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CANADA

MEDICAL JOURNAL

ORIGINAL COMMUNICATIONS.

A Few Thoughts Respecting the Treatment of the After-birth. By W. Canniff, M.D., M.R.C.S., England.

The function of the placenta is well understood. It is at once a bond of union between the new being within the womb, and the mother; and the organ by which the offspring's blood is aerated and its growth and development sustained. The hour of utero-gestation, at which the placenta begins its duty, may be doubtful; but the moment when it ceases its work is sufficiently certain.

The onset of parturition at once affects the placental circulation; for, as each pain comes and the uterus contracts, there must be a correlative arrest of the flow of blood into the maternal portion of the placenta. The only effect upon the child is such as may be experienced by holding the breath for a certain length of time. As the passage of the child by the natural way into the world progresses, the effect upon the child must be correspondingly increased; not only because of the increasingly intensified and prolonged bearing-down pains, but the necessarily increased contraction of the womb as its contents are expelled, and a diminution of the cavity takes place. At last, when the expulsive power overcomes all obstacles, and the head of the child or any portion of equal dimension is born, there must attend more or less displacement of the placenta in its attachment to the uterine walls. The placenta cannot contract, while the uterus in the whole of its extent does, and this, it is submitted, necessitates a partial or complete separation at this time of the placental organ. The child during this last pain, has been, as during the previous ones, deprived of the vivifying influence of the maternal blood; but does it now,

after this pain, by which the head is born, is over, recover the vital stimulus? If the placenta remains attached it might, indeed it would. But what says experience? The writer speaks only for himself. He has noticed invariably that the child,—shortly after the head is born, when there should be, if the placenta remained attached, a return of maternal blood—makes an effort to breathe; there is a gasping. As the chest is confined within the pelvic cavity, the lungs cannot expand; if a long period elapses before another pain completes the birth, the child becomes asphyxiated, and may even die, at least render artificial respiration necessary to bring on the natural. So far, it is supposed, all has been done by the normal powers of nature, although if interference or assistance has been necessary, the subsequent steps will be the same.

When the child is completely expelled, it is submitted that the final expulsive effort of the uterus has entirely detached the placenta, unless there should be abnormal adhesions, and even then it is not of sufficient extent to allow a maternal flow of blood for the child. In other words, it seems most likely that when the head is born there is such a separation of the placenta from the uterus, that the child no longer can derive sustenance from that source, and consequently seeks it in another way, as is evidenced by its gasping; and that when the child is entirely born, there is undoubtedly a complete severance, unless there be abnormal attachment, which will require unusual interference to overcome, yet which cannot afford a channel by which the mother can continue to maintain life in the offspring. The child is born, and henceforth must seek the breath and food of life in another way—through other channels. Such being the case, we can see the utter futility of the accoucheur waiting a moment before severing the funis. The mistake of feeling the cord, to see if there be fœtal circulation, is palpable, for although blood may be felt passing from the child to the placenta, it does not from that action receive any benefit—acquire any change. It is obvious then, that the cord may be divided without delay, and, moreover, when the child is asphyxiated, the sooner this is done the better—the greater the chance of resuscitating the child by artificial respiration. The proper course is, not to wait until the child breathes, but to hasten the application of the ligature and division of the funis, that the child may be placed in the most favourable position and circumstances to produce animation.

The child is separated from the placenta and is properly breathing, what remains to be done? Will the medical attendant apply a bandage and wait for a pain to expel the placenta, be the time long or short? Why should he wait? For five years the writer had been accustomed not to wait, but to proceed to assist nature in its removal, in the follow-

ing manner: The time occupied in tying the cord and disposing of the child is generally about the same period as the intervals between the previous pains, and nature is found quite prepared to obey the solicitations of the attendant and expel the after-birth, which in the majority of cases lies within the vagina. Taking hold of the funis with the right hand, the left is placed over the fundus of the uterus, and through the abdominal walls gentle manipulation is made, at the same time a moderate degree of traction is used in the proper direction upon the cord. According to my own experience, the uterus responds to this action, and the placenta comes away; and when such is not the case, it is found that some unnatural adhesions retain it. In all cases where the placenta does not come, I unhesitatingly introduce the hand and remove it. The dilated state of the parts, and the prepared condition of the hand are most favourable for this procedure. But, says one "meddlesome midwifery is bad," and so it is, in so far as nature is thereby embarrassed or hindered. Is it, however, a meddlesome thing to tie the cord after the child is born? Certainly not, nor is it to remove the placenta, which now, a foreign body, only prevents the comfortable settling of the mother, whose jaded frame and excited mind so much require the absolute rest which only comes when all is over. It must be borne in mind that in the great majority of cases the placenta comes away by gentle traction and abdominal manipulation, and when it does not, there exists abnormal adhesions, rendering the introduction of the hand necessary; for it is taken for granted that no one would think of administering ergot to produce pains to expel the after-birth. And if manual interference is necessary, there can be no doubt that the sooner it be made the better. The argument that may be advanced, that it is better to wait until the woman can rest before disturbing her, it is ventured, is unsound. After great agony attending the birth of the child, the removal of the after-birth is but a small thing, unless some time has elapsed so that the stretched and benumbed parts have had time to recover their sensibility.

And, still more, the opinion is advanced, that this procedure secures a more through contraction of the uterus, so as to prevent *post partum* hemorrhage, and also to prevent the formation of numerous clots, the expulsion of which causes the distressing after-pains.

Reference has not been made to the use of chloroform. It is the writer's custom to always carry with him chloroform when called to attend a case of midwifery, to be given if desired by the patient, and the number desirous of having it is steadily increasing, notwithstanding the influence used against it by a few old practitioners, whose prejudice or something else will not permit them to countenance its use. Of course the amount of

chloroform taken is never sufficient to keep the patient insensible, but to limit the severity of the pain, to take away the acuteness of the sting. Generally, when the last pain comes, a larger quantity is allowed; and at this period the patient is generally clamorous for more; so when the child has been given to the nurse or placed at the foot of the bed, the patient is still under the influence of the anæsthetic agent. And so the steps above recommended, may all be taken ere the mother regain her senses, to know in joy, that her child is born.

Belleville, Ontario, Canada, February, 1868.

On the use of Carbolic Acid in Surgery. By D. S. E. BAIN, F.R.C.S., Edin., Staff Surgeon Major.

In the columns of the *Lancet* during the past year, Professor Lister, of Glasgow, was the first to bring before the medical world the uses to which carbolic acid could be advantageously applied, and notwithstanding the controversy which has since arisen on this subject, it must be admitted that Mr. Lister has the honour of having brought prominently forward in the columns of the *Lancet*, the uses to which this acid can be applied externally. From Mr. Lister's favourable description, I was induced to try it in various ways: the first was a case of carbuncle, only remarkable for the method of treatment. It occurred in the ordinary situation, viz., the nape of the neck, free incisions were made, and a pledget of lint saturated with carbolic acid was inserted in the wound, over which a solution of the acid in glycerine (℥j. ℥j), was used as the ordinary dressing. Within 48 hours the slough separated, leaving a clean healthy surface which healed rapidly under the daily application of the acid in glycerine. From the marked success in this instance, I suggested its use in various degress of strength, according to the nature of the affection. Thus in sloughing (syphilitic) ulcers, and in sluggish ill conditioned sores on the extremities, this application has met *every* requirement in the most perfect manner. To cite other cases, a few weeks back, a serious gun-shot accident occurred to a young girl 16 years of age, carrying away the greater portion of the lower jaw, wounding the tongue and destroying much of the soft parts. The dressing at my suggestion consisted of carbolic acid and glycerine (℥ i—℥ i) which was applied by saturating lint and placing it *carefully* in all the crevises. The hœmorrhage which was severe, ceased, and the subsequent discharge was healthy without the slightest unpleasant odour, portions of bone came away in the shape of exfoliations in some four weeks after the accident, without the slightest perceptible fetor, and I am happy to add that the girl is now convalescent.

Quebec, 12th February, 1868.

Observations on some of the Inflammatory and Obstructive Diseases of the Cæcum. By ALEXANDER MCMASTER, M.D., York, Ontario.

In systematic treatises on medicine, it is a matter of surprise in how slight and cursory a manner the diseases of the intestinal canal are disposed of, particularly those of an inflammatory or obstructive character. Physiology teaches us that the whole canal is concerned in the process digestion, and also, that each portion of its anatomical division has its own peculiar function to perform before the completion of that process, the proper performance of which is so essential to a healthy condition of the whole system. Inflammatory disease of the cæcum is frequently confounded with other and essentially different conditions of the intestinal canal. In its function it partakes of the nature of a stomach in the graminivorous and ruminating animals, and it is said to be the viscus in which the last act of digestion takes place, its mucus membrane secreting an alkaline albuminous fluid, while its follicles pour out an unctious oily material with hydro-sulphuretted gases to be eliminated from the economy in the performance of which it becomes, like the lungs or kidney, a depurating organ. When constipation takes place, there is more or less absorption of these excreta, which being carried by the blood, not only contaminates that fluid, but produce a degree of depression of the whole system. I am convinced that it is often the seat of fatal disease without disturbing the function of any other part of the canal, and I also believe that it is often the first in the chain of causation of other disorders, while it manifests comparatively few signs of disease. Inflammatory disorders of the cæcum are often mistaken for hysteritis, ovaritis, cystitis, and enteritis, &c., they may be classed as acute and chronic, and extending over an indefinite period, either from wrong medical treatment, or errors in diet. They do not seem to be produced by the ordinary causes of inflammation, nor by vicissitudes of the weather, but rather by hardened and impacted fœces, the pips, rinds, and indigestible portions of fruit, acting as mechanical irritants, and oftentimes by various kinds of concretions. The symptoms sometimes begin very mildly and gradually, there being very little febrile excitement when compared with the local pain; the pulse is not small nor much quickened as in other abdominal inflammations; there is less anxiety expressed in the face; pressure over the cœcum produces considerable pain; there is also great tension over the whole ileo-cœcal region, the pain does not intermit, but gradually extends its area, until the whole abdomen becomes involved. There are no rigours: violent vomiting may set in, especially if drastic purgatives have been persevered in: there is obstinate costiveness. The position is characteristic; the patient lies on the right

side with his body bent and the thigh drawn up. If wrongly treated or neglected, general peritonitis may supervene, and speedily end fatally. In the progress of these diseases adhesions often form either in the interior and surrounding parts; also abscess, sometimes pointing outwards and requiring evacuation, sometimes bursting into other parts of the intestinal canal, the contents being so evacuated per anus, sometimes producing fatal peritonitis. When resolution takes place, it is generally preceded by action of the bowels, subsidence of the pain, tenderness and sickness; about the fifth or eighth day this result can only be hoped for by the most judicious treatment, but when mistaken and treated by large and repeated bleedings or violent purgatives, there is great danger of a fatal termination or a protracted convalescence. The treatment to be pursued in these cases, consists of leaches applied to the cæcal region in numbers proportionate to the severity of the disease, hot fomentations assiduously employed, mild aperients and the free use of opium (in some instances in combination with calomel and ipecac), large bland emenata thrown into the bowels by means of an O'Bierne's tube. Purgative of a drastic or irritating character should be avoided; the diet should be entirely farinacious.

