that condition because of his voluntary act of drink-

ing ; hence his accountability. The law holds that all insane are irresponsible, but bases its definition of insanity on the capacity of a person to know the distinction between right and wrong in the abstract. This fulcrum mind-test was laid down by the English judges in the McNaughton case (1843). In carrying out the law, judges never give a personal opinion. To them the accepted *lex scripta* is gospel truth, as far as the verdict and execution of law are concerned. They do not question the received decisions, authorities and precedents of their legal ancestry. To them, it is what the law commands, which is supposed to be founded on justice in its fundamental principles. Were a judge to act on experience and thereby be able to alter at will his instructions to the jury against what had been decided by courts no more competent than himself, he would fear for the stability of the judiciary. We need no other example in this particular than that already mentioned. To make a knowledge of right and wrong the crucial test of sanity has wrought untold mischief in the administration of law. In fact, it is now acknowledged by eminent jurists, such as Sir James Fitzjames Stephens, in his works on "Criminal Law," and by Lord Chief-Justice Cockburn, in his opinions given before a parliamentary committee, that such a rule of law is misleading and faulty. The consequence has been that in recent works on medical jurisprudence a new element has been introduced into the legal definition. The ethical test is not given up, but there is added such a clause as, "the law allows that a man who, by reason of mental disease, is prevented from controlling his own conduct, is not responsible for what he does." (*Stephens' Relation of Madness Crime.*) It is added, "No doubt there are cases in which madness interferes with the power of self-control, and so leaves the sufferer at the mercy of any temptation to which he may be exposed ; and if this can be shown to be the case, I think the sufferer ought to be excused." (*Stephens.*)

In 1874, when Russell Gurney's Bill was before the English Parliament, a clause embodying the recognized fact that the moral test was very fallacious, and that a statement should be introduced accepting as proof of unsoundness of mind or lack of

responsibility such brain disease as destroyed self-control. As might have been expected, the law officers of the Crown recommended its rejection, and it was shelved accordingly. When this proposed amendment was before the committee of the House, Lord Chief-Justice Cockburn cordially accepted this amendment and significantly said: "The pathology of disease abundantly establishes there are forms of mental disease in which, though the patient is quite aware he is about to do wrong, the will becomes overpowered by the force of irresistible impulse. So the power of self-control, when destroyed or suspended by mental disease, becomes, I think, an essential element in irresponsibility." At the same time, Sir James Stephens suggested that in such cases a jury should be allowed to bring in one of three verdicts, viz.: 1st, Guilty. 2nd, Guilty, but the power of self-control was diminished by insanity. 3rd, Not guilty on the ground of insanity.

These were only the opinions of distinguished men, and not being statutory, the old law is not changed. The judicial instructions to juries in rendering verdicts remain as before, and even Chief-Justice Cockburn was obliged to charge juries according to the written law, although he knew how inconsistent with physical fact the law is. He was obliged to abide by the traditions of the legal fathers. Hanging, under the old definition, is still going on, in spite of the flood of knowledge which has been poured upon the subject by psychologists during the last forty years, since the moral test formula became law. The more enlightened opinions of eminent jurists must ultimately have weight in the British Empire and in the United States, and will tend to affect legislation in the right direction. This is notably the case in the neighboring Republic. Newly enacted penal codes in some of the States have, in addition to the moral definition of 1843, some form of recognition of loss of self-control by virtue of disease.

From these general statements it will be seen how widely law and medicine differ on this radical and all-important matter. The medical test for insanity is based on the presence of physical disease and its abnormal results on conduct: the legal test is

metaphysical and theoretical. The medical diagnosis is based on pathology and experience: the legal ignores any physical condition which does not affect the moral attributes. The legal cares nothing for impulse, loss of will power, or sudden change of character and conduct without motive or from childish incentives: medicine takes in the whole man in all his multifarious interests. The former tests by the ambiguous notion of *right* and *wrong*, but the latter by the *will not* or *can not* of each individual. The one deals with an abstract idea: the other in what is found every day in the wards of any lunatic asylum. Law adheres to tradition and the fiat of statutes: medicine points to the facts of clinical experience and practical knowledge. Legal *dicta* permit a counsel and judge to instruct a jury both as to law and facts, both as to responsibility and insanity; but a medical witness—whatever his experience and skill may be—is not allowed to relate them to the jury, although they may be of intrinsic value in teaching and enlightening those in whose verdict lies the destiny of a prisoner. The man, of all others, who should know whereof he asserts, must be “a dumb dog,” while the man whose experience may be of the most crude kind is legally allowed to appeal, to instruct and direct a jury in the most abstruse of all medico-legal subjects. The writer, not long since, heard at a state trial a well-known Canadian barrister and Queen’s counsel instruct a jury that any ordinary man was as able to detect any form of insanity as could an expert. The absurdity of such a statement might be seen any day by turning loose into the wards of a strange asylum this counsel, a jury, and asylum medical officers, to select the sane from the insane as they were presented. A short experience in this discriminating work might not convince, but it would certainly give ground for legal reflection and possibly prevent a repetition of such a silly statement, unless “our learned friend” had passed the age of conversion. Perhaps he should not be blamed too much, as his text-books make the same assertion. It would be rank heresy for him to fly in the face of accepted authority, even were he convinced of its absurdity.

In reading the history of jurisprudence, it is satisfactory to

observe that the broad minds of the great jurists and legislators are groping towards the light. Let us take the question under discussion, for example.

During last century, the definition laid down by Lord Coke was accepted as law. In this it was held that to be insane meant to be totally devoid of memory and understanding when an insane act was committed. If this negative condition did not exist, such were responsible. It need scarcely be said to-day that no insanity ever existed to which this definition would apply.

In the beginning of this century it was held that insanity should be tested on the basis of the possession of delusions. Of course the absence of them would imply sanity, yet we know many insane have no delusions. This phase of legal thought was followed by the crucial test that any person who has the capacity "to know the *nature* and *quality* of the act he was doing" must be sane, and responsible. Many insane are quite capable of knowing as described. This moral test is absurd in itself. What right and wrong are in the abstract have not been determined. Law is one thing and ethics may be quite another. As one item of the curiosity of law penalty it may be noticed that at the beginning of this century more than 200 offences, from robbing hen-roosts to treason and murder, were punishable by death in the British Isles. In 1816, no less than 58 persons were under sentence of death for such offences, and one was a child under ten years of age, who could neither read nor write. As the years rolled by, it became evident that punishment and crime were unequally associated, and law began to adopt a sliding scale in the administration of justice more in keeping with the quality of the crime. Any one who will take the trouble to wade through the evidence on which the verdicts of those days were based, will see it fared badly with the poor lunatics. The court suspended the insane, in many instances, instead of the judgment. The putting the life of the assumed insane in one scale and then placing these ever-changing conditions of law in the other, have been, is now, and apparently will be the means of putting many innocents to death. Definitions are mischievous

when they bind down judges, juries, and legal evidence to certain lines of opinion, from which there is no deviation permitted. The result, so far, has been that the pathway of legal record in the past is full of the victims of crude definitions and metaphysical subtleties.

The word *insanity* is a relative term, and means a disease. It is always a brain disease, with gradations of severity. As we cannot tell where the colors of the rainbow blend, nor can we point out where the steel grey of the dawn commenced, nor where the last glow departs of the closing day, neither can we define when sanity ceases and insanity begins. There is a border-land which lies in the shadows, and no one can penetrate it with a pencil of light. Reason passes into it, possibly unconsciously, or, it may be, with dread forebodings, and emerges from the ominous cloud into the positive region of mental alienation. The foe comes stealthily, but surely, and ties the captive to his chariot-wheel. There is at this stage no mistake as to the mind trouble. It has assumed a definite form in its prominent features, which are modified by the personal characteristics of each individual: hence no general definition of insanity can ever be given. No two people are alike in any one particular, so mental manifestations differ. In judging the insane, the temperament, peculiarities, education, habits, surroundings and apparent motives must always be taken into account. Does the man act naturally? Is he himself? Is his unusual conduct brought about by anything but brain disease? We must measure all men by their own half-bushels, and not by an arbitrary standard of capacity. The ascending series of intelligence seen in the normal creation have a counterpart in insanity. If we take an intellectual general test and apply it to each class of the insane, we will find at the lowest point the harmless dement in whom is little mental capacity beyond that found in the helpless child. Such have little vitality beyond organic life. At the other end of the series are the 'cute, clever, intelligent insane, who puzzle even experts in their most searching examinations. Among this higher class are found the insane over whom courts sit in judgment, and concerning whom juries give strange ver-

dicts. The stupid, the boisterous maniac, and the suicidal and religious melancholics, are easily known; but the clever possessor of delusions which he carefully hides, and which may be the mainspring of his general conduct, needs to be carefully examined, watched and studied before the most experienced can pronounce definite judgment and determine responsibility. These delusions may be of a harmless kind, and control or may not impel overt acts, or they may be mainsprings to urge to insane manifestations. Of course, we all have delusions of some kind, but the judgments of the sane give them proper value. The insane accept them as facts, not fancies. There is a large class of individuals between the feeble-minded and the normal section of the community, and *animalism* is the predominating feature of such beings. The intellect is developed to such a degree that they may be tolerable citizens as far as intelligence is concerned. They are, however, low in the scale, and are known to be such by even ordinary observers. The cunning, selfish instincts and impulses found in animals are strongly dominant in them. They set lightly on law or any of its restrictions so long as they can avoid detection. With such, it is not a question of morals, but of punishment. The sense of right and wrong is feebly developed, and the moral judgments are seldom exercised. Conscience is either not present, or, at best, weak and functionless, and gives little trouble. It is not an ethical nature blunted by repetitions of evil, but a faculty never brought to maturity. Such have been called "moral idiots." No crime, however dark and horrible, will cause them to lose a meal or a night's rest. Like brutes they live, and like brutes they die. If they have not much mental activity, they may be harmless in a community from sheer *inertia*, and are never heard of but as *ne'er-do-weels*; but if the brutal instincts goad on the intelligence, we have developed a low class of criminals for whom there is little hope. They crop up as the chronic vagrant, tramp, petty thief, burglar, or, in short, the inveterably depraved all-around character. The whole being is saturated with laziness and cupidity, through which a living can be procured at the expense of the honest workers of society.

The fact is, all intelligent creation is like a pyramid. The first section from the base represents the animal instincts of man and beast. The next section may represent the higher intelligence, not instinctive ; it is much narrower in its scope. The section including the apex might typify the moral nature, and represents a much narrower and higher class of beings. In humanity, the building up of our nature is in the following order from birth : 1st, Animal instincts. 2nd, Intellectual powers. 3rd. Moral conceptions. In any or all of these we may have arrested development. When all are possessed in a normal degree, the loss of each section of the prism is in the inverse order of building up. This is notably seen in the acquisition of depraved habits and in insanity.

Now, in the building up of this sympathetic whole from childhood to adult life, we may find the growth arrested at any of the stages. If development should be checked in any stage of youth, only the animal exists : hence the idiot and imbecile. If arrested in the progress of intellectual growth, we have feeble-mindedness and dwarfed knowledge. If atrophy takes place in the last section of building a full manhood, then have we intelligence, but no moral nature, or, at best, only the rudiments of one.

No amount of metaphysical subtlety can reason away the physical fact that our whole entity of body, intellect, will, affections, emotions and morals, are only manifestations of one organic whole, and are interdependent upon one another in many relations of this unity. The genesis of our conduct is largely dominated over and affected by their development, their relative power, and their controlling activity. The elements of our existence have in them the potentialities of the coming man. Habit, education, and favorable surroundings do direct these primary forces for good or evil, but they never can obliterate the characteristic features which make us distinct from one another. Our individuality is born with us, and goes with us to our graves. A very little change in the relation of our constituent elements of character and of primal nature does alter very much individual peculiarities, just as a very little change in chemical elements brings about radical differences in material

substances. The old landmarks, however, remain unchanged, and must, in the nature of things, so continue. No two physical forms or faces of humanity are akin; no two brains are alike; and no two minds are counterparts of one another, except in a generic sense. The primal elements are varied, and the growth of brain and mind are different in each person. The immature brain of a child may be fully developed into the mature and complex brain of manhood, but the attempt to improve a partially grown brain, such as is seen in the feeble-minded, is well-nigh hopeless. The juvenile brain grows, and mentality with it, in a corresponding ratio, so that an equation might be made between the two. A dwarfed brain has only a mental scope equal to the brain.

The child is judged according to its mental capacity, so ought the savage and the feeble-minded to be. It is not by years we should measure mind-power, but by the standard of the ordinary intelligence of the ordinary man. There are children wise beyond their years, and there are men with childish minds.

The brains of the lower forms of humanity and of the higher beasts come close together in structure and shape. The natures of both such men and beasts have much in common. Both have intelligence and reasoning power, but there is no evidence that they have a moral sense, or if so, it must be in a rudimentary degree. They have no contrition for acts. Punishment, not compunction, restrains them. The idiot has not even the animal intelligence. The imbecile is a step higher in the plane of instinct and knowing, but is little, if any, higher in these than a dog, elephant, or chimpanzee, and is held not to be accountable because of mental deprivations. The feeble-minded approach more nearly to the normal man, but are lacking in keenness of judgment, the conceptive faculty, and mental concentration. Such are either very childish and harmless, or show viciousness or many forms of depraved propensity. The criminal and accountable, in the next stage, manifest themselves in the nature, but at the zero of the scale. They have no keen appreciation of the rights of others. Many of them are children with grown bodies, just as we find in the habits, tastes and mental scope of

the untutored savage. The immature brains of a child, a barbarian, and the weak-minded produce analogous mental phenomena. It is to be remembered that there can be no responsibility where there is no moral nature, and there can be no moral nature where there is little or no intellect. The necessity of a knowledge and appreciation of our relation to law and of the consequences flowing from its infraction may exist without responsibility. To simply know is one thing, but to be able to determine and set in action reasonable volitions is quite another.

These statements are made to help to an appreciation of another class, which can be placed between the feeble-minded and a full-developed man. We find a large class of the community who have, in a low degree, judgment, discretion, common and moral sense. From this class comes the vicious and low criminal. Reference is not here made to those who become so by association, example, and habit, but to those who are congenitally weak in all the necessary attributes of a well-ordered humanity. They start life handicapped with low cunning, inordinate acquisitiveness, selfishness, cruelty, low mental powers, and lack of a moral sense. All of these deterrents are seen in a lower plane in the brute creation. To prey on the public, to do no work for a livelihood, to indulge in petty larceny, to revel in the mere performance of wickedness for the love of it, whether sensualistic or destructive—in short, to indulge in all depraved tastes and vices: never to know practically what is meant by the stings of conscience. A love of wrong-doing is an inborn and inbred condition in which they take delight. As a matter of fact, the responsibility of such is small, measured by any rule of ethics, and it is a serious matter to consider if such criminals should be incarcerated for life when they become chronics. They should be made to earn an honest living, not merely as a penalty for crime, but as a charity towards the vicious, and as a protection to society against their ravages. Such ordinarily spend most of their time in prison because of repeated offences, and are let out of durance intermittently, only to prey on society, to educate others to follow their example, and to leave behind them a criminal progeny. The low criminal, by oft convictions

and repeated imprisonments, becomes an incurable law-breaker, and should be treated as incorrigible. Experience shows they are such, and being so, have forfeited all right to liberty and personal consideration beyond kind treatment and forbearance, based on industrious habits and good conduct.

It is easily to be understood, then, that in this next upwards stratum is found the larger number of our ignorant, depraved, lazy, bestial criminals and insane. Their cunning will make them sham religion when it suits their purpose, their instability makes them yield readily to temptation, their *animalism* makes them the sport of their passions, their love of ease makes them indulge in the luxury of vagrancy or petty larceny, their low tastes make them victims of strong drink and the seekers of like associations, and their gregarious instincts cause them to form combinations which threaten to disturb the foundations of society.

In view of these facts, it is one of the great social problems of to-day to determine, in equity, how much conduct is influenced by natural and irresistible qualities, and how much is modified by immediate and proximate external causes and circumstances, or wherein our actions and modes of thought are influenced and directed by our natural aptitudes and propensities. As far as we can know these factors, they should be taken into account in estimating the culpability of guilt. Law is based on abstractions, and punishes absolutely according to act and not according to turpitude. The man who commits a homicide in the frenzy of drunkenness has no consideration shown to him in his sentence, yet culpability may depend largely on circumstances. In one case, the passion for drink may have come on from a vicious and acquired habit, therefore it is blameable; in another, it may be a dipsomania by reason of hereditary transmission, from which there may be no manumission. It is a heritage of uncontrollable impulse, which is intermittent in its invasion and departure. In both classes the penalty is identical.

A forgery is committed by a man whose whole life record has been that of honesty and truthfulness, but who, by stress of financial pressure, has suddenly fallen from his high estate.

The trend of his whole career has been in the direction of virtue and honest living, but with commercial disaster staring him in the face, he commits a felony, which he hopes to rectify before discovery. His whole moral nature revolts against the act, but his sensitive fear of men and of its effects on his family and himself is a motive too strong to resist.

Another man has a mean, grasping, selfish nature. He has been naturally so from childhood. He has cultivated all evil influences, and has sought environments calculated to encourage their growth and deepen their intensity. Because of these tendencies, natural and acquired, he forges and cheats simply to possess and increase his gains, based on the pure love of greed.

The act in both examples is the same, but in their comparative guilt they are far asunder. In the one, it is a sudden impulse to deviate from the well-beaten track of a life-long rectitude; in the other, it is the natural outcome of an ingrained vicious nature. The responsibility in both cases is scarcely to be compared, but the penalty is equal. The motives are not taken into account. In fact, the man of heretofore good reputation is held to be the greatest culprit, although it was only an incident in his life, and in the other the outcome of a bad record.

SUMMARY.

1st, The natural history of crime shows that brains of chronic criminals deviate from the normal type and approach those of the lower creation.

2nd, That many such are as impotent to restrain themselves from crime as the insane.

3rd, That immoral sense may be hidden from expediency by the cunning seen even in the brutes, until evoked by circumstances.

4th, No man can shake himself free from the physical surroundings in which he is encased.

5th, Crime is an ethical subject of study outside of its penal relations.

6th, Insanity and responsibility may coexist.

7th, Some insane can make competent wills, because rational.

8th, The monomaniac may be responsible should he do acts not in the line of his delusion, and which are not influenced thereby.

9th, Many insane are influenced in their conduct by hopes of reward or fear of punishment in the same way as the sane: the rudiments of free-will remain.

10th, Many insane have correct ideas in respect to right and wrong both in the abstract and concrete.

11th, Many insane have power to withstand being influenced even by their delusions.

INHIBITION OF THE HEART IN DIPHTHERIA.

BY J. H. GARDINER, M.D., LONDON, ONT.

(Read before the Canadian Medical Association, at Quebec, August, 1886.)

The tonsils, pharynx, œsophagus, stomach, part of the intestines, larynx, trachea, lungs and heart derive their chief nervous supply from the pneumogastric. It is true, however, that this is scarcely a simple nerve, seeing that it receives such large accessions from the sympathetic and spinal accessory. Besides a full anastomosis with many of the special facial nerves, as well as with the general spinal nervous system, in that so many important vital parts are supplied from the same source, one need not be surprised that a very slight irritation to any one will give rise to symptoms far graver than what the apparent cause would lead us to expect. Tickling the throat with a feather, or bringing any nauseous substance into the mouth, induces vomiting. A slight sore throat causes headache, earache, backache, sickness at the stomach, and a horrible feeling of malaise. And any one who has suffered from quinsy or diphtheria will testify to the deathly feeling of sickness and exhaustion which these troubles give rise to. And most medical men of experience in the treatment of diphtheria will have met with cases similar to the following, or with cases where death supervened even more suddenly in persons where the disease appeared conquered and convalescence was apparently fast progressing:

CASE I.—Miss A., aged 14, a beautiful girl, with a first-class family and personal history, was, on the 4th day of Feb., 1884,

attacked with diphtheria. The case was a severe one, and vomiting, with a partial loss of voice, marked it from the commencement. There was also a good deal of sloughing of the throat, and the urine was loaded with albumen. The symptoms continued violent for the first four days, and then the case began to do well. Pulse ranged from 70 to 80. Temperature normal. Vomiting slight. Slough came away and membrane disappeared, as also did the albumen in the urine. The appetite improved, and everything pointed to a speedy recovery. On the morning of the 12th—*i.e.*, on the eighth day of the disease—I was struck with the dusky appearance of the skin. The temperature was $97\frac{1}{2}^{\circ}$, and the pulse 55. In the evening the temperature remained the same; pulse 48, but impulse strong. During the day, patient vomited once. Was quite cheerful, however; said she felt better, and wanted to get out to the dining-room. On the morning of the 13th, patient says she is better. Vomited once through the night. A small herpetic rash on upper lip, at left angle. Skin dusky. Pulse 40, very feeble. Heart-beat regular and well-marked. At 2 p.m., pulse 38; countenance anxious; patient cheerful as to recovery; said she felt quite well, but weak. In the evening, pulse very feeble, and only 32. Patient vomited a good deal during the day. Thirsty. Site of slough on throat looks grey. No membrane. Temperature 97° .

Feb. 14th.—Had a restless night, but friends thought her better. Cheerful, but very weak. Could not make out the pulse at the wrist. Heart beats 38. Vomits nearly everything but little pieces of ice. Died from syncope at 2 p.m.

CASE II.—Miss H., aged 5 years; previous health good; family history good. Attacked with diphtheria on the 20th of June, 1886. Case mild during first week, and membrane had almost disappeared.

June 27th.—Pulse 60; temperature normal; vomited once or twice. *28th*—Pulse 50 in the morning and 45 at night; vomiting. *29th*—Pulse 40, fairly strong; thirsty, and vomits now and then; herpetic eruption on face; in the evening, pulse 36; temperature $97\frac{1}{2}^{\circ}$. *30th*—Pulse 32, soft and compressible,

and father says that he counted pulse at 5 a.m. and found it only 28 ; temperature 97° ; patient restless, but intellect clear. Vomiting.

July 1st.—Pulse very feeble, 40 in morning and 45 evening.
2nd—Patient died in fainting fit at 4 a.m.

I cannot say what an autopsy would reveal in cases like these. I would suppose that there would be heart-clot, but this would not explain all the symptoms, or the same slow pulse would be observed in other cases of death from this cause. I have not noted such in cases where a post-mortem proved such formation. One of these two cases it must be : 1st, Paralysis of the sympathetic ; 2nd, Nervous influence on the heart through the pneumogastric, either direct or reflex. That the local paresis following some cases of diphtheria is due to a disturbance of the nutrition of the nerves through the sympathetic, one would infer on account of the insidious manner of its advent, the extent to which it spreads, and the slowness of recovery. But this, although it would explain the vomiting and prostration, will not explain the retardation of the heart. The experiments of Weber, Bernard and other physiologists show how the heart's action may be retarded by galvanization of the pneumogastric. They also demonstrate that it is in branches derived from the spinal accessory that this power chiefly lies. Now the pharyngeal, recurrent laryngeal and cardiac branches of the pneumogastric receive large accessions from the spinal accessory, and the tonsils, pharynx and upper part of the œsophagus are supplied from the pharyngeal nerve. Hence the peripheral ends of this nerve are subject to the direct local irritation of the disease. And from this a reflex action may be transmitted to the brain, or a peculiar irritation may be transmitted directly to the heart on account of the close relations existing between the heart and the affected parts. But if it is true that this irritation of the nerves is the cause of the inhibition, why do all cases of diphtheria or throat affections not present like symptoms ? This I will answer by asking another question : Why are all wounds not followed by tetanus ? You will answer that it is only when the nerves are affected in a certain manner, and the system is

in a proper condition for the spread of the disorder from the periphery to the centre, that this dreaded disease supervenes. So a peculiar condition of the organization is necessary for a diphtheritic irritation of the pharyngeal nerves to cause inhibition of the heart.

Correspondence.

VIENNA, Sept. 6th, 1886.

To the Editor of the CANADA MEDICAL & SURGICAL JOURNAL.

DEAR SIR,—In these days of widely extended literary research and keen observation, it is exceedingly difficult to supply anything to the reading medical public that is not, in one sense or another, old; at the risk, however, of repeating to many what they through journals already know, I propose, in this letter, briefly to describe a few of the newer operations performed here.

The first I would mention is the partial amputation of the foot, after Mikulicz of Krakau, in which the heel is removed and the remaining part of the foot is, as it were, grafted on the leg in the straight position, tenotomy being performed on the flexor tendons of the toes, so permitting them to turn forward, forming a short foot, while the body of the foot makes up the deficiency in the length of the amputated limb. This operation is obviously suited only to a particular class of cases—namely, those in which disease is confined to the os calcis, astragalus, and, perhaps, a small part of tibia or fibula. In Germany and Austria this operation has been on its trial for some four or five years, but from its limited applicability, the number of cases operated upon must be comparatively small. The statistics, I believe, have not yet been gathered. Although Mikulicz himself has performed it frequently with great success, till statistics have been fully investigated it is not fair to attempt an estimate of the value to be attached to the operation.

From the nature of the cases to which it may be applied, it is evident that frequent deviations from a typical operation will be necessary. Such, however, may be performed in the following way: The limb being raised to a convenient height, and held firmly by an assistant, the point of the knife is entered, suppos-

ing the right foot to be operated upon, immediately behind the scaphoid tubercle, as in Chopart's operation; the incision, however, instead of being carried over the dorsum, is firmly carried directly across the sole of the foot to the opposite limit of Chopart's dorsal incision—namely, a thumb's-breadth behind the base of the fifth metatarsal bone. This incision strikes directly on the articulation between the os calcis and astragalus behind, and the scaphoid and cuboid in front; the joint is now opened by severing the ligaments on the sole and sides. The second or upper incision is carried firmly from the middle of one malleolus directly across the back of the ankle to a corresponding point on the opposite side. The upper and lower incisions are now united on each side by a straight lateral cut down to the bones. The ankle joint is disarticulated from behind, and now the free astragalus and os calcis are carefully removed from the soft parts in front; this is the only part of the operation where a serious mistake may be made. The anterior tibial artery being now the sole dependence of the foot for blood supply, a wound of that vessel, through rough or careless surgery, would ruin the operation. The articular surface of the tibia, with the malleoli, as also the corresponding cartilaginous surfaces of the scaphoid and cuboid having been removed by the saw, the two bony surfaces are brought together, care being taken that the foot be in the proper line; the scaphoid is pegged, nailed or wired to the tibia, drainage tubes inserted, the wound sewed up and antiseptically dressed, a starch, stiff muslin or plaster bandage is applied outside to give support.

This operation was very successfully performed here a few weeks ago by Dr. I. Salzer, assistant to Professor Billroth. In this case, the lower three inches of the fibula, with the associated soft parts, being diseased (tuberculosis), had to be removed; a sole flap was ingeniously retained on the foot to fill up the defect. The greatest difficulty in the operation in this case was the very free bleeding from this sole flap; in an ordinary case this, of course, would not occur, and it was, at least in this, far from satisfactory. It showed the very free supply of blood afforded to the foot by the anterior tibial artery. Tenotomy,

for the freeing of the toes, may be performed at the time of the operation, or a few weeks later, before the patient is able to get about on the new foot. The fact that this operation results in an inelegant bulging of the anterior soft parts at the point of union cannot be said to be a real objection to the procedure, which, theoretically at least, seems to be a valuable addition to conservative surgery.