In chronic cases where the action of the bowels has become irregular, and the ejections fœtid, (diarrhœa alternating with costiveness) associated with colicy pains, hardness and fulness over the region of the cæcum, with tenderness on pressure, reliance is to be placed in blisters, iodine and linaments with united aperients, also a strict regard to dietic rules.

In cases of simple obstruction from over-distention or impracted fœces, relief is to be sought in the employment of large bland enemata, mild aperients and sedatives, such as hyosciamus and belladonna, dashing cold water over the surface of the abdomen, electricity, tobacco enemata, &c. Should these means fail, operative surgery still comes to our aid.

REVIEWS AND NOTICES OF BOOKS.

Annual abstract of Therapeutics, Materia Medica Pharmacy, and Toxicology, for 1867, *followed by an original memoir on Gout, Gravel, and Urinary Calculi.* By A. BOUCHARDAT, Professor of Hygiene to the Faculty of Medicine, Paris, translated and edited by M. J. De ROSSET, M. D., adjunct to the Professor of Chemistry, University of Maryland. Philadelphia: Lindsay and Blackiston, 1868. Montreal: Dawson Brothers.

This annual abstract of the more valuable discoveries in the sciences

named, has been issued for some years back, and on the Continent of Europe has acquired a very high reputation. We believe this is the first translation which has been published on the American Continent, and so far as we have been enabled to examine the work, the translator has done his task well, adhering as far as practicable to the text. The selections have been made mainly with a view to the useful information they convey, mere theoretical abstractions we are glad to notice being omitted. In the preface the Editor says: "the work is addressed to the requirements of physicians whose engagements do not permit of their searching over the immense field from which these facts are gathered; to practitioners in the country as conveying the results of the active labours of the "toilers" in our profession, and to medical men generally, in the amount of original information from sources hitherto unavaible." We have much pleasure in recommending the manual to the notice of our subscribers in the country, convinced as we are that many valuable hints of a thoroughly practical character may be gathered from its pages. The translator has added a few foot notes, which give to it an additional value.

PERISCOPIC DEPARTMENT.

Surgery.

COMPOUND FRACTURE OF THE SKULL, WITH LOSS OF A PORTION OF THE SUBSTANCE OF THE BRAIN.

By George Croker, M. D., F. R. C. S. I.

James Gipson, æt. 19, carter, in the employment of the Marquis of Downshire, of strong, healthy appearance, the youngest but one of eleven brothers, all of whom are living.

July 9th, while driving a horse and empty cart, in which he was standing, the horse became restive, and kicked in the forepart of the cart, getting his hind legs right in; Gipson having loss his balance, fell with his head towards the horse's heels. After a short distance the horse fell; just at this time some men came to Gipson's assistance, and found him lying with his head towards the heels of the horse, which at this time was struggling. They at once lifted him out, and laid him on the ground. Ten minutes elapsed before I saw him. He was then rolling about, complaining bitterly of pain in his right shoulder and arm, and not at all of the head. On examining the arm there was no apparent cause for all this pain. One of the men who assisted in lifting him had several pieces of

medullary substance on his coat sleeve, and also in the cart where his head lay there was more. The hair being cut, and part of it shaved, two small wounds were to be seen on the upper and fore part of the right side of the head; they were between three and four inches apart, and corresponded with the cocks on the horse's shoe.

Having introduced a prope into the front one, it passed easily down for more than two inches, giving evidence at the bottom of a depressed fracture.

The two wounds were thrown into one by a blunt pointed bistoury. The scalp had been separated from the skull for some distance round. The flaps were easily drawn to either side. The blood being cleared away, large pieces of the skull were seen imbedded deep into the substance of the brain. On rising one piece which was altogether unattached, there at once came up a large gush of blood. This, after a little time, subsided, and, when cleared away, the brain and its membranes, &c., could be seen very extensively lacerated and deep. The bone which was removed is two and half inches long, by inch and half, at the broad side, and at the narrow end nearly an inch. The other depressed bones were denuded of the periosteum for about two square inches, but adherent to the scalp over the right temple. They were raised up by an elevator, and placed in as close apposition as it was possible; nevertheless, their tendency was to fall down. It may be worth mentioning that the brain appeared not to fill the cavity of the skull, as when all was cleared off, the handle of a scalpel could be passed easily between it and the cranium, round the part that was visible.

The wound and surrounding parts having now been cleaned, it was dressed with a pledget of lint and cold water. The man was then put on a stretcher and carried home, a distance of nearly two miles.

His after treatment was keeping him in a dark room, and putting him as quickly as possible under the influence of mercury, by small doses of calomel and James's powder every two hours, applying large quantities of ice to the head, occasionally the use of a turpentine enema.

He had no bad symptoms for some days, the circulation very little disturbed. About the sixth day he became restless and wandering; this lasted for three days, when he began to complain of severe pain in the right shoulder and arm, which became partially paralysed; this continued for four days, and then the pupils became dilated, and his sight almost gone, particularly in the right eye. Small portions of medullary matter were now then thrown up from the wound.

From the twentieth day after the accident he began gradually to improve. All bad symptoms appeared to have left him, and he was able to

sit up a little in a fortnight after. This state of things went on every day; he gained strength quickly, and was able to resume his work the tenth week, suffering little or no inconvenience.

The wound cicatrized perfectly over, leaving a deep furrow about five inches long and two wide along the side of his head, the deepest part being about two-thirds of an inch.

In this case, it is remarkable to what extent the brain, its membranes, and vessels, can ever recover from the effects of such an injury, and how nature, with a little assistance, can accommodate all those parts to again work in unison, and repair such a breach without any impairment to mind or body.—*Medical Press and Circular.*

HOSPITAL NOTES AND GLEANINGS.

TREATMENT OF WHITLOW IN THE LONDON HOSPITALS. MIDDLESEX HOSPITAL.—Amongst the out-patients of this hospital Mr. Lawson has remarked that the frequency of whitlow varies considerably. At one period of the year the disease may be of frequent occurrence, whilst at another it may be comparatively rare. In speaking of whitlow, it is the deep or severe form to which he refers: the treatment of a superficial whitlow is self-evident. The causes which produce whitlow may be local or constitutional; but the majority of cases are due to the latter. A slight injury, such as a scratch or a prick with a rusty nail, may have been the immediate excitant; but had the health of the patient been good at the time of the accident, the probability is that no severe after effects would have followed. At certain times when boils are prevalent, and the tendency of disease is to assume a low type, whitlows are common in the out-patient rooms of the hospitals. They should always be regarded as evidences of low power, and in considering the treatment of them this fact should be borne in mind.

When a whitlow threatens, the patient should, if possible, strike work; and a purgative should be given to clear the bowels of all irritating matter, as a preliminary to the tonic treatment which is to follow. The mineral acids with bark nearly always do good; or their use may be preceded by diffusible stimulants, such as ammonia and chloric ether. Depressants are uncalled for, and will probably do harm. Warmth should be applied to the finger by linseed-meal poultices, changed two or three times a day; and, with each change of the poultice, the part should be soaked for at least a quarter of an hour in hot water. The warmth is grateful to the patient, and generally does good.

The most important points, however, in the treatment of whitlow are:

1st, to ascertain when pus has been formed; and, 2dly, to give vent to it by a free incision.

The sense of fluctuation, which is usually one of the prominent symptoms of the presence of pus, cannot be appreciated when the matter is in the extremity of the finger or thumb. The natural elasticity of the par is so deceptive that it may be easily mistaken for fluctuation. The only reliable guides for determining the existence of pus in cases of whitlow are tension and pain. The cushion of the finger or thumb becomes hot and swollen, more or less tense, and exquisitely painful. The slightest touch aggravates the pain, which is of a throbbing character, and so severe as to destroy sleep. Such symptoms are diagnostic of pus, and a free opening should be at once made to give vent to it. The incision should be in the mesial line of the palmar surface of the finger or thumb, and of a sufficient length and depth to give a free escape to the pus. A warm linseed-meal poultice should be then applied, and the fomentations with hot water repeated from time to time.

Much might be said about the neglected whitlows which are often met with amongst the out-patients. The suppuration has been allowed to go on undisturbed: and no exit for the pus having been made, it either works its way to the surface by progressive ulceration, or it burrows beneath the palmar surface of the finger and thumb, in some instances extending into the palm of the hand. Even when the pus makes its way to the surface, there is always considerable destruction of overlying tissues, and very frequently necrosis of the last phalanx. In treating such cases it is advisable to save the nail, and as much as possible of the end of the finger or thumbs. By waiting patiently, the necrosed bone will become loosened from its attachments, and it may generally in the end be lifted away with a pair of forceps, and a very useful finger will be the result. Amputation should not be performed simply because the last phalanx is necrosed. It can always be resorted to after the other plan of treatment has been tried and failed. There are, however, cases of neglected whitlow in which amputation of the finger or thumb is the only treatment which can be rightly pursued; but these must be regarded as rather exceptional.