Surgical works are rich in methods of reaching, for the purpose of ligation, most of the arteries of the human body. One vessel, however, seems to have been much neglected: the internal mammary is seldom mentioned in this connection, in spite of the fact that it lies so near the surface of a part so liable to injury as the front of the chest. Any one who has tried on the dead subject to ligate this artery between the costal cartilages knows what a work of chance it is. Let the chest be in constant respiratory movement, as in life, and the difficulty becomes practically insurmountable; yet we can easily see that a stab-wound in the chest may, on short notice, demand the tying of this vessel by any man in the medical profession. The following method is simple, easy, comparatively safe, and quickly performed: The artery lies about a finger's-breadth outside the sternal border; a longitudinal incision, with its centre at the above-mentioned point, is made on the costal cartilage; by this the integument fascia and perichondrium are divided. The integuments are now drawn aside by retractors, fully exposing the cartilage. Two transverse incisions are made in the perichondrium, so as to free half or three-quarters of an inch of that structure. This is now carefully stripped down from the sides by a raspatory, and the instrument carefully carried round between the perichondrium and cartilage, underneath the latter. A portion of the cartilage corresponding in extent to the freed surface is now cut through at both ends on the raspatory and gently lifted out, when the artery may be plainly seen lying between the perichondrium and pleura. The former is carefully scratched through with the point of a director, and the vessel ligated. This operation gives abundant room and a clear sight of the vessel, rendering the danger of injuring the pleura very slight in the hands of a careful surgeon.

J. H. D.

Hospital Reports.

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

*Dislocation and Fracture of Metatarsal Bones of both feet—
Immediate application of Plaster-of-Paris bandages—
Excellent result.* (Under the care of Dr. F. J. SHEPHERD.)

(Reported by DR. H. S. BIRKETT, House-Surgeon.)

E. Le J., aged 22, bricklayer, admitted 25th June, 1886, suffering from injuries to both feet. The same morning, whilst working on a scaffold, patient struck the roof of the house with a board which he was carrying, throwing him a little backwards; this caused him to step off the scaffolding, and he fell, alighting on his toes upon a heap of stones and dirt, a distance of 20 feet. Upon examination, the following was the condition of the feet:

Left Foot—Large painful swelling extending from external and internal malleoli behind, forwards to the metatarso-phalangeal articulations. Plantar arch not well marked, foot being rather flat. Slight foreshortening. Find the 1st, 3rd and 4th metatarsal bones dislocated upwards, backwards and inwards, the bases being distinctly felt beneath the skin, their prominence being obscured by the great swelling present.

Right Foot—Dorsum swollen moderately, and to same extent as left foot. Plantar arch lost; 2nd, 3rd and 4th metatarsal bones dislocated upwards, backwards and inwards, the bases being easily felt beneath the skin. Crepitus felt over the dislocated metatarsal bones of both feet.

Under ether, the dislocations were easily reduced, the fragments kept in position by pressure with absorbent cotton, and both feet put up in plaster-of-paris bandages.

Next day there was considerable pain and swelling of both feet, though the circulation and sensation was good, therefore a strip a quarter of an inch wide was removed from median line of both splints, which were then kept in position by bandages.

The progress of the case from this day until two weeks after exit (17th July), when patient returned to report himself, and on examination, has no pain or tenderness in feet; walks quite naturally.

Three Cases of Sciatica—Nerve-stretching—Cured.

(Reported by DR. H. S. BIRETT, House Surgeon.)

CASE I.—Under the care of Dr. F. J. SHEPHERD.

P. C., aged 40, maltster, admitted 21st June, 1886, complaining of pain in left thigh and leg. Last March, began to complain of a sharp, intermittent pain in left lumbar region, and extending down thigh and leg of the same side, brought on by exposure to varying temperatures which his occupation calls for. The attack was non-febrile. The pain was increased by exercise and lifting heavy weights, severe enough to prevent patient from sleeping, and affected his walking so that he has been lame ever since. Was compelled to give up work since attack set in. Muscles of thigh and leg have wasted very much. Treatment received was without any relief. Always healthy; no specific history; habits intemperate.

Present condition—Patient is a fairly well developed and healthy-looking man. Walks with a very marked limp in left leg, body being bent over to that side. Upon examination, left leg is found to be tender and painful along the course of the sciatic nerve and up its branches, extending downwards as far as the calf of the leg. This pain is increased by movement of the limb. Muscles soft, flabby, and much wasted, the thigh being three-quarters and the leg half an inch smaller than the right. Heart and lungs negative.

On the 23rd of June, patient was etherized and an incision two inches long made in upper third of thigh, posteriorly, bringing the belly of the biceps at once into view; this being drawn to one side, the sciatic nerve was then found, and stretched moderately firmly from above downwards and from below upwards. The wound was next irrigated with a solution of bichloride (1-1500), the edges brought together by a continuous catgut suture, and a medium-sized drainage-tube introduced into lower end of wound; dressed with iodoform gauze and jute pad. The wound was subsequently dressed on the 2nd of July, and the drainage-tube and sutures removed, the edges of the wound well united. No redness or inflammatory signs about incision, and on the 10th July patient left the hospital, the pain and ten-

derness in leg having completely left, his gait quite natural and without limping, and the wound perfectly healed. The temperature since the day of operation until patient's exit fluctuated between $97\frac{1}{2}^{\circ}$ and $98\frac{1}{2}^{\circ}$.

CASE II.—Under the care of Dr. G. E. FENWICK.

J. H., aged 24, carpenter, admitted 27th July, 1886, complaining of severe pain in the right leg. Five months ago took cold through exposure, followed the next day by severe, sharp; and intermittent pains in right buttock, extending downwards to the knee, of such severity as to cause the gluteal muscles to contract into a lump, and prevent the patient from sleeping. The pains were worse at night, and aggravated by exercise. Within the last three weeks the pain has extended to the toes, and thus caused a decided limp when walking. Has received no treatment. Has always enjoyed good health. Says that his mother suffers from the same complaint as he does.

Patient is a strong and healthy man. His gait is markedly affected, the right leg being flexed at an obtuse angle, so that he walks with a limp and the body bent to the right side. Upon examination, find tenderness along the whole course of the sciatic nerve, and not exaggerated at any particular spot. Movement of leg increases the pain; no wasting of the muscles.

On the 30th July, patient being etherized, a straight incision, two inches long, was made in upper third of the thigh, posteriorly. Through the incision the external edge of the biceps was found and the sciatic nerve brought into view. The nerve was well stretched both from above downwards and below upwards. The wound was well irrigated with bichloride solution (1-1500), a medium-sized drainage-tube introduced, edges of wound brought together by a continuous catgut suture, and dressings of iodoform gauze and jute applied.

The next day after the operation the patient complained of tingling and a sensation of numbness in the leg, extending anteriorly and posteriorly from the knee-joint downwards to the toes. The pain in the leg the night previously was rather severe; relieved by $\frac{1}{2}$ -grain of morphia hypodermically. Temperature,

99½°. Three days after the operation, the wound was dressed, when the following condition was noted: No redness or swelling about line of incision; edges well united; no purulent discharge; drainage-tube removed and dry dressings reapplied; temperature 98½°; tingling and numbness less marked; slight paresis of extensors of foot.

On the 4th of August the dressings were left off, the wound being completely healed, and the patient up and walking about with a decided improvement and without pain. On the 7th, patient was discharged, his gait being quite natural and unattended with pain. Paresis of the foot had almost disappeared.

CASE III.—Under the care of Dr. G. E. FENWICK.

N. McL., aged 24, farmer, admitted 15th July, 1886, complaining of pain in left hip and leg. Began two years ago with dull, intermittent pain in left buttock, extending down the back of the thigh to calf of leg. The pain is worse in the morning, and increased by exercise; often severe enough to prevent him from sleeping, and has caused him to walk lame. Has always been able to attend to his work. Has had liniment applied and hypodermic injections of morphia given, but without relief. Cause of complaint is assigned to exposure to cold and damp weather. Patient is a strong and healthy-looking man; has a slight limp in left leg when walking. Upon examination, the left leg is found to be very tender on pressure throughout the whole course of the sciatic nerve. The muscles of the affected leg are much wasted, the middle thirds of the thigh and leg being 1 and a ¼ inch respectively smaller than the right leg.

On the 20th July, patient being etherized, a straight incision 3 inches long was made in the middle third of the thigh, posteriorly; the sciatic nerve was brought into view by drawing the biceps aside, and then moderately stretched from below upwards and above downwards. Bichloride irrigation (1-1500) was used, medium-sized drainage-tube inserted, edges of wound brought together by non-continuous catgut suture, and dressings of iodoform gauze, and jute applied.

The dressings were removed four days after the operation,

when it was found that the wound had healed by first intention ; small amount of healthy pus soiled the first layer of gauze. Drainage-tube removed. Dry dressings reapplied. Temperature $98\frac{1}{2}^{\circ}$ to $99\frac{1}{2}^{\circ}$. On the 31st July patient was discharged from the hospital, being perfectly free from pain and walking quite naturally. The wound had completely closed. Temperature $98\frac{1}{2}^{\circ}$.

Reviews and Notices of Books.

Diseases of the Digestive Organs in Infancy and Childhood. With chapters on the Investigation of Disease and on the General Management of Children.—By LOUIS STARR, M.D., Clinical Professor of Diseases of Children in the Hospital of the University of Pennsylvania, &c. With colored plates and other illustrations. Philadelphia : P. Blakiston, Son & Co.

Always present with us, at certain seasons of the year, the digestive disturbances of children quite frequently assume a very marked predominance over all others. For their successful management they require a sufficient knowledge, not alone of the general clinical features of their various forms, but also of the general regulation of an infantile hygiene and therapeutics. It is a subject which necessarily occupies a considerable space in the text-books, but still, its importance is such that it is well deserving of being treated of in special monographs. The affections of the alimentary canal in all its parts are here treated of systematically, and markedly so from a clinical standpoint, the whole forming a very excellent guide and general book of reference in its own department. The directions upon general management are very appropriate, and are sure to prove useful to any young practitioner in search of an instructor in the regimen of the nursery. The book makes a handsome library volume, but we have looked in vain for the colored and other illustrations announced in the title-page,—the only specimens we have been able to find being a pair of tongues on one page, some verminous eggs on another, and a cut of a feeding-bottle at the end of the book !

The Healing of Arteries after Ligature in Man and Animals.—By J. COLLINS WARREN, M.D., Assistant Professor of Surgery, Harvard University; Surgeon to the Massachusetts General Hospital; Member American Surgical Association; Honorary Fellow Philadelphia Academy of Surgery. New York: Wm. Wood & Co.

In 1883 Dr. Warren read before the Boston Society of Medical Sciences a provisional report (which was afterwards published in pamphlet form) "On the Healing of Arteries after Ligature." The present volume represents the completed work of which the provisional report was a mere note. Dr. Warren is to be congratulated on the valuable character of his work, which is the result of years of careful experiment and patient investigation. According to Dr. Warren, the duration of the process of repair after the ligature of arteries is much longer than has been hitherto thought; for large arteries it ranges from three to six months. The nature of the healing process is very complicated. The author states that the healing of arteries takes place much as does repair of broken bones; provisional structures are thrown out "which seal the vessel, while the coats gradually elaborate those elements which are to form part of the future cicatrix." The greater part of this callus is derived from the middle coat, and when the callus disappears, there is a renewing cicatrix which closely resembles the three coats of the artery. Contrary to the usual opinion, the muscular cell was found to be an essential feature of the arterial cicatrix. No evidence was found in the experiments performed to justify the belief that arteries ever unite by first intention. The author does not believe that a human artery can be tied and heal without the formation of a thrombus, the latter protecting the wound and being a good culture medium for granulation cells in its deeper portions. With regard to the kind of ligature, it has latterly been thought necessary to employ a substance which can be easily absorbed, and catgut or other animal substance was used, but in reality this is of little consequence, for it is now known that silk and hempen ligatures can become either encysted or absorbed. When one end of the ligature is left uncut, or suppuration takes place, the

surrounding callus is imperfectly developed (for it follows the uncut ligature), and secondary hemorrhage is liable to take place. When the ligature is cut short, the callus surrounds and encysts it, and if no suppuration takes place, it is afterwards absorbed. The author says: "The prime object, therefore, to be obtained, is to employ such methods as will interfere as little as possible with the natural sequence of events which follow one another during the process of repair under the most favorable conditions; when the ends of the vessel are once sealed by the formation of an external ring of callus, and the rest of the wound is promptly healed by first intention, all danger of hemorrhage is avoided. The rules of antiseptic surgery supply us, therefore, with a more certain method of securing this desirable result than any other plan which up to the present time has been proposed."

We have here presented the principal points treated of in the book in a very superficial way, but we trust we have conveyed to the reader some slight idea of the great importance of the work accomplished by Dr. Collins Warren. The first chapter is devoted to a full and elaborate history of the ligature, then follow chapters on experiments on animals, observations on the human subject, and an account of the closure of the foetal vessels. At the end of the work is a full bibliography and a complete index. We heartily recommend this work to all scientific surgeons and others interested in surgical pathology, and we trust that Dr. Warren will not rest on his laurels, but devote his attention to the many other vexed points in surgical pathology.

A Manual of Midwifery.—By ALFRED LEWIS GALABIN, M.A., M.D., Obstetric Physician and Lecturer on Midwifery and the Diseases of Women to Guy's Hospital, &c. Illustrated with 227 wood engravings. Philadelphia: P. Blakiston, Son & Co.

One of the clinical manuals in course of publication by the Blakiston firm. It will be found that its teachings correspond with those of the best instructors of modern times. It contains a complete exposition of the science and art of midwifery compressed into such space as does not extend it beyond the reason-

able dimensions of a good manual or text-book. The style is particularly clear, and the explanations of the mechanism of labor in accordance with the various positions of the foetus are specially commendable. We think that when it becomes sufficiently known, Dr. Galabin's manual will become a favorite amongst all students and practitioners.

A Manual of Practical Therapeutics considered with reference to articles of the Materia Medica.
By EDWARD JOHN WARING, C.I.E., M.D., F.R.C.P., Lond.
Edited by DUDLEY W. BUXTON, M.D., B.S., Lond.,
M.R.C.P., &c. Fourth edition. Philadelphia: P. Blakiston, Son & Co.

This is another of the same series of manuals, and is a late edition of a well-known standard on therapeutics. The articles of the materia medica are arranged in alphabetical order, and accompanied by accurate descriptions of their several physiological actions and therapeutical uses, numerous references being given to authorities by whom these statements are substantiated. The compilation has been made with the greatest care, and the most modern views as to the value of the various drugs have evidently received careful attention. It can be highly recommended to all practitioners and students of medicine.

A Treatise on the Diseases of the Nervous System.
By WILLIAM A. HAMMOND, M.D., Professor of Diseases of the Mind and Nervous System in the New York Post-Graduate School and Hospital, &c. Eighth edition, with corrections and additions. New York. D. Appleton & Co.

The preface to the edition states that the work "has continued to receive approval, at home and abroad, to an extent beyond that ever given to any other work of like scope and objects published in any part of the world." Being one of the standard exponents of neurological teaching in America, it is always in demand, and we require only to draw attention to the issue of this new edition. One entirely new chapter has been added, which contains matter of considerable interest. It is entitled

“Certain obscure diseases of the Nervous System,” and deals chiefly with tetany, Thomsen’s disease, and Miryachit and its kindred affections.

Text-Book of Ophthalmoscopy.—By EDWD. G. LORING, M.D. Part I.—The Normal Eye; Determination of Refraction; Diseases of the Media; Physiological Optics and the theory of the Ophthalmoscope. New York: D. Appleton & Co.

A handsome volume of 259 pages, in six chapters, and a voluminous appendix. The entire work has been produced in the very best style, and is copiously illustrated. There are also three beautifully-executed colored plates, representing physiological and deviations from the ordinary physiological ophthalmoscopic appearances. A work of this kind cannot, of course, contain much that is new to an expert in the science of ophthalmology; the difference, however, between a small elementary treatise on this subject (and there are many such) and the volume under consideration is, to say the least, somewhat striking. The chapters on the fundus of the normal eye are admirably worked up, and present all the features of this “storehouse of physiology” in the clearest possible light; a thorough study of these will do all that the accumulated experience of others can do to enable the student to avoid the common errors of ophthalmoscopic diagnosis. They contain, in fact, a clear and concise explanation of all the knotty points in clinical ophthalmoscopy. In the ophthalmoscopic examination of the eye, and the study of the refractive media in their normal and pathological conditions, the greatest thoroughness is ensured, and the subject of refraction is treated in the masterly way that is worthy of an author who has won for himself well-earned fame for his extraordinary skill in this particular branch of ophthalmic science.

The appendix deals with the elementary principles, or what might best be defined as the optics of ophthalmoscopy. To the beginner imbued (as most beginners are) with an exaggerated idea of the difficulties to be encountered in learning to use the ophthalmoscope, a study of this portion of the work would be

equivalent to transforming an irksome task into a delightful recreation. The illustrations both in text and diagram are always clear and to the point; nothing essential has been omitted and nothing superfluous included. The advice given as to choice of instruments to be employed is thoroughly practical and judicious. We know of no text-book of the kind at all so well adapted to meet the wants of beginners or advanced students in every particular as this one, for facilitating the acquirement either of a smattering of the subject, or for making it a profound study, the author has succeeded in presenting the subject in the most thoroughly practical and attractive form.

Outlines of Lectures on Physiology. With an Introductory Chapter on General Biology and an Appendix containing Laboratory Exercises in Practical Physiology.—By T. WESLEY MILLS, M.A., M.D., L.R.C.P., Eng., Professor of Physiology, McGill University, Montreal. Montreal: W. Drysdale & Co.

This work is an elaborate outline of the course given on physiology by Professor Mills in the lecture-room and physiological laboratory of McGill University. It proves, if proof were needed, how entirely different is the teaching of physiology to-day compared to what it was even ten years ago, and how impossible it is for any teacher to attempt the teaching of this subject who is not a pure physiologist simply, but also one who has had a careful and extensive training in the modern methods of physiological research. The time has fortunately passed, for the cause of scientific medicine, when the teaching of physiology in medical schools can be conducted by any practitioner at a few weeks notice. It opens with a chapter on general biology, followed by one on the chemical constitution of the body. Then in order we have in detail the blood and lymph, the contractile tissues, the nervous tissues, the circulation of the blood, respiration, digestion, the excretory processes, metabolism, etc. As might be expected, the part dealing with the circulation of the blood is one of the ablest in the work. After some general anatomical and physiological considerations, the physics of the circulation

are clearly and concisely considered, followed by paragraphs on the velocity of the blood-current, the pulse, the work done by the heart, the intracardiac blood-pressure, the sounds of the heart, the mechanism and modifications of the heart-beat, inhibition of the heart, regulation of the blood-pressure, regulation of local blood supply, and vaso-motor reflexes. Reference is also made to the recent work on the circulation, a field in which Prof. Mills has done some lasting original work. This chapter concludes with an account of the different demonstrations employed by the author in illustrating his lectures on the physiology of the circulation. The work concludes with a description of the class laboratory exercises in food-stuffs, artificial digestion and animal liquids as practised in the physiological laboratory of McGill University. The student will find Prof. Mills' manual of great service. The publishers have performed their part in a very creditable manner.

Books and Pamphlets Received.

HANDBOOK OF DISEASES OF THE EAR. For the use of Students and Practitioners. By Urban Pritchard, M.D., F.R.C.S. With illustrations. London, H. K. Lewis.

A TREATISE ON ELECTROLYSIS, and its application to Therapeutical and Surgical Treatment in Disease. By Robt. Amory, A.M., M.D. New York, Wm. Wood & Co.

MANUAL OF DIFFERENTIAL DIAGNOSIS. By Condict. W. Cutler, M.I., M.D. New York, G. P. Putnam's Sons.

SPASM IN CHRONIC NERVE DISEASE. By Seymour J. Sharkey, M.A., M.B., Oxon, F.R.C.P. London, J. & A. Churchill.

A REFERENCE HANDBOOK OF THE MEDICAL SCIENCES. Vol. III. FACTO N Y S. Edited by Albert H. Buck, M.D. New York, Wm. Wood & Co.

TRANSACTIONS OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA. Third Series. Vol. VIII. Philadelphia, P. Blakiston, Son & Co.

TRANSACTIONS OF THE MICHIGAN STATE MEDICAL SOCIETY. Vol. X. For 1886.

MESSAGE AS A MODE OF TREATMENT. By Wm. Murrell, M.D., F.R.C.P. London, H. K. Lewis.

Society Proceedings.

MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

Stated Meeting, June 11th, 1886.

T. G. RODDICK, M.D., PRESIDENT, IN THE CHAIR.

Lupus of the Feet.—DR. R. J. B. HOWARD again exhibited the boy shown at a previous meeting, to show the effect of treatment. The history of the case is as follows: Boy aged 12, good family history, was brought to the Dispensary on account of a cough. He was found to have bronchitis, which improved under treatment. Dr. Howard was asked to see his feet, which were said to be “breaking out” on the skin. He has angular curvature, involving the lower dorsal region. First noticed when $3\frac{1}{2}$ years old. His feet were first affected in his sixth year. A small “scurfy” spot appeared on the right foot, spreading steadily, and healing at centre. When seen, it appeared as a serpiginous patch, about 4 inches across. On the right ankle and instep, smaller similar patches were seen, also on outside of right little toe and left great toe at metatarso-phalangeal joint. The patch was covered with a crust or scab of somewhat papillary appearance. No pain or tenderness, and never ulcerated. Such was the condition when brought before the Society on May 1st. Following the advice then given, he ordered poultices to remove the crusts, when the appearance presented was that of a typical cutaneous lupus. The acid nitrate of silver was then applied to each tubercle. Great improvement was evident.

Extirpation of the Uterus per Vaginam for Epithelioma.—DR. PERRIGO related the case as follows: R. B., aged 31, unmarried, but had an illegitimate child ten years ago. Family history good. Father dead from cardiac disease. Mother is still living. Has four brothers and four sisters, all living and healthy. Patient began to menstruate at 13 years old; was always regular. Felt perfectly well after her confinement. Four years ago had an illness which kept her in bed for two or three weeks, the most prominent symptoms of which were severe pains in both legs, from the hips downwards. While convalescing,

had some uterine hemorrhage, occurring in the interval between the menstrual periods. About two years after this illness she began to menstruate more profusely and more frequently until, during the last year, she was "unwell all the time." Consulted several physicians, without receiving any benefit. No examination had been made by them. Never complained of any pain in connection with the hemorrhagic discharge. During last winter her health and strength suddenly began to fail. In the spring she entered the Western Hospital. When examined, the presence of epithelioma was discovered, involving the cervix and a very small portion of the vagina next to the anterior portion of the cervix. Pacquelin's thermo-cautère was thoroughly applied on two occasions, but with only temporary benefit. It was then decided to extirpate the uterus per vaginam, as there was a capacious vagina, and, besides, the whole disease could be removed. Drs. Hingston, Kennedy and Rowell were the assistants. A horizontal incision was made in Douglas's pouch, enlarged by the finger, the uterus retroverted, after which a ligature was placed around the organ at the junction of the cervix with the body. This was done for the purpose of traction. The after steps of the operation consisted in taking up a certain portion of tissue with a threaded aneurism-needle, tying, and then dividing with scissors. Both Fallopian tubes were divided in the same way. After removal, a circular opening was left at the upper end of the vagina, through which a small loop of intestine could be seen, but which did not come down. Three sutures were put in to draw the edges of the vagina together, and rubber tubing to facilitate drainage. The bladder was uninjured, and there was hardly any hemorrhage during the operation. Excepting some vesical catarrh, recovery was uninterrupted. The patient left for home six weeks after the operation.

DR. ROWELL exhibited the uterus.

DR. CAMERON said the patient came to him at the out-door department of the Western Hospital. She complained of hemorrhages lasting over a year. An examination revealed this malignant disease. She did not suffer any pain.

DR. GARDNER said that hemorrhage was a very constant

symptom of malignant disease. He, however, mentioned a case he had seen with Dr. McCallum, where the only symptom was leucorrhœa. Menstruation was normal, and there was absence of pain. On examining, a rapidly-growing mass the size of an egg, involving the cervix, was found. This was removed with the knife and scissors, and chloride of zinc applied. He had never removed a uterus per vaginam. Dr. Schröder has good success, but it was not yet decided which operation was best for prolonging life.

DR. R. J. B. HOWARD said that absence of symptoms in these cases was remarkable. He knew of a case where a woman consulted a doctor for bleeding piles, and it was found she had a large cancerous mass involving the uterus. She had no symptoms whatever.

DR. HINGSTON said the practical question was, should we operate or not? He was in favor of operating if the disease be confined to the uterus or involving as much vagina as can easily be removed. If the broad ligaments are diseased, or if the vagina be much infiltrated, he would not operate. He was in favor of removing per vaginam, because the shock was less and hemorrhage less.

DR. SHEPHERD said the operation in a suitable case was as justifiable as removing the rectum or tongue.

HAMILTON MEDICAL AND SURGICAL SOCIETY.

Regular Monthly Meeting, August, 1886.

DR. STARK, PRESIDENT, IN THE CHAIR.

(From our own Correspondent.)

DR. MALLOCH exhibited a specimen of a soft catheter which he had removed from a patient. The patient had been using a soft catheter for some time, and one night, from some cause or other, he allowed the catheter to slip into the bladder. Not thinking anything serious would result, he allowed it to remain in the bladder for six or seven days. Dr. M. was called to see the patient, and introduced a lithotrite with the object of removing the catheter; this proved ineffectual. He then performed

the operation of median lithotomy, and removed the catheter with a pair of forceps. From the length of time the catheter had been in the bladder, it was covered with a considerable deposit, which would have rendered it dangerous to remove it by the urethra.

Dr. Malloch also exhibited a specimen of a calculus from the pelvis of the kidney. Patient had been suffering for about 15 years, and had been operated upon for stone in the bladder. He first saw the patient ten years ago; she then had a fistulous opening. One year ago he probed the opening and detached a stone; five months ago it was removed.

DRS. ROSEBRUGH, MULLIN and McCARGOW took part in the discussion and related cases which had come under their notice.

DR. STARK related two cases of puerperal eclampsia treated by the hypodermic injection of pilocarpine.

A lengthy discussion followed, in which DRS. LESLIE, MALLOCH, MULLIN, WHITE, SHAW and RIDLEY took part.

Regular Monthly Meeting, Sept. 7, 1886.

DR. STARK, PRESIDENT, IN THE CHAIR.

DR. H. S. GRIFFIN exhibited a specimen of cancer of the stomach from a negro-woman, about 65 or 70 years of age. Had six or eight children, all of whom are dead. When Dr. Griffin first saw the patient she complained of constant and troublesome spitting of water, which also escaped from the mouth during sleep. There was also regurgitation of fluids after drinking. Had been losing flesh rapidly. At one time raised a quantity of pus, about a pint. The post-mortem revealed general thickening of the walls of the stomach. There was a narrowing of the œsophagus near the cardiac orifice of the stomach, not a complete stricture. Several fibroid tumors of the uterus was the only other abnormality found.