WESTMINSTER HOSPITAL.—Mr. Power holds that there is no sufficient evidence of there being but two distinct forms of whitlow — the superficial and the deep-seated (onychia maligna); but that there are many degrees of inflammation, the severity depending essentially on the state of the patient's general health, and partly also on the cause and on the condition of the part itself. The disease commonly appears as a consequence of some slight injury, as a punctured wound; or results from disordered bowels, insufficient or unwholesome diet, night watching, or other depressing con-

dition. If the patient be otherwise healthy, and the skin, as in young persons, be thin and delicate, the affection, which is to be regarded merely as a boil, requires but little treatment. The bowels should be opened with a dose of compound jalap powder, a black draught, or castor oil. The hand and arm should be kept raised in a sling, and the finger, and even the hand, enveloped in a poultice of linseed-meal with a view of softening the skin, of allowing swelling to take place more readily, and of facilitating the bursting of the little abscess. When this has occurred, the symptoms immediately remit, and quick recovery follows. Incisions are not needed in such cases; on the contrary, they do harm. If made, a drop of bloody pus exudes, and a reddish, vascular, fungous growth springs up, the pain recommences, and what would otherwise have been superficial and slight becomes deep-seated and severe.

When the formation of matter occurs under the nail or beneath the horny skin of the finger of the artisan, a different line of treatment must be adopted. Here the pain is very severe; and the matter, when formed, must creep and burrow beneath the skin or nail, and may easily, by the pressure it exerts, cause the ungual phalanx to die. General treatment is of little service; but the skin should be softened by the application of a poultice for a few hours, and a free incision be made. Water-dressing may then be applied; and if any recurrence of the inflammatory symptoms is observed, the whole of the finger should be well rubbed over with the solid nitrate of silver.

Finally, in very unhealthy subjects, when the disease has lasted for some time; when the subcutaneous connective tissue is infiltrated with matter, the skin raised in vesicasions, the finger, hand, and arm swollen, with red lines extending up the forearm, indicating the position of the lymphatici, and the gland at the elbow or those of the axilla swollen and painful, the use of the knife is indispensable, and the incision should be free and deep. If the bone is felt bare and necrosed, the whole phalanx should be removed at once; if not, it may be left, though it will generally necrose subsequently, when the inflammation has been so severe. The sheaths of the tendons should not be opened too far. They may recover their functions.

As regards general treatment, opium and sedatives are of little service. Common sense will dictate whether abstinence should be enjoined, or wine, full diet, and tonics administered. Persistent fistulous orifices indicate the existence of a portion of dead bone, which must be cut down upon and removed with forceps, or, if necessary, with cutting pliers.

St. Bartholomew's Hospital.—At this hospital a large number of ill-nourished young women, mostly sempstresses or engaged in domes

tic service, apply for relief, suffering from the cutaneous or subcutaneous forms of whitlow. These varieties of the disease, where the inflammation begins in the neighbourhood of the nail, and limits itself to the last joint of the finger, Mr. T. Smith treats by the administration of tonics, and locally by poultices or water-dressing, leaving the patient to decide whether the pus shall find its own way to the surface, or an earlier relief from pain shall be procured by incision. He believes that in any case where the matter is near enough to the surface to be seen through the skin, no other harm than some additional pain is caused by allowing the abscess to open spontaneously. He is in the habit, however, of opening early by incision the deeply-seated subcutaneous whitlows that occur over the last phalanx, in order to diminish the risk of necrosis. Should necrosis occur, the bone, when thoroughly separate from the soft parts, is drawn out through some already existing sinus, or through an incision made just beneath and parallel to the free edge of the nail. Tendinous whitlow occurring on the first or second phalanges, Mr Smith treats locally by early and free median incisions on one or both aspects of the finger. In any form of whitlow, when once there is a free exit for the pus, Mr Smith recommends at the first the temporary and then the permanent discontinuance of the poultice, as tending in this stage to prolong and increase suppuration. — *Lancet.*

OPERATION OF SPLENOTOMY (REMOVAL OF A SPLENIC CYST AND COMPLETE EXTIRPATION OF THE HYPERTROPHIED SPLEEN): RECOVERY.

PERFORMED BY DR. PEAN, SURGEON TO THE HOSPITAL. By BALTHAZAR W. FOSTER, M. D., M. R. C. P., Translated from the *L'Union Médicale*, Nov. 26th, 1867. PHYSICIAN TO THE QUEEN'S HOSPITAL, BIRMINGHAM.

MLLE. ADELE CERCILY, boarder at the orphanage of Saint Mandé, aged twenty years, of a robust constitution and lymphatic temperament, had always enjoyed good health until the appearance of the first symptoms of the present malady, which manifested themselves some two years ago, by an increase in the size of the hypogastric region, accompanied by acute pain. The symptoms increased gradually till about two months before the operation, when her sufferings became so violent that they compelled her to cry out, and threw her into a profound state of melancholy and depression. The pains, moreover, were not thoroughly intermitting, were seated for the most part in the right illiac fossa, and resisted all treatment.

The patient came to consult me on August 20th last, her sufferings had become so unsupportable, that she was prepared to undergo any treatment.

The following are the results of the examination made at that date:—

General health greatly debilitated, advanced anæmia, great disorder of digestive functions, dysmenorrhœa, slight embarrassment of respiration. The patient complained of febrile attacks, and diffused neuralgic pain. She was in a state of exhaustion from her suffering; there was no œdema, yet a little embonpoint.

The abdomen was increased in size, and presented a considerable prominence in the hypogastic region, while there was scarcely any fulness in the hypochondria and lumbar regions. The prominence was nodulated on its surface, but, in other respects, was similar by position, extent, and form, to the gravid uterus in the last months of gestation. The circumference of the abdomen measured 1 metre 10 centi-metres.

Palpation produced a little pain in places; the consistence of the tumour varied; fluctuation was very distinct in the median line, and on the right side. At the surface of certain elevations, particularly on the left side, the consistence was firmer, solid, and recalled that of a fibroma.

On percussion, there was absolute dulness all over the surface of tumour, and sensation of fluid over a great part of its extent. Resonance all round it, in the epigastric, hypogastric, and especially in the lumbar regions. The tumour appeared clearly defined at its circumference, and in particular, at the superior margin. It was completely immoveable.

Digital examination found the hymen entire. The uterus, of normal size, appeared wedged in the thickness of the tumour, which rendered it immoveable, and formed, anteriorly and posteriorly, a projection, which depressed the viginal walls. The finger easily detected the existence of fluid on pressure and percussion being made on the hypogastrium. The greater solidity of the tumour on the left side and below, led to the opinion that it was developed in the left ovary, and the pain caused on this side by vaginal pressure, excited a fear that numerous adhesions existed.

On September 6th, at the Convent of the Augustine Sister, in the Rue de la Santé, I performed the operation, assisted by Drs. Ordonez, G. Désarènes, Gaudin, Morpain, Gossé, and M. Magdelain, my clinical assistant.

The patient resisted the action of chloroform, and it prbduced vomiting several times during the operation, which was a troublesome complication. An incision was made in the median line from the umbilicus to the pubis. The abdominal wall, somewhat thick, was divided in successive layers. Four ligatures had to be applied to the divided vessels. The peritoneum was divided on a director, and no fluid escaped from its cavity. The edges of the incision having been separated, the anterior

surface of the tumour was exposed, in close contact with the abdominal wall, and covered over its entire extent by omentum, which it was impossible to separate on account of adhesions. I resolved to puncture the cyst through the omentum with a large trochar. The puncture gave exit to three litres of thick, viscid, brownish-yellow fluid. The tumour having been thus diminished in size, I was able to introduce my hand into the peritoneal cavity, and carrying it downwards, I detached the omentum from the pelvis and the tumour. Traction separated the adhesions, which gave rise to no hæmorrhage requiring the application of ligatures. Next I searched in vain in the direction of the ovary to discover the situation of the pedicle or place of origin of the cyst, which, now that it was freed from the omentum which had covered it, presented an appearance very similar to uterine tissue. I was able to satisfy myself not only that there was no pedicle, but also that the tumour was completely independent at its inferior surface of the organs contained in the pelvis. Knowing that cysts having a very close analogy with those which arise in the ovary may be developed in the mesentery, or even in the parenchyma of the kidney, I directed my attention to those parts, but the result of my examination was completely negative. The impossibility of drawing the tumour outwards in order to carry the exploration further, necessitated the extension of the incision. I therefore prolonged it towards the left to the extent of four finger-breadths above the umbilicus. The portion of the cyst forming the pouch evacuated by the puncture could now be drawn into the superior angle of the wound. As it still contained fluid, in order to empty it completely, and to facilitate the extraction, the thinnest part of the wall of this pouch was exercised. I could now draw the cyst outwards.

We were now struck by the aspect of the cyst, as regards its unusual colour, the character of the tissue forming its walls, especially in the thickest portions. But soon doubt was impossible. The search for the point of origin of the cyst conducted the hand to the diaphragmatic hollow of the left hypochondrium, and permitted me to circumscribe the fleshy mass constituting the superior portion of the tumour. Everything proved that it was the spleen which was implicated, and that a cyst situated anteriorly and inferiorly had been developed in the hypertrophied organ, and had burrowed in its substance to a considerable distance.

The cyst was unilocular, and the nodules, as well as the non-uniform resistance of different parts of its surface, remarked on examination, were due to the varying thickness of its walls, which varied from some millimetres to four or five centimetres in thickness.

The thickened portions were situated on the inferior part of the cyst

accessible to the touch, and also on the lateral surface, especially that occupying the left flank.

The surface of the tumour was furrowed by vessels, and marked posteriorly by a large venous trunk of 1½ centimetres in diameter. In spite of the extent of the incision the immediate extraction of the whole tumour was rendered impossible by its situation, and I determined, therefore, to remove it in several pieces. Bearing in mind the disposition of the arterial system of the spleen, and how it is divided into tracts independent of each other, we proceeded to ligature in succession, the several branches of the splenic artery, so as to circumscribe and isolate that part of the spleen containing the cyst. The large vein which extended on the posterior surface having been first tied as near as possible to its junction with the splenic vein, the inferior part of the tumour was cut off, and, as we had hoped, no hæmorrhage followed the section. The superior part of the tumour, consisting of about one-third of the whole mass, had now become accessible. Some intestinal and omental adhesions were detached and gave rise to no hœmorrhage, which compression of the vessels did not arrest. If the structure of the spleen had undergone no degeneration whatever, but had been perfectly healthy, it would have been impossible to preserve the remaining portion of the organ. For the nature of the tissue rendered compression by a clamp impossible, and besides the clamp could not be drawn out, nor maintained in the superior angle of the wound, because the mass which would serve as its base was situated too deeply in the sub-diaphragmatic hollow of the hypochondrium. Moreover, the extent of the cut surface of the spleen was too extensive to strangulate.

The extraction of the last portion of the spleen was proceeded with as follows:—

First of all, four metallic ligatures were carefully placed on the gastro-splenic omentum, as near the spleen as possible, in the short space which separates it from the tail of the pancreas and the bulging end of the stomach. According to all probability, these ligatures would include all the vessels and remove all risk of hæmorrhage. However, in order to guard ourselves still better against the immediate danger, the gravity of which we had every reason to fear, we proceeded to extirpate the remaining portions by their successive destruction by the the actual cautery, after having compressed them in a special clamp made with the object of obtaining by compression of the tissues, linear eschars. These successive cauterizations reached the extreme limits of the spleen below the ligatures so thoroughly that there did not remain a vestige of the splenic tissue. The four metallic sutures were next cut close and left in the cavity of

the abdomen. The patient had not lost 100 grammes of blood by the operation. During the examination of the cyst no portion of the fluid escaped into the abdomen. Nevertheless, I neglected no precaution necessary in such a case, but, after having cleaned the coils of intestine, I sponged out the peritoneal cavity several times. I then closed the wound, and in order to obtain complete occlusion, I placed nine metallic ligatures on the abdominal parietes, at a good distance from the edges of incision, and including the parietal peritoneum. Five twisted sutures were placed on the points which opened between the ligatures.

The operation, thus terminated, lasted a little more than two hours. It had been performed without any remarkable loss of blood, with the exception of that contained in considerable quantity in the tissue of the tumour. During the whole of the operation the patient was kept in a state of perfect insensibility. The chloroformization was so complete that it required nearly half an hour to restore her from her profound artificial sleep. During the day and night following the operation, there was no fever; the pulse was 80, the respiration was again easy; the patient complained only of malaise, and had occasionally vomiting, due to the action of the chloroform. She took a little cold broth, and some stimulating drinks.

The next day vomiting occurred on two occasions, and excited a little pain in the left hypochondrium; the stomach was not at all painful on pressure, and there was no sign of meteorism: The pulse was normal, 90.

On the third day the vomiting ceased; the patient recovered her cheerfulness; the improvement, indeed, was so marked that she could sit up and turn in her bed without perceiving the least pain. The abdomen was soft, and not tender on pressure.

The margins of the wound were perfectly united, and the pins of the twisted sutures were withdrawn. Broth and porridge.

On the 5th day all the metallic sutures were withdrawn, and replaced by a dry colodion suture: At this time the general health of the patient was as satisfactory as if she had undergone no operation. There was no fever, and no pain; the digestive functions were so well performed that solid food was allowed.

From the 8th day, the patient could leave her bed, recline on a long easy chair, without producing any relapse. The cicatrization of the wound was solid and complete in all its extent. At this date the catamenia, which had hitherto been regular, but scanty, and had ceased at the last period, only three days before the operation, re-appeared in great abundance, and of a much darker colour than natural. The flow lasted

three days, but caused only some slight pain on the right hypogastric region. This anticipatory appearance of the menstrual flow frequently occurs after ovariotomy, and, for my own part, I have often observed it, and always under such conditions, that I consider it a most favourable symptom.

On the 10th day it was impossible to prevent the patient from going out. She descended and mounted alone the two flights of stairs which led to her chamber, after having spent a few minutes sitting in the garden, which was about 100 metres from the body of the building in which she lived. She walked as well as possible. The next day she had gone into the entrance court of the convent, when she was extremely frightened by the sight of a runaway horse. This young girl, besides being highly nervous, was so easily affected, that she fainted, and, in spite of the care with which she was surrounded, she was seized with nervous tremors, which lasted three hours. She afterwards had delirium, and some ataxic symptoms.

From this time appetite and sleep deserted her; the pulse varied from 100 to 120 per minute. Violent pains occurred in the right orbit, and brought on a vivid injection of the conjunctiva and lachrymation. This condition lasted some days, and produced moral and physical depression so great as to inspire much anxiety. Nevertheless, thanks to the great care which surrounded her, all the symptoms successively disappeared. The orbital pain and conjunctival injection were determined by an attack of epistaxis; but these local conditions recurred again three different times from week to week, each time, however, the crisis declared itself by epistaxis.

From the fifteenth day the patient, who had been obliged to take to her bed, could again quit it, and return to the use of solid food. She was allowed to go out, and afterwards she went down to the court-yard and the gardens, where she spent the greatest part of her days. During this time the state of her health left nothing to be desired, as, indeed, several distinguished physicians who visited her could testify, more especially Drs. Belin, Blanchard, Galligo of Florence, Kœberlé of Strasbourg, and my illustrious and revered master, M. Nélaton, to whose wise counsels I owe the success I have obtained in the practice of ovariotomy.

However, not to omit anything, I must mention some circumstances which occurred during her convalescence. Thus, during the third and fourth weeks, at the same time that the orbital pains and the epistaxis appeared, the stomach was affected with violent neuralgic pains, which disappeared immediately on the administration of sulphate of quina. Besides this, the menses, which had not returned at the fifth week, were

replaced by very sharp uterine pains, which some laudanum injection, quickly removed: Finally, during the sixth week an adhesive phlebitis of the internal saphena made its appearance, accompanied by œdemas which soon ceased to be painful under some topical treatment.

The convalescence was, however, only somewhat impeded by these symptoms, which left after them no permanent lesion. The menses returned for the second time on the sixty-fifth day after the operation. The respiration remained perfectly easy. The patient affirmed that she was able to walk quickly without inconvenience, which was formerly impossible. Lastly, when she was presented to the Academy of Medicine, M. Barth auscultated the jugulars, and could discover no bruit de souffle, a circumstance extremely rare, in the case of a young girl of her age dwelling in Paris.

Examination of the Tumour.—The tumour was examined immediately after the operation; it was of the colour and consistence of hypertrophied spleen. The mass first removed constituted the cyst-walls, and formed about two-thirds of the morbid mass; it weighed 1140 grammes. The walls of the cyst were of variable thickness; at certain points they were thin and reduced to fibrous membrane, in other places, on the contrary, they were two or three finger-breadths in thickness, and were composed of a reddish soft structure, of an appearance similar to that of the spleen. The structure of this tissue was examined by Dr. Ordonez. This able observer recognized, under the microscope:—1. A great number of unaltered blood-corpuscles. 2. A very large quantity of the glomeruli of Malpighi, hypertrophied to such a degree that it was easy to isolate them by the aid of a lens. 3. At certain points where the substance was much thinned, these elements were seen to disappear successively, and to give place to a very close net-work of fibrous tissue, which in spots alone formed the cyst-wall. The wall itself was traversed on the exterior by a great number of blood-vessels of all sizes. The interior of the cavity was smooth and covered in places by hard patches composed of carbonates and phosphates of lime and magnesia. The fluid contents did not differ materially from those found in some ovarian cysts. The fluid was thick, of a brownish yellow colour, and contained a large proportion of albumen, white corpuscles in various degrees of degeneration, and lastly some calcareous granules.

Medicine.

CLINICAL LECTURE A CASE OF FRONTO-TEMPORAL NEURALGIA ATTENDED WITH CEREBRAL DISORDER.

By C. Hanfield Jones, M. B. Cantab, F. R. S., Physician to St Mary's Hospital.

M. A. C., ÆT. 25 years, single, admitted October 8th, 1867. On admission, the chief feature of her condition was stupor or semi-coma. She could be induced, with some difficulty, to answer questions, but it was slowly and reluctantly, and not by any means always rationally or coherently. We understood from her mother, I believe, that about ten years ago she had a fall, and hurt her head, and since then at intervals she had had violent pains in her head, with sickness. During the last few days she had been delirious or wandering. Face pale, tongue coated, pulse 84, soft and weak; urine slightly acid, not albuminous; deposits phosphates when boiled, and lithates when treated with nitric acid. No spots on abdomen. Pupils rather large, about equal. Left lower eyelid is congested; left temple seems rather swollen.

She was ordered two morphia dressed blisters, one to the forehead, the other to the left temple, and extracti cannabis indicæ gr. ½ *ter die*; sherry 4 ounces.

I may introduce here the account of her previous history, which was kindly furnished me by Dr. Bastin, although I did not receive it till about the time of the patients discharge from the hospital. "M. A. C. came to live with us eight months ago; was then very anæmic and delicate looking, and continued so all the time. She had two attacks while in our service, in addition to the illness for which she entered the hospital. The first commenced soon after she came, and lasted nearly a week, the predominant symtoms being intense pain in the left frontal region, with loss of appetite, but no feverishness or impairment of mental faculties. The recovery was pretty sudden. About three months afterwards she had another attack, which was rather severe but quite of the same character. She seemed to get much relief on this occasion from potas. iodid, gr. x. doses, and after regaining her usual state of health she took perchloride of iron in a bitter infusion for some weeks. During all this time the catamenia had been regular. No headache was complained of to Dr. Bastian in the interval between this attack and the one for which she was admitted into hospital, though her fellow-servants say that she did suffer from it at times. The third attack commenced on October 3rd, in the usual way, with intense pain in the left frontal region, loss of appetite, cool skin, furred tongue, but

rather quick pulse. Two days later her appetite became much worse, and she became slightly incoherent for the first time. Only some wine and beef-tea were taken on this and the following days. The bowels had been well opened by medicine, and I again gave her the iodide of potassium, with an occassional dose of morphia. The left eyelid about this time became red, and slightly swollen, and there was increased lacrymal secretion. The next day she was decidedly more incoherent and rambling in answers to questions, though she seemed to suffer less from pain. Both pupils were dilated, and almost insensible to light, and continued so.