DR. MULLIN related a case of a woman who had been suffering for two or three years. At the time he saw her she had had no medical attendant for some months. On making an examination, found two or three lumps in right iliac region, extending upwards about twice as large as the thumb, and move-

able; could not be fixed; sometimes disappeared altogether. Post-mortem—Stomach: walls dilated and very thin; greater curvature reached as far as the umbilicus. There was much thickening of the pyloric orifice, the opening being about the size of a small catheter. No evidence of secondary deposit in any other organ. The descending colon had a mesocolon fully six inches in length, and the bowel was loose and floating—a condition which would have rendered the operation of colotomy difficult, if not dangerous. The uterus was exhibited; right ovary normal, but the left ovary had the remains of a cyst which had collapsed. A band extended from the omentum, near the transverse colon, about the situation of the pyloric orifice of the stomach, looped around the head of the ascending colon and cæcum, and passed over to the left ovary, where it was attached, forming nearly a half circle. The tumors mentioned above are supposed to have been formed by this band retaining fæces in the intestines, at times being moveable, and then disappearing, as already stated on examination.

A committee consisting of Drs. Malloch, Mullin, Macdonald, White, Leslie and Griffin was appointed to report on the pollution of the waters of the bay by drainage and the best remedy for the evil.

Extracts from British and Foreign Journals.

Unless otherwise stated the translations are made specially for this Journal.

Epidemic of Scarlatina caused by the Milk of diseased Cows.—An epidemic of scarlatina recently appeared in three districts in London, all of which were supplied with milk by the same company. In a fourth district, which was also supplied by the same firm, the disease did not appear. Upon inquiry it was found that the cows belonging to this company were kept in three separate stables. In two of them were three cows which had been recently purchased, and which were evidently sick. The nature of the disease was not known, but upon their udders were vesicles and patches of ulceration. The milk from the two infected stables was all distributed to the three districts in which the scarlatina had appeared. The

fourth district was supplied from the third stable, in which all the cows were apparently healthy. Shortly after this the milk from the infected stables was furnished to the inhabitants of a neighboring village, but without the knowledgo or consent of the company. Scarlatina also appeared in this village within a few days, though previous to that time no cases were known. At the stables the disease developed among other cows, including those which furnished the milk to the district which had not been visited with scarlatina up to that time. The result was the appearance of the disease in this district also. After the sale of this company's milk had been entirely stopped, the disease began to disappear, and no new cases, at least from this source, developed. These facts are important, and may have a bearing upon the development of other epidemics.—*Archives of Ped.*

The Management of Placenta Prævia.

—Malcolm McLean, in a recent article on the management of placenta prævia, thus concludes:—

1. In any case, avoid the application of all chemical styptics, which only clog the vagina with inert coagula, and do not prevent hemorrhage. At the very first, the patient should be put in a state of absolute rest, body and mind, and a mild opiate is often desirable at this stage, to quiet irritation.

2. Inasmuch as the dangers from hemorrhage are greater than all else, to both mother and child, at the earliest moment preparations should be made to induce premature labor, and labor being once started, the case should be closely watched to its termination by the accoucheur.

3. In primiparæ and mothers with rigid tissues, the vagina should be well distended, by either the colpeurynter or tampon, as an adjuvant to the cervical dilatation.

4. In the majority of cases, and in all cases, especially where there is reason to believe that rapid delivery may be required, it is more safe to rely on the thorough, continuous, hydraulic pressure of a Barnes' dilator than on pressure on the foetal parts.

5. Where the implantation is only lateral or partial, and where there is no object in hurrying the labor, bipolar version, drawing

down a foot and leaving one thigh to occlude and dilate the os; may be practiced, according to the method of Braxton Hicks; except in cases where the head presents well at the os, when,

6. The membranes should be ruptured, the waters evacuated, and the head encouraged to engage in the cervico-vaginal canal.

7. In the majority of cases, podalic version is to be preferred to the application of the forceps within the os.

8. In some cases, in the absence of assistance or the necessary instruments, the complete vaginal tampon, in part or wholly of cotton, may be applied and left *in situ* until (within a reasonable time) it is dislodged by the uterine contractions and the voluntary efforts of the mother. In case of favorable presentation—occiput or breech—the tampon will not materially obstruct the descent of the child, and in some cases the tampon, placenta and child will be expelled rapidly and safely without artificial assistance.

9. The dangers of septic infection by means of the tampon or indiarubber dilators are so slight, if properly used, as not to be considered as seriously impairing their great value.

10. Whenever it is possible, dilatation and delivery ought to be deliberately accomplished, in order to avoid maternal lacerations.

Finally. As cases of placenta prævia offer special dangers from post-partum hemorrhages, septicæmia, etc., the greatest care must be exercised in every detail of operation and nursing to avoid conveying septic material to the system of the mother.—*Amer. Jour. of Obstetrics.*

Professional Responsibilities.—One of the most difficult part of a physician's duties, and one which demands all the tact and judgment he can bring to bear, consists in determining the course to pursue when certain diagnoses have been arrived at. A woman who believes herself to be suffering from some trifling and passing ailment, is shown to be the subject of carcinoma; a patient with a supposed simple sore on his lip has epithelioma; or a person apparently in good health is found, on examination, to be the possessor of some form of car-

diac disease, not only unsuspected, but, it may be, unfelt. The physicians of "chest hospitals" know as well as any the difficulty of deciding whether to reveal the true nature of the case, or to leave the patient in a state of ignorance, which, after all, is comparative bliss. Of course, the plan adopted is modified according to circumstances. Affections such as epithelioma, where surgical intervention is imperative, are naturally explained without reticence; for the more fully the patient understands his position, the more disposed will he be to acquiesce in the necessary remedial measures. The real difficulty lies in those cases, such as cancer or heart-disease, where little or nothing may be practicable for their relief, but where a fatal termination is either inevitable or to be feared.

In the discussion at the Brighton meeting on the duration of life with heart-disease, Dr. Bristowe made some very excellent and apposite observations on this subject. "It is," he said, "quite early enough, in my opinion, for a man to know that he has heart disease when he begins to feel the effects of it"; and with this sententious remark most practitioners will agree. Incalculable harm has often been done by the abrupt announcement that a patient has cancer, or that another has heart-disease; and the evil is aggravated by the fact that, as in all other human affairs, the diagnosis may be wrong, or the prognosis may not be realized. Sir Andrew Clark told a very amusing but instructive anecdote of his having been called to see a gentleman suffering from bronchitis, who, fifty years before, had been precipitately superannuated on full salary, on the announcement by the medical officer to an insurance company that he was the victim of an incurable form of heart-disease, and would probably not live more than six months. Dr. Bristowe, in expressing the belief, backed by the hope, of his own freedom from "murmurs," sturdily declared that nothing short of acute and pressing circumstances would induce him to give any of his colleagues the opportunity of disturbing his equanimity by such an announcement. The best plan to pursue in such cases is undoubtedly to discharge the responsibility of the knowledge so obtained on to the shoulders of a near and trustworthy relation or friend:

Simple silence is apt to lead subsequently to the imputation of ignorance; and, for the sake of both the practitioner and the patient, it is desirable that cognizance should be taken of the actual condition of the latter, even when no immediate bad results are to be anticipated.—*British Medical Journal*.

Case of Congenital Absence of the Os-tium Vaginæ, and delivery by the Anus.

—Dr. J. F. T. Payne of Texas reported this remarkable case to the American Medical Association, as follows:—

On April 24, 1885, late in the evening, Dr. Geo. S. Sykes of Galveston was called to attend Mrs. H. T., who was in labor. She was 35 years old, and bore every sign of perfect physical development. The midwife said she had been in labor since the preceding midday. The bag of waters had been ruptured early in labor, and the patient was very much prostrated by her protracted and inefficient efforts to expel the fœtus. Examination revealed entire absence of the vaginal orifice, and the finger, passed along the perineum, sank into the distended anus, and encountered the fœtal head just within the opening. The anus was dilated to about the diameter of three inches. Never having met with such a case, the attending physician sought the advice of Dr. Payne. Examination confirmed the diagnosis. The fœtal head was found within the rectum, arrested at the distended and resisting anus. A clammy skin, sighing respiration, rapid, feeble pulse told the story of strength wasted by a fruitless labor. Uterine inertia; the anus, though considerably dilated, was insufficiently so to admit the passage of the head, and was rigid and unyielding. The indications were too clear to admit of a doubt as to the treatment. Chloroform was administered, a Simpson's obstetrical forceps applied with comparatively little difficulty, and by moderate effort the head was promptly delivered. The shoulder and trunk were brought into the world by a *vis a tergo*, exerted by squeezing and downward pressure on the uterus through the abdominal parietes. The placenta was speedily expelled by expression. There was no apparent laceration of the anal sphincters. There was no un-

usual hemorrhage at the time of the accouchement, nor was there subsequent oozing. Firm tonic contraction of the uterus quickly followed a dose of ergot. The anus regained its normal characteristics within a few hours. Subsequent treatment: Rest, and antiseptic irrigations *per rectum*. Patient sat up on the sixth day, and entered upon her accustomed domestic vocations at the end of the second week. On the 8th of October, five months and sixteen days after her accouchement, Dr. Paine examined the case thoroughly, and found complete absence of the ostium vaginæ. All the parts within the vulva presented the characteristics of virginity—the clitoris, normally developed and situated; the vestibule and posterior commissure bore no signs of having been stretched, distorted, or lacerated by childbirth; the urethra was in its proper place; the nymphæ and labia majora were in every respect natural in their virgin symmetry of outline. Two fingers were readily introduced into the rectum, and passed upward along the anterior rectal wall for a distance of about two inches, when it was clearly appreciable that the surface gradually sloped forward and upward, and merged into the anterior vaginal wall, which, at this point, was natural in its anatomical relations. From a half to an inch below the os uteri, could be distinctly felt the free edge of a membranous curtain which represented the upper third of the recto-vaginal septum. There was nothing abnormal either in the size or position of the uterus, or in its relation to the vagina. Examination with the speculum fully confirmed the revelation of the digital exploration. The most painstaking investigation failed to detect the slightest trace of cicatricial tissue. The conclusion was that the malformation was congenital. This woman has borne three children, all at full term, and well developed, but dead. The cause of death seemed to lie in the early drainage of the amniotic fluid and the protracted labor. Nothing noteworthy occurred during the day of the accouchement, except continuance beyond the ordinary limit, and the exhaustion which, as a natural consequence, ensued. Her labors had lasted, she said, about two days; but had not, in any case, been followed by fever, pain, abnormal discharge, or other evidences of inflammatory action.

Her recoveries had been uniformly short : sitting up on the sixth day, and resuming her ordinary duties at the end of the second week. Menstruation has always been regular (except during pregnancy) and painless. Sexual desire and its gratification during coitus were in every respect satisfactory. She had never been made aware, either by the exit of the menstrual flux, the method of sexual intercourse, or even the strange manner of her accouchement, that she was different from other women. Her husband, after being closely questioned, asserted most positively that he had never entertained the faintest suspicion that there was anything the matter with his wife out of the usual order of things.—*Medical News*.

Chloride of Sodium in Bright's Disease of the Kidneys.—Dr. Memminger, in a recent article detailing cases of Bright's disease successfully treated by chloride of sodium, urges a thorough trial of this therapeutical agent by the profession on the following grounds :—1st, It is harmless, if properly administered. 2nd, Its effects are comparatively uniform, provided it is given for a sufficient time ; that I have so far used it only in chronic cases of not long standing does not, in my opinion, militate against its beneficial effects, for even should it not be found a cure for Bright's disease, may it not become an important article in our medical armamentarium, indeed, if only an ameliorator of man's sufferings and a prolonger of his life? 3rd, It may be employed as an adjunct to all recognized methods of treatment, without detriment to the patient"—*N. Y. Med. Journal*.

A New Method of taking Temperature in Children.—The difficulties in taking the temperature in children are but too well known, and an important symptom often fails of accuracy of record either because the child offers too much opposition, or because the mother cannot endure the crying of the child for the quarter of an hour during which the thermometer must remain in the axilla, or the five minutes during which it should be kept in the rectum. In cases of this

kind the author recommends the use of a warmed thermometer which need be kept only for a moment in the axilla, and with which the fall and not the rise of the column of mercury is to be observed. The result will not vary by more than one or two hundredths of a degree from that which is obtained by the ordinary method. The thermometer may be warmed either by rubbing the bulb in the bare hand, or in a handkerchief, and 42°C . to 43°C . may be quickly indicated. It should then be quickly placed in the axilla and allowed to remain one or two minutes. The author has been satisfied with the experience which he has had with this plan up to the present time.—*Archives of Ped.*

The Physiology of Sleep.—The wonderful phenomena of sleep, to which a life-long familiarity has so accustomed us as to blunt our powers of observation, is, nevertheless, at once so interesting, so important, and so ill understood a subject that further information thereon cannot fail to be appreciated. The medical man, it is true, has generally, except in his own person, more to do with sleep as a diseased or absent condition, but in his endeavors to cope with a symptom which, like the pyrexia in fevers, may in itself determine a fatal result, he cannot but derive aid and assistance from a study of the details of the processes which precede, accompany and follow this condition.