"On October 7th she was in a dull, almost semi-comatose condition: made no particular complaint of pain, but was quite incoherent in conversation.

12th.—Some slow but gradual improvement has taken place. *Zinci* valerianatis gr. ij. + extr cannabis indicæ gr. ½ in pil. *ter die.*

14th.—Is very much better; looks brighter; eyes more lively. Says she cannot tell persons' names, though she knows them. At least this is what I understand her to say. Aspect tranquil. Broth diet.

16th.—Doing well. Sherry 6 oz.

22.—Improves slowly. Her appetite is poor in spite of nitric acid, strychnia, and cascarilla. Says she has now no pain in head at all. Mistakes pronouns frequently—uses *he* for *she*, and *vice versa.*

26th. —Is still very pale and feeble, mopy, and inapt for exertion. Ferri et quinæ citratis, gr. vij. + tr. nucis vomicæ, x. + aq., ℥i. *ter die*, omitt. pil.; pt. c. oleo morrh. (ordered eight or ten days before.

Nov. 4th.—Is much better; lips of better colour; is more cheerful and rational in manner. Discharged.

The condition of this patient on admission could not be regarded without anxiety. Severe pain in the head, with a considerable amount of stupor and incoherence, recent vomiting, and a previous history of an injury to the head, with subsequent paroxysms of severe pain, were symptoms which could not but excite apprehension. The left frontal and temporal regions, which were the seat of the pain, were somewhat swollen, and the lids of the left eye redder than natural. I confess my first impression was that there existed some (possibly rheumatic) inflammation of the pericranium, bone, and dura mater, and that this was the cause of the pain and other symptoms. At this time I had not the assistance of the detailed report of her previous condition, which Dr. Bastian kindly furnished me with afterwards. On considering, however, that there was no unequivocal symptom of cerebral mischief, no paralysis of the limbs, inequality of the pupils, irregularity, or slowness of the pulse, no convulsion or fever, and observing the manifest anæmia, I thought it not im-

probable that the cerebral disorder was but an effect and extension of the pain, regarding the latter as a neuralgia. In a previous case, I had seen violent pain in the forehead, of apparently rheumatic character, at first complicated with delirium, and subsequently completely absorbed in it (so to speak) when it became more intense. Severe retching was also present. The patient was a strong made man, quite temperate. He died in collapse, and the autopsy the brain was found pale and shrunken and the heart very flabby. Although wild delirium and stupor are very different symptoms in their outward show, there is no doubt in my mind that the state of the brain giving rise to them is, at least, as far as our means of observation can inform us, very similiar, and I am confident that could we have looked within the cranium of our living patient, we should have seen no hyperæmia, but the reverse. Taking thus this view, that the pain in the forehead was neuralgic, and that the brain was suffering sympathetically, the indication was to lull pain or homologous disorder, and recreate nerve power. The progress to recovery was steady but not rapid; her memory continued to be feeble, her mental actions slow and languid, and her general nervous energy considerably below par. Under the continued administration of tonics, she improved very decidedly, and before she was discharged, the nature of the disorder was beyond all doubt. It had, in fact, resolved itself into an ordinary case of anæmia and debility. The swelling of the left side of the forehead and temple, and the redness of the left lids, was no doubt dependent on paresis of the vasomotor nerves of the arteries of these districts. This has been well recognized by Dr. Anstie, who has seen neuralgia of the face, in several instances, give rise to a condition much resembling erysipelas. Sir Thos. Watson also states in his lectures, that severe neuralgia will give rise "to a moderate degree of inflammation of the part; which become tender to the touch, manifestly vascular, and even swollen a little." It is important that you should remember the possibility of such hyperæmia being associated with neuralgia, as, otherwise, you might be led into the error of regarding the pain as dependent on inflammation. The dilation and insensibility of the pupils, which Dr. Bastian observed, no doubt depended on the centres of the third pair being rendered paretic, just as the hemispheres were. This case may be instructively compared with those related by M. Notta, Marechal de Calvi, and d'Hurtelise, in which neuralgia of some of the branches of the fifth pair produced paralysis of the third or sixth nerves. Let me remind you, also, of a case of sciatica under my care last year, in which there was complete motor paralysis of the affected limb, and partial of the detrusor urinæ. In these instances the disorder of a sensory nerve and its centre, extend-

ed to and involved certain adjacent motor centres. In the patient whose case we are considering, the hemispheres succumbed, being probably of weaker constitution than in most persons.

I commend this history to your attentive consideration, for I am sure you will meet in future days with similar instances, and I think the views I have expounded to you of the pathology of these forms of nerve disorder, may prove of real service in enabling you to judge correctly and treat satisfactorily, conditions that would otherwise be very embarassing. In conclusion, I will put into the form of direct precept the points which I wish especially to emphasize.—1st. Do not be too ready to take refuge in the conclusion that there is "congestion and effusion" whenever you have to deal with cases of threatening head affections. Let the conception of paresis of nervous structure be quite as familiar to your minds as those of hyperæmia, or of structural lesion.

2nd. Remark the tendency which disorder of a nerve has to extend to, and to involve nervous centres, even those of the highest order, as the intellectual. In the two first attacks the intellectual centres remained free, in the third they gave way. I believe that two things have influence in determining the situation of the secondary affection—viz., proximity and debility. The nearer centres are, *cæteris paribus*, most likely to suffer, but if they happen to be notably stronger than more remote ones, the latter give way. There is one case on record where diseased teeth gave rise to paraplegia.

3rd. See in the quality of the brain disorder in our patient a manifest demonstration of the real nature of neuralgia. Her brain was evidently partially paralysed, and her frontal and temporal nerves were, I cannot doubt, in a like condition.

4th. Remember that, as this case shows, mere neuralgia may lead to more serious disorder. It is bad enough to be tortured with pain, but any amount of cerebral disturbance is a much graver thing. To prevent such an evil it is surely well worth a patient's while to adopt a suitable mode of life, and to perserve in taking suitable medicines, and this you ought to be able to convince them of. A country life, and the use of citrate of iron and quinine, till all anæmia and neuralgia are fairly got rid of, must be advised to our patient.—*Medical News and Circular.*

HYSTERIA IN THE MALE,

Followed by, and complicated with, cerebral congestion. By J. G. Thornley, M. D., L. R. C. S. Edin.

On the first of October, 1867, I was called to see J. W., who was stated to be very ill. On arriving at the residence of my patient, I found

him in bed, with flushed face, stertorous breathing, and a tremulous movement or quiver running through both the upper and lower extremities; occasionally the tremulous movements assumed the character of a slight convulsion, and then terminated for a period of from five to fifteen minutes, when the tremulous movements again commenced, and terminated as before. The patient, during all this time, did not speak, but lay in an apparently semi-conscious state. That peculiar trembling of the eyelid which is so strongly diagnostic of hysteria, and which has been especially pointed out by Dr. Guy, was well marked, and was present during almost the whole period of the attack. The pulse was very variable, ranging from 72 to 100 beats per minute. On shaking the patient, and speaking in an authoritative tone of voice, he would open his eyes for a moment, answer in a stupid manner, and again relapse into his former state of apathy. After remaining in the above state for about forty-eight hours, and there being no signs of improvement, his friends were desirous that I should call in another medical man; I accordingly called into consultation my friend, Dr. M'Bride, who concurred with me that the case was one of hysteria, with incipient cerebral congestion. At the time of our first meeting in consultation, the tremulous motion of the limbs, and the quivering motion of the eyelids had ceased, the face becoming more flushed, with throbbing of the temporal arteries, and increasing stupor, from which it was almost impossible to arouse him.

During the early part of the attack when the hysterical symptoms were well-marked, I administered repeated doses of ammoniated tinct. of valerian, and tinct. of assafœtida, and sprinkled the patient's face and hands with cold water, which, however, had very little effect. I then directed the patient's head, neck, and chest to be held over the side of the bed, and from a considerable distance, poured a continuous stream of cold water over the exposed face and chest of the patient. The effect was astonishing, perfect consciousness almost immediately returned, and he was able to sit up in bed, and answer questions rationally, and even requested that more cold water should be poured over his face and hands. The good effect of the cold water was, however, but of short duration, for, in the course of a short time after its application, the patient fell into the same state of stupor as before. I tried the above treatment, together with that of assafœtida enemata for some time, but as it seemed to be losing effect, and as the cerebral symptoms were increasing, we resolved to try another mode of treatment. Six leeches were ordered to be applied to each temple, and a blister to the nape of the neck, and to be allowed to remain on for ten hours; the leeches extracted a considerable quantity of blood, which was still further increased by stuping the leech-bites, and

when the bleeding had ceased, the flush in the face and neck had somewhat abated; the blister was applied to the nape of the neck about five o'clock, P. M., and when I called on the following morning, the patient was able to converse rationally. The friends stated that indications of returning consciousness began to appear at midnight. The patient from this period progressed steadily towards convalescence, and in the course of about a fortnight afterwards, was able to walk a long distance into the country.

The history not only of this patient, but that of his family, is somewhat peculiar, for when the subject of this case or any member of his family see blood, or is subjected to any surgical operation, however trifling, syncope is immediately induced. The subject of this case is by no means of an effeminate appearance, but is tall and well-formed, and wrought for some time as a blacksmith, and at which two of his brothers are still employed. About ten days previous to the hysterical attack, this patient fainted on account of a suppurating finger being slightly punctured with a bistoury. The supposed cause of the attack was some unpleasant words which he had with one of his brothers, some four or five hours previous to the attack. The patient is now in good health, and following his usual employment, which is a kind of carpentry, known to artizans as pattern-making. He does not appear to have suffered much by his late attack.—*Medical Press and Circular.*

DIPHTHERIA.

By Dr. W. Watson Campbell, Dunse.