Since attention was first turned to the investigation of the physiology of sleep, numerous contending and often absurd theories have been formulated with a view of accounting for its rhythmical occurrence, the unconsciousness in varying degrees which accompanies it, and its bearings on the economy. The very nature of the subject, however, seems to have predisposed those who devoted themselves to its study to leave the arid path of scientific research and deduction in favor of the more flowery and popular method of dishing up recitals of the weird and the extraordinary, as exemplified in those aberrations of varieties of sleep known as somnambulism, hypnotism, etc., and the result has been the publication of numerous treatises containing much that is both curious and interesting, but which from a physiological or pathological point of view are not of much value. The

perusal of a really scientific work on the subject, however, only proves once more the truth of the adage that truth is stranger than fiction. To the methodical and careful observer, the proper means of research yield results which are incomparably more curious, and at the same time instructive, than the pseudo-facts with which some writers fill their books.

Each successive gradation in sleep is marked by the inclusion of the nervous system which is for the time being shut off, so to speak, from participating in the general life function of the individual until, when the maximum intensity is attained, nothing is left but the purely animal—one might almost say the vegetative—life. Sleep of this degree of intensity, although a perfectly normal process, is not, in health, of long duration. After the lapse of a variable space of time, the systems one by one resume their function, until finally the sum of perceptions brings about the condition of awakening. As a natural consequence of these variations in perceptive powers, the character of the sleep is altered, according to the period. From the deep unconsciousness of complete repose, when every sense is in abeyance and the will rendered nugatory, the cerebrum is gradually aroused, first to the dim appreciation of the influences of external agencies, followed in due course by a return of perceptive power in the sensorium, and the cessation of sleep.

The brain shares in the need, which is everywhere apparent, of periods of rest. The products of cerebral activity accumulate more rapidly than they are eliminated, and a period arrives when the tissues are no longer able to do their work. The result is an invincible feeling of indisposition to exertion, physical or mental. The temporary and involuntary cessation of activity is at once followed by a diminution of the blood supply; the anæmia so induced being, therefore, a consequence, not a cause, of the state of repose. The various parts of the nervous system are not all involved simultaneously or to the same extent. The centres governing voluntary movement are the first to be affected, as seen in the nodding of the head and the closure of the eyelids; and the body, if not prevented, tends to assume the position of repose, determined by the laws of gravity. The special

senses soon follow ; but here, again, they are not abrogated *en masse*. Sight is the first to go, the stimulus no longer reaching that portion of the cerebrum where it can give rise to a definite sensation even where the closure of the lids has not shut off external stimuli altogether. Hearing and smell are remarkably persistent, and, except in the deepest sleep, may be said to be only dulled, and not extinguished. Everyone is familiar with the ease with which sleep is put an end to by unaccustomed noise even of slight intensity, or, better still, by the cessation of any monotonous sound, as, for instance, the awakening of travellers by rail or steamboat on any stoppage of the train or machinery. Instances are on record, too, where the inhabitants of a house have been roused simply by the smell of the tobacco indulged in by inexperienced or incautious burglars. The persistent sensibility of these senses may to some extent be accounted for by the fact that they are not shut off from communication with the outside world, as are, for example, the eyes.

To allow sleep, or, at any rate, quiet sleep, a certain harmony must exist in the condition of all the organs, which must, so to speak, be tuned to the sleep tone. If one organ be in a state of activity, or, on the other hand, its condition be abnormal in some other way, the sensorium refuses to abdicate its control. This is familiar to us in the case of cerebral activity, or cold feet at bed-time, both being inimical to sleep. Inasmuch, therefore, as insomnia may result from either set of causes, we can either employ drugs, such as opium, which act directly on the nerve-centres, and so bring about sleep ; or, we may resort to medicines like hypnone, which is said to favor sleep, rather than induce it, by allaying the irritable or hyperæsthetic condition of certain organs or parts. In this way a little peppermint-water or brandy may be considered in the light of hypnotics, when taken for a nocturnal attack of stomach-ache. The pains of flatulence being assuaged, sleep comes as a matter of course. For this reason, many forms of insomnia are relieved by hot or cold douches, which stimulate or damp peripheral sensibility. The study of the causes and treatment of insomnia, however, does not enter into the compass of this article ; but it is one

which can only be satisfactorily pursued after competent knowledge has been acquired of the normal process in a state of health, undisturbed by flatulence, dyspepsia, or cerebral disorganization.—*Brit. Med. Journal.*

Ear Disease in Diphtheria and Scarlet Fever.—

Dr. Thomas Barr, of the Glasgow Ear Hospital, concluded the clinical history of a case of scarlet fever, complicated with nasal and pharyngeal diphtheria, acute suppuration of both middle ears, rapid destruction of tympanic membranes, serious loss of hearing, facial paralysis, and abscess of the lachrymal sac, ending in recovery, with the following remarks :—“ 1. This case bears out what Burckhardt-Merian has especially drawn attention to—namely, that scarlet fever, when complicated with or followed by diphtheria, is apt to give rise to a most destructive type of disease of the ear. It is probable that in such cases there is a real propagation of the diphtheritic membrane along the Eustachian tube to the tympanic cavity, and even to the external auditory canal. We have not simply to deal with an ordinary collection of purulent secretion in the tympanic cavity, with rupture of the membrane and evacuation of the pus; we have rather to do with a rapidly destructive ulcerative process, which, as is shown by this case, denudes the organ of the tympanic membrane in a very short time. There is reason to believe that scarlet fever alone does not produce such havoc; the addition of the diphtheritic poison seems to impart that destructive tendency to the ear complication which may terminate in deaf-mutism, or even lead to a fatal issue. 2. From the favorable course of the facial paralysis in this case, we need not despair of recovery from this complication of purulent disease of the ear. In children, not only is the facial nerve, as it lies in its osseous canal on the inner wall of the tympanum, in close juxta-position to the mucous membrane of the tympanic cavity, but the bony walls of this canal are very frequently defective when the neurilemma of the nerve is in actual contact with the mucous membrane. It is easy to understand how, with such an anatomical arrangement,

the pressure of granulation tissue, swollen mucous membrane, or even of secretion, may produce paralysis of the facial nerve without ulcerative disease of the bone, and therefore without the same gloomy prognosis. 3. The recovery of fair hearing also illustrates a fact which is not unfrequently observed—namely, that fair hearing may exist even when the tympanic membrane is almost quite destroyed. What is of more importance than the presence of the tympanic membrane is a normal mobility of the fenestral structures. If these structures, with the staples, are not thickened, bound down by adhesion, or subjected to pressure, fair hearing power may be enjoyed, although the membrane, with even the malleus and incus, should have been swept away. 4. This case also shows in a striking way the value of treatment by rectified spirit in purulent disease of the middle ear associated with granular excrescences. The following is Dr. Barr's description of the treatment pursued in the case referred to above:—Diluted rectified spirit was employed in the strength of one-third of spirit and two-thirds of water. The following process was carried out every eight hours:—(1) Careful syringing with a warm solution of boracic acid; (2) removal of all the moisture in the interior of the ear with absorbent cotton on a cotton holder; (3) instilling into the ear fifteen drops (warm) of the diluted spirit; (4) allowing it to remain in the ear, while the child lay on the opposite side for fifteen minutes; (5) drying the canal with cotton, and then placing a plug of salicylated cotton, in the orifice of the ear. This treatment was, of course, applied to both ears. In addition, and in order to ensure still more thoroughly the complete expulsion of the purulent secretion, Politzer's method of inflating the middle ear was performed once a day after the syringing. The nasal passages were also syringed daily with a tepid solution of chlorate of potash. The strength of the spirit was gradually increased to equal parts of water and rectified spirit, but when employed stronger than this the pain excited by it compelled us to return to the weaker form. This method of treatment very soon proved itself to be the most efficient. The discharge perceptibly diminished; the granulation tissue began to shrink; and the hearing power became more acute.—*Lancet.*

Contribution to the Study of the Pathology and Therapeutics of Diphtheritic Paralysis.

—This thesis is based upon an analysis of 23 cases of diphtheritic paralysis. This accident may occur as a result of pharyngeal diphtheria of all varieties, whether benign or grave in character. It is the result of specific action of the infectious agent upon the nervous system. Pierrot explains the pathogenesis of this form of paralysis by supposing a concomitant diphtheritic meningitis; but this condition occurred in only three of the cases which were analyzed. Déjerine supposed that the paralysis was due to an anterior poliomyelitis, but this position is not tenable, for the gray matter of the cord in poliomyelitis is not inflamed but is degenerated, and the number of degenerated cells does not correspond with the severe lesions which the peripheral nerves have experienced. The great extent of the lesions of degeneration, as well in the peripheral as in the central nervous system, is explained by the fact that the diphtheritic poison can penetrate, in whatever way, to the nervous system. The peripheral nerves of persons who have died of diphtheria, without having shown any symptom of paralysis, will sometimes show a more or less decided degeneration of the nerve sheaths, or even of the contained nerve fibres. A predisposition to diphtheritic paralysis is sometimes quite noticeable in certain families. There is no particular symptom to announce the beginning of the accident. The velum of the palate is usually attacked first, its loss of power being either total or partial. The accident may last several days or several weeks, and is usually terminated by restored function.

Seeligmüller attaches the greatest importance to the treatment by electricity of diphtheritic paralysis. When the velum of the palate is affected, the constant current should be employed; the positive pole being placed upon the nucha, the negative under the inferior maxilla. If the muscles of the eye are paralyzed, the positive pole may be placed upon the nucha and the negative in the vicinity of the paralyzed muscles. If the extremities are affected, the positive electrode should be placed in the lumbar region and the negative over the motor and sensory nerves which are to be excited.—*Archives of Ped.*

Scarlatina Sine Exanthemata.—The author's experience in a number of carefully observed cases revealed the following. The patients which were seen were all between the ages of two and nine years, suggesting the idea that the first and second infancy had something to do with this anomaly as to the exanthemata. Fever was present as in the ordinary form of the disease, but did not go beyond 39°C . Angina also was manifest in connection with a rapid and febrile pulse. The angina was of a catarrhal or hyperæmic type, however, and was not attended with enlarged tonsils, nor with pultaceous or diphtheritic deposits. The tongue was red at the commencement of the disease, but there were no decided symptoms during the first few days of any grave internal disorder. The fever was of an intermittent character, of either the single or double quotidian variety. After these phenomena of the first stage of the disease have disappeared, a very important sign may be observed, namely, the presence of albumen in the urine. It may not be in large quantity at first, and may require the more delicate tests to discover it, such as picric acid, or the acid nitrate of mercury. Albuminous nephritis, whether medullary or cortical, with all its usual symptoms, constitutes the second stage of this disease, which is called the *white* form of the disease, as the skin is not colored red at any time during its progress. The renal lesion from the first appearance of albumen in the urine. This may happen within a few days of the first symptoms of the disease, or it may be deferred for a longer period, as in ordinary scarlatina. If the fever has remitted, it may appear together with the other symptoms of acute parenchymatous nephritis, reaching 40°C . or even a higher point. The urine is usually scanty as to quantity, dense, contains blood, much albumen, many epithelial cells, and epithelial casts. The quantity of uræa is diminished, anasarca is quite general, and the serous cavities and especially the peritoneal contain much fluid. In addition, there are visceral disorders which are common to uræmia, and which vary as the lesions are in the nervous centre, the retina, the respiratory apparatus, the heart, or the gastro-intestinal tube. These symptoms, though serious, are not necessarily

fatal; but the prognosis is less favorable when they occur in connection with a relapse which has made its appearance fifteen or twenty days after the appearance of the eruption. The treatment should consist of vapor baths, jaborandi, pilocarpin, and opium. The diet should be composed mainly of milk. Acetate of potash and quinine are also most useful for their diuretic and tonic effects.—*Archives of Pediatrics.*

Renal Irritation from Pure Terebene.

—A correspondent writes to the *British Medical Journal* to ask his professional brethren whether they have ever noticed severe nephralgia and other evidences of renal irritation follow the use of “pure terebene.” He has lately had under his care a case of bronchiectasis, in which he tried all the stock remedies, such as creosote, eucalyptol, iodine, phenol, iodoform, tar, sandalwood oil, and lastly “pure terebene,” to try and diminish the secretion and lessen the almost gangrenous odor of the sputa. He thinks he may safely say that they all practically failed to accomplish what he intended, even though the doses were pushed. “Pure terebene” was the last experimented with, and when his patient was taking from 20 to 25 minims four or five times during the twenty-four hours, he suddenly developed most intense nephralgia, the urine became scanty, high-colored, and distinctly albuminous. There had been traces of albumen before, but it was distinctly increased at this. There was no reason to suspect renal “colic” due to other causes. After the lapse of three weeks “pure terebene” was again begun to be taken, and as the doses were increased to the same quantity as before, a repetition of the nephralgic symptoms occurred, but less marked than before, and gradually a tolerance was established.—*Cincinnati Lancet-Clinic.*

Iodol in Gynæcological Practice.—Dr. Ménière has used iodol with good results in cases of granular degeneration and erosion of the cervix. He uses a solution containing—Iodol, 1 part; Glycerin, 15 parts; Alcohol, 30 parts. He has also used the solution with equally favorable results in a few cases of muciparous inflammation of the vulva in young lymphatic subjects.—*N. Y. Med. Jour.*

Tuberculosis of the Tongue.—There are two forms of lingual tuberculosis, the primary and the secondary, both of which are rare, but the former especially so. Secondary tuberculosis of the tongue is usually met with in the latter stages of pulmonary phthisis, and occurs in the form of superficial and dirty-looking ulcers, which are exceedingly painful and add greatly to the sufferings of the patient. The primary form is a very uncommon affection, or at least it is so considered, though it may be that this belief has arisen from mistakes in diagnosis, lingual tuberculosis having been regarded as carcinoma and reported as such. Dr. G. Feuerer reports two cases of the disease in the *Correspondenz-Blatt für Schweizer Aerzte* of August 15, 1886, and the following description is taken from his article: The muscular tissue is very seldom the seat of tubercular disease, and this is the explanation of the freedom which the tongue enjoys, for of all muscular structures it is the one most frequently attacked. Primary lingual tuberculosis occurs usually in individuals who have acquired or inherited a predisposition to the disease, but who are as yet free from the specific lesions in other organs. In addition to a more or less characteristic, often granular, ragged, and dirty ulcer, there is a deep infiltration consists of a number of more or less sharply defined nodules, the size of a millet-seed, either isolated or lying closely together. Sometimes these become agglutinated into a whitish gray, transparent, or cloudy mass, presenting an appearance like that found sometimes in tuberculosis of the testicle. Microscopical examination shows these nodules to be tubercles with all their histological characteristics. Tubercle bacilli are also present. There may, in certain cases, be such a marked swelling of the tongue as to completely fill the mouth, showing the marks of the teeth and interfering with speech and mastication, and presenting the picture of a subacute glossitis. At times there is fever of a hectic type, and the patient's general health becomes seriously depressed. There is usually considerable pain, which is increased by attempted mastication. The pain is, however, localized, and the radiating pains, to the ear and elsewhere, such as are commonly noticed in carcinoma, are

absent. This is due, the author says, to the fact that while cancer spares no tissues, but invades all, nervous as well as others, while lie in its path, tuberculosis adheres to the connective-tissue spaces and affects the other tissues only indirectly in interfering with their nutrition. The submaxillary glands are infected in tuberculosis of the tongue, but they are never enlarged to such an extent as they are in carcinoma. The disease occurs probably by direct infection through wounds of the tongue, for if the bacilli were brought through the blood-channels, they would probably be arrested in other more predisposed organs. In both of the cases observed by Dr. Feurer there had been wounds of the tongue which did not heal, and in the immediate neighborhood of which the infiltration commenced. The treatment of lingual tuberculosis consists in the early removal of the diseased foci, and of the swollen glands in the submaxillary region. The prognosis is as yet unsettled. In some cases there has been no return of the disease, after a number of years, either in the tongue or in other organs. In one case of the author's the patient died, four months after the operation, of meningitis, apparently tubercular, though an autopsy was not made. Usually, when the lingual affection has not been removed the disease has in time attacked other organs, generally the lungs or intestines.—*New York Medical Record.*

Conception of Male Children at the time of the Post-menstrual Anæmia.—Dr. Camillo Fürst, of Graz, publishes in the *Archiv. für Gynæcologie*, 1886, Vol. XVIII, No. 1, p. 14, a contribution to the interesting and frequently-discussed question, When and how is the sex of the conception-product determined? In the first section of the paper, which treats of “the time and causes of the determination of the sex in general,” Fürst proposes certain maxims which, though not new, will interest our readers. According to the author we find a surplus of male conceptions in the working classes and country inhabitants as compared with the well-to-do people and the inhabitants of cities. Likewise, we can look for the surplus of male infants during hard times and the concomitant rise of food-prices, and before the ultimate

extinction of a race. If a deficient nutrition of the procreators produces a surplus of male children, our author continues to argue, we can be certain that also the state of nutrition of the fecundated ovum, especially shortly after conception, will influence the sexual differentiation. And as after menstruation the vessels of the genital organs assume an ischæmatus character—forming the so-called post-menstrual anæmia—Fürst concludes that conceptions taking place immediately or shortly after menstruation will give a surplus of males on account of a relatively bad nutrition of the fecundated ovum. To strengthen his theory the author utilizes the statements of women confined in maternities, who mostly with an astonishing certainty could remember the end of the last menstruation and the day of conception. The statistics of the mentioned institutions show a very considerable surplus of male children for the first four or five days following menstruation, and a surplus of female ones for the succeeding period.—*Ther. Gaz.*

Clinical Studies of the Pupil.—Schmeichler has recorded the results of over 5,000 observations made upon the pupils of persons in health, of those suffering from acute and chronic diseases, and of the dying and dead. There were observed :

1. Pulsations of those vessels of the iris which are in direct connection with the intracranial vessels showed a systole and diastole occurring from sixty to eighty times in the minute.

2. A movement of the iris dependent upon rhythmic impulses from the vasomotor centre, occurring from two to six times per minute.

3. Protrusion and depression of the iris, coincident with respiratory movements. These correspond with the "spontaneous pupillar movements" described by the author. Such movements were noted during an attack of hystero-epilepsy in a girl of twenty-one years. In this case such variations in the rhythmical movements of the iris occurred in the complete absence of pupillary reaction to light, and were coincident with the forced respiratory movement of the patient. The spontaneous pupillary movements were most marked in excitable, neuropathic individuals.—*Centralblatt f. kiln. Med.*, July 10, 1886.

CANADA

Medical and Surgical Journal.

MONTREAL, OCT., 1886.

THE PROVINCIAL MEDICAL BOARD.

The semi-annual meeting of the Provincial Medical Board was held at Quebec on the 29th ult. The meeting was an important one, as the committee upon the proposed amendments to the Medical Act presented their report, which was adopted with a few not material alterations. It has been impossible for us to obtain at once the official minutes, but these will be published in November. The following points, however, include the leading features of the changes which it is proposed to make. The Central Examining Board, which has already been decided upon, will consist of twenty members equally divided between French and English, and between those attached to our medical schools and those of the general profession. The professional examinations (primary and final) will be held in the middle of April. The preliminary examination will be held once a year only, in July, with a supplemental in September for those who fail partially only. In this examination, the optional branches are done away with, and physics, elementary chemistry, and mental and moral philosophy have been added to the obligatory subjects. The subject of botany has been erased from the medical curriculum. The amendments are not expected to come into force until after the 1st January, 1888. Clauses are also introduced governing the granting of licenses to licentiates in Great Britain, provided a similar privilege is accorded to the members of the Provincial College of Quebec. Parisian graduates may also be accepted in this Province without examination. Provision is also made for reciprocity with the Province

of Ontario and any other Province in the Dominion in which there may be a Central Examining Board. It is further proposed to rearrange the method of election so that each judicial district may send its own representative, the representation of the universities and cities remaining practically unchanged. The committee which has elaborated these changes was continued, and will proceed to have a draft prepared containing the various changes decided upon and presented at the approaching session of the Provincial Legislature.

THE CHAIR OF MIDWIFERY IN MCGILL UNIVERSITY.

Dr. A. A. Browne has resigned the chair of Midwifery in McGill University, a position which he has occupied with great credit to himself and to the University during the past three years. Dr. Browne was led to tender his resignation from the ever-increasing demands of a large private practice on his time and energies. His successor is Dr. James C. Cameron, late Professor of Obstetrics in Bishop's College. Dr. Cameron, ever since he graduated in McGill, has paid special attention to obstetrics. He has had opportunities shared by but few in becoming practically acquainted with this all-important branch of the medical curriculum. Shortly after graduating he spent a considerable time in the Rotunda Hospital, Dublin, and quite recently he acted as assistant in Prof. Braun's obstetrical wards in the Allgemeine Krankenhaus, in Vienna. This, the great midwifery school of the world at the present day, offers advantages that are not elsewhere obtainable. Dr. Cameron is well known as a clear, forcible and enthusiastic teacher. He has a field before him of unlimited usefulness, and it is our earnest wish that he may long live to cultivate it.

BRITISH ASSOCIATION MEETING.

It is very gratifying to Canadians to know that the recent Birmingham meeting of the above Association was one of the most successful that this important body has ever held. The ability with which the distinguished president, Sir Wm. Dawson,

conducted the proceedings was the subject of general remark. The subjects discussed in the biological and physiological sections were of very little direct medical interest. A discussion which took place on cerebral localization was very disappointing both in matter and manner. The veteran experimentalist, Dr. Blake of California, read a paper on the connection between molecular and biological action. In the section for anthropology, Dr. Hingston of Montreal read a paper on "The Influence of the Canadian Climate on Europeans," and Dr. Felkin of Edinburgh one on "Acclimatization of Europeans in Tropical Africa." Dr. Ruttan, lecturer on Chemistry, McGill University, read a paper on "The Derivatives of Tolidin and the Azotolidine Dyes."

AXIS-TRACTION.—We notice an article by Professor William Stephenson of Aberdeen in the *British Medical Journal* of August 28th, 1886, "On the principle of Traction-rods, with a simple suggestion applicable to any Forceps." The correctness in principle and practical bearing of Professor Stephenson's views on the subject of axis-traction render this article well worthy of perusal. We would, however, call the author's attention to the fact that this identical "traction-hook" was devised and exhibited by Dr. Alloway at the Montreal Medico-Chirurgical Society meeting of November 9th, 1883,* and that the remarks made at that meeting upon the merits of the "traction-hook" were practically similar to those expressed by Prof. Stephenson in the article above referred to.

THE OBSTETRICAL SECTION OF THE BRITISH MEDICAL ASSOCIATION.

[The following account of some of the work in this section of the British Medical Association by a Canadian who was present will be read with interest.—ED.]

The annual meeting of the British Medical Association, held this year at Brighton, was one of peculiar interest; for, in addition to a representative gathering of the British medical profession, a number of foreign and colonial visitors were present,

* "Canada Medical and Surgical Journal," December, 1883.

who took an active part in the discussions. In no section was better work done than in the obstetrical; the meetings were crowded, the discussions well sustained, and the results highly satisfactory. Three principal topics were chosen for consideration: 1, The alternatives to craniotomy. 2, The treatment of extra-uterine gestation by abdominal section and by electricity. 3, The removal of the uterine appendages.

DR. ALFRED MEADOWS, president of the section, opened the proceedings with an able and thoughtful address. He favored the movement now going on in England, Germany and America to separate gynæcology from obstetrics, since now "each is sufficiently important to be regarded as a separate item, and is best studied and advanced by judicious and judicial separation." After paying a glowing tribute to the brilliant achievements of gynæcology in recent years, he entered a strong protest against the frequent resort to craniotomy, and expressed the hope that ere long the operation would be largely, if not wholly, abandoned, and that it would in most cases be regarded by the profession "almost as great a crime to thrust the perforator into the head of an unborn as of a born infant." He contended that "we have not exhausted the resources of civilization until we have found out some means by which we may in every case of labor, with reasonable chances of maternal safety, extract a living and viable child from the mother who gives it life." He hoped that the powerful influence of the British Medical Association would be used to check the fearful tide of infant slaughter which in Great Britain alone "sweeps away annually nearly two thousand innocent lives, besides hundreds of mothers." He criticised the term *uterine appendages*, as applied to the ovaries and Fallopian tubes, contending that the uterus is really the appendage, being inferior to the ovaries and tubes in physiological work. He acknowledged the sound and scientific basis upon which Tait's operation is founded, and endorsed its use (1) in tubal and ovarian disease beyond the reach of other measures, (2) in certain nervous diseases otherwise incurable, and (3) in relieving suffering from certain forms of uterine fibromata. In conclusion, he warned his hearers to remember that they are physicians as well

as surgeons, and urged the necessity of attaining greater perfection in diagnosis and devoting more attention to uterine therapeutics.

DR. ROBERT BARNES introduced the subject of "The Alternatives to Craniotomy" in an admirable paper, somewhat conservative in tone. He said that in Tyler Smith's time the perforator was more frequently used than the forceps, craniotomy being done once in every 340 cases. The abolition of craniotomy was Tyler Smith's dream; but though this will probably never be realized, the frequency of the operation may in several ways be diminished: (1) By hygienic and prophylactic measures. Infancy is the time when deformity begins, hence infancy is the proper time to prevent it. Secure better food and hygiene for the working classes and deformity will decrease. Deformed pelves are much rarer in England since the passage of the Factory Acts, and of late years cases of extreme deformity are far less frequent than in Germany. (2) By the use of the long forceps with the pelvic curve, many children are now extracted through narrow pelves that would in earlier times have been sacrificed. (3) By the induction of premature labor, either before or after viability, when the case is seen sufficiently early. (4) By turning, an operation available from the 36th to the 40th week. But when the woman has come to full term with a living child too large to be extracted alive through her pelvis, the only alternatives are craniotomy or one of the Cæsarean section operations. Which shall it be? For Cæsarean section two strong arguments are urged: 1st, The child has thereby a reasonable prospect of living. 2nd, The mother's chances are not much worse than after a difficult craniotomy. The advocates of craniotomy maintain that (1) Cæsarean section does not, as yet, give the mother as good a chance as craniotomy; (2) the mother has a primary right to life, consequently that operation should be chosen which will give her the best chance. The whole question hinges upon the degree of deformity of the pelvis; the operation, which is preferable in minor degrees of contraction, is not necessarily preferable in the major degrees. In deformed pelves with a conjugate of 3 to $3\frac{1}{2}$ inches, the risks of craniotomy

should be scarcely more than those of natural labor; in such cases craniotomy is preferable, especially as in subsequent pregnancies premature labor may be safely induced and family secured. In this way craniotomy may save more infantile as well as maternal life than Porro's operation, in cases where the deformity is not too great. But when the contraction is great, Cæsarean section is a fair alternative to craniotomy, and in skilful hands is to be preferred. Conclusions: 1, Greater attention to diet and hygiene, especially among the working-classes, will decrease the frequency of deformed pelves. 2, In very slight degrees of deformity, the long forceps, turning, and induction of premature labor are the proper alternatives to craniotomy. 3, Porro's operation is suitable in great degrees of deformity. 4, Cæsarean section (Sänger's or Leopold's) is legitimate in less degrees of deformity. 5, Craniotomy is preferable in minor degrees of contraction. 6, In other obstructions, such as tumors, Porro's operation or removal of the tumor. The legitimate aspiration of the obstetrician is to eliminate from his art the practice of craniotomy upon living children; but the dream of Tyler Smith will probably be realized only when hygiene has triumphed over disease, and when all men and women are healthy and virtuous.