On the 18th of May, I was asked to visit a young lady, residing at a distance of about eight miles, who was said to suffer from sore-throat. Here I may remark that her brother resided in the same street where the five cases last referred to occurred, and that he occasionally asked after the children while they were ailing as he passed along. He visited his home while the children were ill, and about ten days after he had been there I was requested to attend his sister. I found her suffering from diphtheria. The exudation was very adherent, of a dirty yellow colour, and extensive—covering nearly both tonsils, the rim of the velum, and the anterior surface of the uvala. She was very feverish and prostrate. She had a shivering three or four days before she was seen, and this was followed by sore-throat, which gradually got worse till I saw her. Deglutition was very painful, and articulation difficult and indistinct. In the treatment of this disease I immediately began with a gargle of the permanganate of potash (grs. x, to the ℥ xx.), recommending it to be used

very frequently. To insure its application to the whole affected surface she was told to swallow a little of it now and then, in order that, should there be any trace of the disease further down than could be seen, it might be flushed (if I may be allowed the expression) with it as often as a little of it was swallowed. Iron and port wine were also used. This patient never went back a day from this time, if we except the retardation of cure by sequelæ. Next day the exudation was much less, and in four or five days it had entirely disappeared; and, though the throat was raw and tender-looking, I was much pleased to find matters going on as they were. From the first application of the gargle her convalescence may be safely dated. From that time the pain began to subside, and deglutition and articulation became more easy. She went to the seaside about three weeks after my first visit, and though she had great weakness in the legs, and suffered from almost complete blindness from amaurosis for some time, she is now quite well.

I have no wish to extend this paper further than the subject requires, but must state that, since the last case came under my care, I have had other ten cases to attend, and that, under the use of the permanganate of potash gargle, the tincture of the muriate of iron, and port wine, every one of these cases recovered rapidly. I would almost make one exception, and in this case—that of a lad about eighteen years of age—there was only a slight weakness in the legs experienced for about fourteen days. Some of these cases I would certainly have despaired of without the aid of the permanganate of potash, so very severe did the attacks seem to be when I first saw them. At the present time I have a very bad case in hand. I was called upon to see him on the 30th of October. He had a shivering on the night of the 25th. On making my first call, his pulse was rapid and wiry, his face pale and anxious-looking, his skin clammy and moist, deglutition very painful, and articulation very indistinct. The same treatment was adopted in this, as in that of the young lady noticed above. I saw him again on the 2d of November. He was clear and bright-looking, the pain was greatly relieved, and articulation was very much improved. He felt and continues to feel better ever since he used the gargle. I saw him on the 4th again. The exudation, which was of a dirty yellow colour, and very adherent, was nearly gone, and the throat was rather raw-looking. Whether the improvement will continue or not remains to be seen, but I have great hope that he will do well.

Perhaps I may be excused for referring to two or three points in my experience of this disease, which are somewhat interesting.

The communication of infection is not necessarily direct. Indeed, in none of the cases I have seen did the disease seem to pass directly from

one to another, unless where it spread in the family, as in the first cases I have noticed. On five well-marked occasions, it appeared to have been carried by a third party to a distance varying from one to eight miles. On one occasion it re-appeared in the family of the woman attended first in September, 1865, after an interval of six or seven months. Only during my attendance on the last two or three cases have I known scarlet fever to be present in the district.

In some cases of scarlet fever, I have seen whitish pellicles on the tonsils—not very unlike what I saw in my first case of diphtheria; but, otherwise, there was in every case quite enough—even putting the rash out of the question—to distinguish the scarlatinal from the diphtheritic exudation.

In no case of diphtheria did I ever observe an abundant muco-purulent discharge from the nostrils; and though the tonsils are generally felt outside to be hard and large, yet I have never seen in this disease a single case of cervical cellulitis.

In all the cases of scarlatina where I have seen an exudation resembling that of diphtheria, there was not long afterward a well-marked and frequently profuse discharge from the nostrils, and, in some of the cases, very extensive cervical cellulitis.

In some of the cases of diphtheria the exudation appeared to select, as its primary seat, the mucous membrance in the upper part of the larynx; and in some of these, by extension of the exudation, a modification of croup was caused.

In no case of scarlatina, even with intense throat affection, have I ever seen croupy symptoms arise to give evidence of the larynx being affected.

I am not aware that palsy is ever met with after scarlet fever, however severely the throat may have been affected, while palsy very frequently follows diphtheria. Only in one case out of thirty-five that I have had under my care, have I seen dropsy—œdema of the legs only—follow. Dropsy is comparatively frequent after scarlatina.

In such cases of diphtheria as I have tested the urine, the chlorides have never been found absent, and only in two or three cases have I detected albumen. In scarlet fever we expect a deficiency or absence of the chlorides, and are not surprised at the presence of albumen.

Notwithstanding all this, there may have been found, in the experience of others, more conditions common to both diseases than I have met with. I was certainly surprised at the re-appearance of the disease in the same family after an interval of six months—a circumstance which has been known to occur in scarlatina.

With regard to the occasional resemblance of diphtheria to croup, I am

disposed to think it accidental; and that the pellicle of the former differs from the false membrane of the latter in extent, in the rule of place, and in the latter being the result of true inflammation.

From my experience of this disease, I venture to differ from authorities, such as Dr. Begbie, Sen., and Dr. Jenner, with regard to the disease being constitutional. My opinion is that it is not so primarily, but that it becomes so, not so much, perhaps, by the absorption of poisonous matter from the seat of the exudation, as by the effect that the presence of such exudation may have on the nerve centres, through the nerves distributed to the part on which the exudation has taken place. It may be objected that some cases have ended fatally without much local disturbance and this by rapid prostration. Still the time required to effect this prostration, and the amount of exudation which will cause death in this way may, as with other poisons, differ much in every case, whether acting in, directly or directly. The best reason, however, for supposing that the disease is local at first, is afforded by the success which has followed the local treatment, and also, by what was very apparent to me, that, on the whole, the more rapidly the local disease was removed, the less likely was the constitution to suffer.

Of twenty-three cases of diphtheria which occurred in my practice before I used the permanganate-of-potash gargle, ten died. Of the thirteen who recovered, four had paralysis to a greater or less extent. On the other hand, of the twelve cases which have occurred since (not including that under treatment), *none* died, and only *two* have had paralysis.

Since I thought of making this communication I have seen a letter from Dr. N. Evans, in the *Medical Times and Gazette*, of October 27th, in which the report of an interesting case is given, which corroborates very strongly my impression that the permanganate of potash may be safely allowed to exercise a remarkably beneficial effect when used perseveringly, and that even in the worst cases a cure may be hoped for, provided the larynx has not been affected.—*Edinburgh Medical Journal.*

LECTURES ON INFANTILE CONVULSIONS.

Delivered at the Bellevue Hospital Medical College, By Wm. A. Hammond, M.,D. Professor of Diseases of the Mind and Nervous System.

Gentlemen,—First among the class of convulsive disorders which I design bringing to your notice is ecclampsia, under which term two affections are embraced—the convulsions of the puerperal condition, and those which occur in young infants. The latter I purpose considering this morning.

Like many other diseases, infantile convulsions have frequently certain precursory symptoms. There is an irritability of temper, a brightness of the eyes, an indisposition to eat or sleep, slight involuntary movements of the muscles of the face or extremities, starting generally during sleep, and grinding of the teeth; all of which indicate disturbance of the nervous system, and excite the anxiety of the mother, who sees that her child is not in its normal condition; under these circumstances, if an attentive examination be made, other phenomena will be observed. Thus the fingers are widely separated from each other, whilst the thumbs are bent across the palms of the hands, the eye-balls roll slightly at times, or rather tremble, and occasionally there is an almost inappreciable squinting of one or both eyes, which lasts for a few seconds only, sometimes, too, there is pain in the head, and I have, in a few instances, observed very decided evidences of illusions and mental aberration.

These symptoms may continue several days, or only a few hours, or they may be so slight as not to attract attention, or they may be altogether absent. In any event the true convulsive seizure comes on with great abruptness. The child, for instance, may be perfectly quiet in the nurse's arms, suddenly it drops anything it may have in its hand; the body becomes rigid, a slight cry is uttered, the face, which has perhaps been pale, becomes red or purple, the veins of the neck turgid, the respiration is suspended and consciousness is entirely lost. This condition, which is one of general tonic spasm, lasts ordinarily but for a short period —a few seconds—and is succeeded at once by phenomena of a very different character. The limbs are rapidly flexed and extended, the body is alternately bent, and stretched out to its full length; the head is twisted and jerked violently to one side or the other by the irregular and intermittent contractions of the muscles of the neck; the tongue is sometimes protruded between the teeth, and may be bitten as in true epilepasy; froth issues from the mouth, the muscles of the face alternately contract irregularly, and distort the visage; the eye-balls roll rapidly in the orbits, or are turned up, so as to show only the whites of the eyes; the respiration is short and hurried, and the contents of the bladder and rectum are often evacuated; gradually the actions diminish in violence, the child takes a deep inspiration, the body becomes relaxed, a slight perspiration sometimes makes its appearance, and a state of profound sleep, or rather stupour, supervenes.

Such, gentlemen, are the phenomena of an ordinary attack of convulsions in children. As in other diseases there are variations from this type—thus the condition of tonic spasm may be so moderate and short as not to be noticed, or it may constitute the main feature of the attack,

and last a minute or more. The clonic convulsions may be very slight, though involving the body generally, or they may be confined to one side of the body, or may even be restricted within still narrower limits. I have witnessed several cases where only the muscles of the face were involved—others which were limited to the eyes; others, again, which affected a single limb, and one in which there were no disorderly movements whatever, except as regarded the thumb of an hand. In this case there was a prolonged tonic spasm, and loss of consciousness.

Then, too, there are great differences as relates to the duration of the whole attack. Generally it lasts about a minute and a half, rarely more than two minutes, whilst in many cases the paroxysm scarcely extends to half a minute. The cases of continued convulsive movements which have been reported as lasting for several hours, were doubtless, in most instances, repeated seizures, though a case has recently been under may care, in which there were several attacks, each of which was succeeded by a period of stupor, and each of which lasted from thirty minutes to one hour.

Ordinarily after the child has remained in the state of stupour for half an hour or so, a second convulsion occurs. It is rarely the case that a third follows, and sometimes there is only one.

The causes of convulsions in children are very numerous, but they may all be embraced under two classes: Disease or injury of the brain, constituting the *centric* causes, and irritation of distant nerves, constituting the *eccentrice* causes.

The brain and nervous system of children are endowed with a great proportionate amount of irritability, and are consequently readily impressed by even slight disturbing causes. A fall, a trifling blow on the head an inconsiderable mental agitation, or other trivial source of irritation, produce such an amount of derangement in their organisms as to occasion convulsions, whilst in adults they would give rise to a perceptible mental or physical perturbation. Convulsions are therefore of very common occurrence in children, and we find the causes to vary greatly as to intensity.

Setting aside for the present those cases of convulsions which result from organic affections of the brain, such as tubercular meningitis, tumours, or other severe diseases, and in which they are due not so much to irritation as to structural changes, we find that the most common causes of infantile convulsions are mental excitement or depression, physical shocks to the brain and nervous system, extreme cold and heat, and local and general irritations of various kinds.

The first of these, mental excitement or depression, is quite a common

cause in children who have passed their second or third year, and who have consequently become more capable of intense and varied emotions. I have several times seen very severe convulsions induced by fits of anger, and again apparently be due to the sorrow experienced from parental rebuke. Doubtless such emotional disturbance acts upon the cerebro-spinal system through the medium of the sympathetic nerve, and in some way or other deranges its normal action. The convulsions which result from mental agitation, though they may be severe, are scarcely ever repeated, the irritation generally working itself off in a single paroxysm.

Physical shock to the cerebro-spinal system is likewise a frequent cause of convulsions, especially in very young children. A child in running across the room falls and strikes its head against the floor. After the immediate pain has passed away a state of relaxation and apparent fatigue ensues. There may be a little headache, the sleep is disturbed, the thumbs are firmly adducted; there are slight convulsive movements of single muscles or groups of muscles, and the child is irritable and fretful; suddenly the convulsive paroxysm occurs, and is usually repeated several times. In fact, no cause is so productive of a series of convulsive attacks as the one under notice, and they are usually longer in duration than those arising from other causes. Another feature is, that the movements are much more commonly unilateral. Only yesterday I saw in consultation, a little girl who had fallen down a grating in the pavement, and who had, in consequence, been attacked with convulsions. Fully an hour elapsed before they supervened, and then they were confined to the right side of the body. They were repeated many times, and the state of stupor lasted continuously for several hours. No signs of injury could be detected upon the head, and in fact it was very certain that the child had fallen upon its feet and buttocks. The shock to the brain was therefore transmitted through the vertebral column. By the following morning all evidences of disease had disappeared.

Persons cannot be too careful to avoid striking children on the head. I have twice known convulsions produced by not very severe blows on this part of the body, and in one of those they recurred, at intervals, till the child reached the age of puberty.

Extreme cold probably acts by causing hyperæmia of the cerebral bloodvessels. An increased amount of blood in the brain always—unless the quantity be so greatly augmented as to produce stupor through increase of pressure—adds to the natural irritability or erethism of the cerebral and other cranial ganglia.

Intense heat acts differently when the irritation is external and general; acting upon the cutaneous nerves and being reflected thence to the cen-

tral system. The same is true, in a somewhat modified sense, of the convulsions which occur at the outset of fevers and the exanthematous diseases.

Local irritations, however, much more frequently give rise to convulsions than any other cause. Chief among them are those due to dentition, indigestion, and the presence of worms in the intestinal canal. Not unfrequently severe convulsive seizures result from the cutaneous irritation produced by blisters or burns. An instance, several years since, came under my care, in which the presence of a small piece of glass under the skin was the exciting cause of the affection, and I have knowledge of a case in which it was induced by a pin, which had been so placed in the diaper as to prick the skin.

Another cause, which likewise belongs to the class of irritations, but which is not altogether, if at all, one of indigestion, is due to that modification which the mother's or nurse's milk may undergo as a consequence of emotional disturbance. Several cases of the kind have fallen under my observation, and a great many are on record.

Now, as might be expected, all children are not alike susceptible to the action of the causes which produce convulsions. Some will withstand very considerable irritations without being thus affected, whilst others, again, are attacked after very slight nervous disturbance. This difference may be due to inherent variations in the organization of the nervous system, or may be the result of hereditary predisposition. That the tendency to convulsions may be thus transmitted through several generations is undoubted. It is not uncommon to observe that all the children of a family have been subject at some time or other to convulsive seizures, even when examination shows that they differ very materially in mental and physical characteristics. Inquiry is such cases, will almost invariably reveal the fact that one or both parents have been similarly affected, and further research will often show that anterior generations have likewise suffered.

And now, what is the essential nature of infantile convulsions? In other words, what is their pathology? Looking at their causes, we find that nearly all are included in the one word, *irritation*. Irritation, then, in some form or other, in the great cause of these affections. To understand something of its action you must bring your physiological knowledge into use.

A familiar example of the effect of irritation is afforded by the action of sneezing. A current of cold air impinges upon some part of the cutaneous surface, or some acid substance comes in contact with the Schneiderian membrane, and produces an irritation of the extremities

of the nerves which are there situated. This irritation passes inwardly along the course of the nerves to the central nervous system, and there causes an impression, which is reflected through other nerves as a motor influence to the muscles of respiration. A deep inspiration ensues, which is immediately followed by a sudden and forcible expulsion of air from the lungs. Now, all these muscular actions are entirely involuntary, and are really convulsive in their character. An irritation therefore, may be reflected to the central nervous system, and converted into a motor influence.

I do not wish you to suppose, however, that what we understand by convulsion is identical in its nature with such involuntary actions as that of sneezing. There is a close analogy, and that is all. Let us take a case in point. A child has gone to bed after a hearty meal, consisting of some indigestible substances. It rests uneasily, for the stomach is endeavoring to accomplish a labor which is beyond its powers, and already an irritation is being transmitted to the cerebro-spinal system. A nerve in a state of irritability is a nerve in action. An irritation of a nerve is therefore nothing more than an exaltation of the normal function of that nerve. But if a nerve becomes unduly irritable, the central nervous system, which is in direct connection with it, participates. Hence arise the premonitory symptoms to which I directed your attention in the first part of this lecture. Eventually these central organs become charged, so to speak, with irritability. Motor influences start out to various parts of the body, the brain ceases its control, consciousness is lost, the convulsion is fully established, the irritability is discharged, and a condition of equilibrium is regained. Again and again, if the cause of the irritation remains, a similar set of actions ensues, until at last the nerves of the stomach become exhausted of their irritability and can no longer be excited by that particular irritating cause; just as when we pass a mild current of galvanism through a nerve, contraction takes place in the muscles which it supplies, but after a time this result no longer follows, unless the current be increased in intensity, or some other irritation is applied.

Nor is this all. A condition of extreme irritability of an organ, is accompanied, and in fact, may sometimes be immediately produced, by two very different causes; there may be too little blood circulating through it, or this fluid may be in excess. In the ordinary irritative convulsions of children, the latter is generally the case, but it is also very certain that an anæmic condition of the brain often exists. The importance of discriminating between these two different states, is, of course very great as regards the treatment.

Relative to the pathological anatomy, I have no definite information to communicate to you, except to say that we know little or nothing on the subject. *Post-mortem* examination generally reveals a more or less congested condition of the brain, the spinal-cord, or their membranes, with serous effusion into the ventricles, or under the arachnoid; but, in all probability, as Trousseau very justly remarks, these are the consequences of the convulsions, not their immediate causes. That there really is a material change in the structure of the organs involved, scarcely admits of doubt; but our means of research are not adequate to discovering its character. When you are told, therefore, that there is no alteration, I advise you to entertain a healthy skepticism on the subject. The sentiment of pathologists is altogether against the existence of any purely functional disorder.

Infantile convulsions are most common in children between the ages of two and five years. It is said that the tendency increases at about the seventh year, but I doubt it. The period embraced within the extremes above mentioned, is that during which the child experiences most irritation from dentition, from indigestion, and from the presence of worms, and during which, its brain and nervous system are in a peculiar condition of activity and erethism.

The diagnosis of infantile convulsions is attended with no difficulty It is important, however, that you should clearly distinguish between the hyperæmic and anæmic conditions of the brain. The general appearance of the little patient will enable you to do this, and if the anterior fontanelle be still open, you have a very certain means of discrimination. If the scalp covering this opening be depressed below the seat of the cranium, it indicates anæmia of the brain; if it be elevated, it shows hyperæmia.

The prognosis in infantile convulsions must be guarded, but, generally speaking, the simple, uncomplicated irritative convulsions are not dangerous. There is more to be feared from the tonic stage of the fit, than from the clonic, or the stupor that supervenes. The reason for this is very obvious. During its continuance the respiratory process is arrested, and if it lasts as long as a minute and a half, as it occasionally does, death necessarily follows from asphyxia or syncope. What are called inward convulsions, and which consist almost entirely of tonic spasm of the diaphragm and other respiratory muscles, are much more liable to terminate unfavourably than those which are more prominently marked, and which are succeeded by clonic convulsions.

Relative to the treatment of infantile convulsions, I have a few points to mention, which, I think, are of importance. During the paroxysm,

in ordinary cases, there is not much to do; a great deal is done, and with more or less injury to the patient. The application of mustard plasters, or hot water, and such like revulsives, to the extremities and pit of the stomach, can do no good; on the contrary, they may do much harm by increasing irritation. Purgatives, injections, emetics, etc., at this stage of the disease, are also inadmissible, and I have never seen any benefit derived from either warm or cold baths. The tendency of the convulsion is to exhaust itself, and this it usually does in a short time. Therefore, give nature a chance, and let the patient alone. Do not, during the seizure, be officiously treating the cause. When the equilibrium is restored is the time to remove this by an emetic, a cathartic, a vermifuge, an incision, or any other medicine or operation which will strike at the source of irritation. Should, however, the paroxysm continue longer than the ordinary period, or should the tonic stage be severe and prolonged, or should the fits recur frequently, and should the symptoms indicate hyperæmia of the brain, press your fingers gently on the carotid arteries, as advised by Rilliet and Barthez, so as to obstruct the flow of blood to the cranium. This measure will generally be successful in breaking up the fit, and you can resort to it as often as may be necessary. You will thus have opportunity to employ more permanent means, and to remove the cause of irritation. You may also, very safely and certainly cut short or prevent a paroxysm by the use of chloroform inhalations, as recommended by Trousseau. Take a linen handkerchief, pour a drachm of chloroform upon it, and hold it close to the mouth of the patient, in such a manner as not to obstruct the free entrance of atmospheric air to the lungs. Do this for a few seconds, and then remove it. Again apply the handkerchief, and continue this see-saw motion till an impression is produced, or till you have reason to believe that the remedy will not succeed. I have treated a number of cases by this means, and always with success in uncomplicated attacks.