DR. KINKEAD of Galway followed with a paper on the possibility of reducing the maternal mortality of Cæsarean section to that of craniotomy. He said that the causes of death after Cæsarean section are shock, hæmorrhage, peritonitis, incarceration of intestine, exhaustion, and septicæmia, all of them dangers which are increased by delay in operating. In fact, delay and fruitless attempts to deliver in other ways are the main causes of the mortality. Dr. R. P. Harris has shown the mortality of Cæsarean section to be about 25 per cent. in pelvic deformity of $2\frac{1}{2}$ inches, where the operation was done within the first 24 hours, no other operative measures having been previously attempted. Although this percentage is too high, it compares favorably with the $37\frac{1}{2}$ per cent. of craniotomy in similar cases. Dr. Kinkead then described minutely the method of performing Cæsarean section according to Leopold and Sänger.

He strongly recommended the continuous suture for the uterine wound in preference to the interrupted, claiming that it controls hæmorrhage better, keeps the edges of the wound in closer apposition, secures earlier peritoneal union, and is less liable to tear out.

DR. LUSK of New York said that in New York there are few cases of contraction under 3 inches, consequently forceps, turning, or induction of premature labor is generally sufficient. It is in the rarer cases of less than 3 inches that the question of craniotomy or Cæsarean section comes up. There are grave, moral objections to craniotomy, and any operation will be welcome which will relieve us from such a repulsive and degrading task. Dr. Harris has shown that 75 to 76 per cent. of Cæsarean sections recover when performed early and under favorable conditions, and that even in the fatal cases, careful examination of the particulars shows that death was generally due to causes necessarily fatal. For instance, the operation has frequently been done upon moribund women as a *dernier ressort*, everything else having been tried in vain; in one case, the patient was operated on with a razor, and in another the woman was actually a corpse before section was performed, yet these cases swell the mortality records. In the early Cæsarean operations, gaping of the uterine wound was the one great danger. Porro overcame the difficulty by removing the uterus. More recently Säger and Leopold have overcome the difficulty by carefully stitching up the uterine wound and returning the uterus to the abdominal cavity. Their success is wonderful: Säger operated upon four cases, with no deaths; Leopold ten cases, with one death. In three hospitals in Germany 19 cases have been operated upon, with the loss of only one mother and no children. The statistics of Säger's operation in Europe and America to the present date are 28 cases, with 7 deaths.* The fatal cases have been either hopeless or done under unfavorable circumstances. There are three operations now before the profession—

* Dr. R. P. Harris of Philadelphia has just published in the *Medical News* some additional cases of Säger's operation, so that the record now stands—38 cases (in all countries), with the loss of 13 mothers and 4 children. The percentage of women saved is 78 (in Germany), and 68 $\frac{2}{3}$ (in all countries).

Sänger's and Porro's Cæsarean section, and Thomas' laparolytrotomy. They are not rival operations, but fulfil different indications, each having its own special limitations: 1, Sängers operation is proper in the bulk of cases of $2\frac{3}{4}$ inches and under, where the cervix is moderately dilated, and the operation can be done early. 2, Porro's is preferable in similar cases where the labor has been protracted. The uterus is exhausted, tissue changes have probably begun, it is better away. 3, Thomas', when the head is at the brim, the vagina pulled up, and the cervix retracted over the head; the success is 6 out of 12 cases.

MR. LAWSON TAIT preferred Porro, because it protected the patient from subsequent pregnancy and its attendant risks. We are too apt to regard women merely as child-bearing machines, and treat them accordingly. To the discredit of our civilization, half the babies die before they reach five years of age. Why, then, argue against Porro's operation because it prevents subsequent child-bearing?

DR. T. M. MADDEN of Dublin looked at the question from the purely moral standpoint, and denied the right of any man to take human life. Fortunately, the opinion and practice of the profession are different from what they were in Sir J. Simpson's time, when the rule was "cold steel for the child, and mercury for the mother (for peritonitis)."

DR. ELIS thought that the preventive aspect of the question had not been sufficiently brought out, and advocated an early examination of patients to discover possible deformity. Premature labor could then be induced, and the dangers of subsequent serious operation avoided.

DR. EMMET read a clear and forcible paper on "Certain moot points in Gynæcology," the gist of which was that discharges from the uterus and vagina are generally due to some cause *outside* of the uterus, that pelvic inflammation is generally the cause resulting in dysmenorrhœa, displacement, etc. The treatment of these conditions resolves itself, therefore, into the treatment of the causative pelvic inflammation. Dysmenorrhœa and flexion often coexist, but they are both symptoms due to the same cause. Mechanical dysmenorrhœa is a myth, and stenosis

has little effect upon menstruation—the most extreme stenoses have been observed with absolutely no accompanying symptoms. Prolapse, not version, is the cause of symptoms. A pessary gives relief by taking up the slack in the broad ligaments, supporting the blood-vessels and relieving congestion, not by merely holding the uterus up in its place. A pessary similarly relieves the troublesome symptom of irritable bladder, which is incorrectly attributed to pressure, but is really due to traction by the cervix on the utero-vesical folds. While not opposed to the use of pessaries, he believes they are used too frequently and too soon. They have a limited field and a definite time for employment. He is becoming more and more convinced that lacerated cervix is the fruitful cause of epithelioma. In the way of treatment for dysmenorrhœa, he recommends hot-water douches given at short intervals from the first pain till relief is obtained. He has abandoned intra-uterine medication, and believes that since doing so his patients require about seven weeks less treatment. The uterus is a very ready absorber, but its proximity to the peritoneum makes this dangerous; pelvic inflammation is very apt to be excited by intra-uterine applications. He owns neither a sound nor a uterine probe. In displacements, he first corrects the prolapse by cotton wool pledgets with glycerine, and waits for the absorption of old products of inflammation before introducing a pessary.

DR. BANTOCK agreed with Dr. Emmet that 6, 9, 12 months rest in bed, with hot douching, etc., would cure many cases; but, unfortunately, there are many patients who cannot, or will not, submit to such a long treatment, and for such, intra-uterine treatment must be resorted to. For dysmenorrhœa, he believes in forcible dilatation of the cervix; we stretch the sciatic and other nerves for the relief of neuralgia, and similarly we stretch the cervix. He believes in pessaries, and uses them early, so that he may, as soon as possible, correct the passive congestion and restore a normal circulation. Chronic inflammation is a misnomer. Inflammation is always acute, lasts but a few days, and leaves behind it effects which should be called chronic passive congestion. In such cases, if the uterus is lifted into place, the

congestion is at once relieved, and pain, tenderness, etc., soon disappear. In the operation for lacerated cervix, he does not agree with Emmet as to the advisability of waiting for months before operating; he thinks it best to operate early, thereby effectually unloading the blood-vessels and relieving passive congestion.

On the following day, DR. LUSK read his paper on "The proper moment for the performance of Gastrotomy in Abdominal Pregnancy." As a sort of text for his paper, he read a case showing the disastrous consequences of delay. He said that septic poisoning is the great danger, especially as in these cases its invasion is so insidious that it is apt to be overlooked. The early symptoms (chills, fever, etc.) are apt to be attributed in America to that ubiquitous disease *malaria*, though really marking the commencement of sepsis. The operation should be done as soon as the death of the child is certain. Do it early, before septic poisoning begins; don't wait for those symptoms which always mean danger.

MR. JESSOP of Leeds asked why the child should be left to die and become putrid. Why not operate sooner and save the child? He had operated once in this way, and saved both mother and child.

DR. EDIS said that if the operation is performed when the foetus is alive, the risk to the mother is much increased. When the foetus is dead, there is less congestion of the pelvic viscera, nature is rearranging her internal economy, there is a less highly organized seps, and consequently less danger. Martini's and Jessop's cases are the only two on record where a living foetus was successfully removed without injury to the mother.

DR. AVELING'S paper introduced the subject of "Electricity as a means of arresting Extra-uterine Gestation." The galvanic current seemed to be preferred by most of the English speakers, the faradic by the Americans.

DR. GARDNER of Montreal related a case treated successfully with the faradic current, which he strongly advocated as being quite as effectual, and at the same time milder and pleasanter.

DR. EDIS emphatically condemned the expectant treatment,

and urged the use of electricity early, before the termination of the third month; after that period there would be more risk of sepsis after the operation.

DR. LUSK advocated the popularizing of the treatment by electricity. It is such a simple operation that it can be done easily and safely by the most inexperienced, while the later operations are far more serious, require greater skill, and can be performed successfully only by men of large experience.

MR. LAWSON TAIT entered his protest against the use of galvanism, and boldly denied the possibility of diagnosing extra-uterine gestation before rupture of the sac. His challenge caused quite a sensation in the section, and in the discussion which followed he got decidedly the worst of it.

On the following day, DR. SAVAGE read a paper on the "Removal of the Uterine Appendages." The discussion was interesting, but very one-sided, Dr. T. M. Madden being the only dissentient voice. His objections were theoretical, fanciful, and weak, being based chiefly upon moral grounds. Lawson Tait was the hero of the hour, and it must have been exceedingly gratifying to him to receive such hearty and unanimous endorsement.

Medical Items.

—Sir Andrew Clark has retired from the office of senior physician to the London Hospital.

—Dr. Bandl of Vienna succeeds to the chair of obstetrics in Prague, vacated by Dr. Breisky.

—The Czar of Russia, it is stated, sent M. Pasteur 40,000 roubles for his institute. The subscriptions received now amount to \$300,000.

—The veteran ophthalmologist, Prof. von Arlt of Vienna, has had his right thigh amputated for gangrene. The latest accounts report his progress to be favorable.

—Dr. R. J. Edes, Professor of Clinical Medicine in the Harvard Medical School, has tendered his resignation. He intends to remove to Washington to practice his profession.

A REMEDY FOR CORYZA.—Muriate of cocaine two grains, roasted coffee and white sugar, of each one ounce. To be taken as snuff.—*Med. Press.*

—Dr. James G. Wakley, editor and proprietor of the *London Lancet*, died on the 30th August from cancer of the tongue. He will be long remembered for his generous gifts to the "Hospital Sunday Funds."

—It is reported that another of Pasteur's patients has just died at Leste, near Bordeaux, after undergoing ten inoculations. The victim is a little boy, aged $3\frac{1}{2}$ years, who was bitten by a mad dog on June 14th last.

—The next annual meeting of the American Public Health Association will be held in Toronto, Oct. 4th to 8th. Arrangements have been made with the Canadian Pacific Railway by which a limited number of delegates to the Association will receive return tickets for the Pacific coast from Toronto, Montreal or Quebec, at the greatly reduced rate of \$85, and \$25 extra for drawing-room and sleeping cars.

—M. Sellar of Paris alleges that the inhalation of hydrofluoric acid in pulmonary tuberculosis is productive of great benefit. The patients are submitted to daily inhalations, which last about an hour each time, and are repeated from twenty to thirty times. Air is passed into a mixture composed of 150 grammes of water and 50 of hydrofluoric acid. The air thus impregnated is propelled into a room in which the patients under treatment remain the necessary length of time.

COCAINE ANÆSTHESIA IN PARTURITION.—At the meeting of the Association of German Physicians in Prague in April last, Fischel presented the record of five cases in which local applications of cocaine were used to diminish the pains of labor. He quoted the brilliant results obtained by Doléris, in whose observations the drug was applied to the vaginal mucosa and the external genitals in aqueous solution, or in the form of a salve, the strength in either case being four per cent. The amount used was from 40 to 60 drops of the solution and 45 to 60 grains

of the salve. In this manner Doléris induced practically painless delivery in 13 out of 15 primiparæ. Fischel's results were less striking. Employing, as a rule, weaker cocaine solutions, he records one case of absolutely painless delivery, two in which the pain was greatly diminished by the application, and two in which the results were negative. These observations, apart from the practical interest, tend to show that the seat of the labor "pains" is not in the uterus, but in the dilating cervix and the vagina.—*Wiener Med. Presse; Med. News.*

FEES OF NOTED PHYSICIANS.—The *Boston Traveller* thus quotes from a London letter:—

" 'Do London doctors earn more than queen's counsel?' As a rule they do not, but the incomes of the three leading physicians and those of the three leading lawyers are about equal—that is to say, at the rate of \$60,000 a year each. The largest sum ever earned in one year by a doctor was \$100,000, made by Sir Astley Cooper. The three men at the head of the medical profession in England at the present day are Sir Wm. Jenner, the court physician, Sir William Gull, and Sir Andrew Clark. Just lately the last named has obtained considerable notoriety. He was induced to visit a very wealthy lady at Nice, and he received the unprecedented fee of \$25,000. One-fifth of this amount he retained as a remuneration for his services, and the remainder he divided between two charitable institutions connected with his profession.

"Speaking of fees, there is a tale told of a rich colonial gentleman living in Kent who had the misfortune to take a slight cold. Not satisfied with his local medical attendant, he desired to have Gull down from London in consultation. Gull happened to be away, and Sir William Jenner came instead. He was duly paid his fee of \$375 for the visit. The patient, feeling no better, then sent to Edinburgh to a leading doctor of that city, who travelled the 400 miles in order to see him, and in ordinary course received a guinea for every mile, that was 400 guineas, or \$2,100. Again the patient felt no better, and this time Gull was summoned and attended.

" 'I suppose,' suggested the local practitioner, 'you will pay Gull what you paid Jenner—375?'

" 'Nonsense,' indignantly retorted the sick gentleman; 'I am not going to pay Gull less than I gave the Scotchman,' and he drew a check for \$2,100. Before he got rid of his cold he had paid \$7,000 in fees."