In the "inward fits," or in cases where the paroxysms recur rapidly and frequently, you will derive much benefit from the bromide of potassium, given in from three to five grain doses, repeated every hour or two. This medicine diminishes the amount of blood in the cerebral vessels, and is therefore, not applicable to anæmic cases. It is also a very decided sedative to the nervous system. For these latter, stimulants, tonics, and a position of the body favouring the flow of blood to the brain, should be employed. In one very severe case, where there was very decided anæmia, I made use of hypodermic injections of morphia. The child was six years old, and I injected the twentieth of a grain of morphia, at intervals of two hours, with very excellent results. The

practice is one which should be followed cautiously, and not at all in very young children, or in slight cases.

The subsequent treatment is exceedingly simple. If you can discover the cause of irritation, remove it. Often you are justified in experimental attempts to find it by using emetics, vermifuges, purgatives or other means which your observation and suspicions may justify you in employing. Hygienic measures should not be neglected. Fresh air, good diet, regular exercise, and the avoidance of undue mental or physical excitement, will materially aid in preventing returns of the attacks. You cannot be too assiduous in using these measures, and no drugs with which I am acquainted can take their place.—*Medical Gazette*

Midwifery and Diseases of Women and Children.

RIGID PERINEUM.

By G. Hubt, M. D., St Louis.

[Communicated for the St. Louis Medical Reporter.]

The article on rigid perineum, by Dr. Beatty, quoted from the proceedings of the Dublin Obstetrical Society, is interesting, both on account of the suggestions of the author, and the great practical importance of the subject of which it treats.

All admit that laceration of the perineum is a serious accident, and when threatened is calculated to fill the mind of the *accoucheur* with feelings of the most painful anxiety. I have never witnessed the accident, but have often experienced the anxiety which the anticipation of it awakens, in labours which have been protracted for many hours after the fœtal head had emerged from the bony strait. I have often had occasion to reflect upon this subject, and though willing to admit that rigidity of the soft parts is usually the primary and efficient cause of the delay at this stage of labour, yet I doubt if it is always the cause of laceration when that accident occurs. For in several cases which have come under my observation, in which laceration of the perineum appeared imminent, the danger did not seem to be so much in consequence of the rigidity as of the relative position of the fœtal head in soft parts. Owing, perhaps, to some peculiarity in the anatomy of the soft parts constituting the floor of the pelvis, or of the pelvis itself, or of the position of the fœtus in utero at the time of parturition, the posterior wall of the vagina sustains the almost entire force of the uterine paroxysms, and is thus carried down in front of the fœtal head toward the perineum, and relaxing, permits the

weight of the head to rest upon the posterior margin of the perineum; while, at the same time, the vulva, from want of antagonism, ascends toward the pubes, so as to place it entirely out of the line of the distending force; and while the sphyncter ani muscles are being rapidly and freely relaxed and dilated, those of the vulva are but little disturbed. It is in these cases that laceration is most to be dreaded, from the fact that it commences at the anus and inflicts a dangerous and irreparable injury.

Now, in these cases, the *accoucheur* may render valuable assistance by passing two fingers of either hand (as the position of the patient may require) into the bowel, and with their palmer surfaces supporting the posterior wall of the vagina, and by a gentle and steady upward pressure direct the fœtal head towards the vulva; while, at the same time, the thumb is pressed against the perineum so as to check further distension, and, at the same time, to depress it so as to bring the vulva more fairly within the axis of the distending force. This has been my practice in a number of instances, and so satisfactory were the results that the dread of laceration seldom haunts me now as it did of yore.

This practice may be regarded by some as indelicate, but I can assure those who are disposed to take this view of it, that in a case of real danger, such as we are supposed to be considering, the objection cannot be considered, and their patients will be more apt to thank than to chide them for their well-timed interference; and in cases where the danger of laceration really exists (and none others ought to be interfered with), the anus will be found to be sufficiently dilated to admit the entire hand if it were necessary, and the assistance can be rendered without the slightest inconvenience or discomfort to the patient.

The important indication in these cases is to bring the expanding force of the fœtal head in position with the vulva, so as to act with energy upon the constrictor muscles of the vagina, which is to be accomplished by elevating the head and depressing the perineum. For if the head continues to advance in the direction of the lower margin of the perineum, scarcely any amount of dilation or expansion can relieve the patient from the perils of a dangerous laceration.

ON THE INDUCTION OF PREMATURE LABOUR BY THE DOUCHE.

By Thomas Telford, M. D., L.R.C.S.I., Ex-Assistant Physician, Rotundo Hospital.

The induction of premature labour in cases of undersized pelvis, is an operation of great importance to the practitioners of Midwifery, and has, for a long time, engaged their attention; by its means we are sometimes

enabled to save the life of the child, and thus add greatly to the happiness of the parents. Various modes of proceeding have from time to time been adopted, and with a varying amount of success—such as rupturing the membranes, separating the membranes around the os, passing a catheter between the membranes and the wall of the uterus, by the hydrostatic dilator of Dr. Barnes, the administration of ergot, and by the douche; the latter is the plan which I adopted in the three following cases, in preference to any other.

Rupturing the membranes is very uncertain in its action. I have frequently seen women come into hospital hardly in labour, though the membranes had been ruptured some days before admission. Early rupture of the membranes predisposes to a rigid condition of the soft parts, adding a new difficulty to the case; the separating the membranes, or passing a catheter between the membranes and uterus, unless done with great care, is likely to rupture the bag of waters, and is, therefore, open to the same objection. Of Dr. Barne's dilator I have no experience. The administration of ergot, I am confident, is not efficacious in producing labour, as, from a series of experiments I made under the direction of Dr. Denham, master of the hospital, for the purpose of testing the toxic effects of ergot on the fœtus, we found that ergot administered to a woman seven or eight months pregnant, neither induced labour, or exerted any deleterious effect on the child.

The application of the douche is extremely simple, it is best done by placing the patient in the usual obstetric position, with the hips drawn well over the edge of the bed; by passing a full-sized Ferguson's speculum, the os is brought into view, the nozzle of an ordinary syphon syringe is then inserted into the os, and a continuous stream of water injected into the cavity of the uterus. On the withdrawal of the syringe, the water pours out of the uterus in a full stream; this may again be repeated a couple of times, one such application will generally induce labour within twenty-four hours. Before using the syringe you must be careful to fill it with water, so as to exclude the admission of any air into the uterine sinuses. Some physicians advise the alternate use of hot and cold water; this, I think, a matter of unimportance; tepid water is most agreeable to the patient, and should therefore be used; otherwise, as the action of the water is altogether mechanical, it is immaterial whether we use hot or cold. The action of the water closely resembles the action of the uterus, by gradually separating the membranes around the os and cervix uteri. The three following cases illustrate the rapidity with which labour is induced.

Mary Brien, aged 23, pregnant of her second child, was admitted to

Hospital, November 28th, 1866. She has been delivered in the Rotundo Hospital, at Christmas, 1865, by the crotchet, owing to narrowing in the antero posterior diameter of the brim. She was then advised, should she again prove pregnant, to come into hospital between the 7th and 8th month, in order that premature labour might be induced, as we feared, owing to the narrowing which existed, a child at the full term could not be born alive: She neglected to come into hospital till just eight months pregnant, when the probability of saving the child was much less than had she been seen earlier. Having cleared out the bowels, I douched her in the manner already described at 12 noon, November 30th; labour commenced at 2 p.m., the pains being short and frequent. At 12.30 a.m. of December 1st the membranes ruptured, no presentation being then discernible, it being altogether out of reach of the finger.

At 8.30 a.m., I was called to see her, and, on examination, found the right hand in the vagina; the child was alive, as proved by the hand grasping the finger, when introduced. Version was at once determined on, and chloroform having been administered, I passed my right hand, and turned with the greatest care; the breach and body of the child were then delivered; the arms offered considerable resistance, and were with much difficulty brought down; the delivery of the head was then attempted in the usual manner, and a considerable amount of extractive force used by myself and Dr. Denham, but without avail. Fearing that any further force might tear the vagina from the neck of the uterus, I delivered the child by perforating behind the ear and using the crotchet; the child was a male, and much larger than most eight months' children. Her convalescence was rather slow; she suffered from some tenderness of the abdomen for a few days, and afterwards from an attack of sciatica, but went out quite well in a couple of weeks.

The second case is that of Eliza Scott, aged 26, pregnant of her fourth child. Her first two children were delivered by the crotchet. She was then advised to come into hospital when seven months pregnant, should she again prove so; this she did, premature labour was induced by the douche, and she was delivered of a live child in September 1862; the child lived till eleven months old, when it was carried off by measles. Finding herself again pregnant, she applied for admission on the 28th of February of the present year, being at the time nearly eight months gone. The bowels having been opened, the douche was applied on March the 1st, at 11 a.m., and again at 4 p.m.; labour came on that evening, the membranes ruptured at 11 a.m., March 2nd, the os being then fully dilated. The pains were quick and strong, but as the head had made no advance at the end of two hours, and the fœtal heart in-

creased in rapidity, delivering by the forceps was decided on. With the assistance of Dr. Cronyn she was delivered, after considerable difficulty, of a healthy male child. Her convalescence was most satisfactory, not a single bad symptom having arisen.

The third case is that of Mary Doyle, aged 21, pregnant of her second child. She had been delivered by the crotchet June 25th, 1866, and was then advised to come in when seven months pregnant, this she neglected doing till past the eighth month. The douche was applied at eleven a.m., June 21st, 1867; labour came on almost immediately; the membranes ruptured at 5.30 p.m., when the right arm was found in vagina. She was put under chloroform and version performed; the arms were brought down with ease, but no amount of traction would deliver the head; the head was then perforated through the mouth and extracted her convalescence was most satisfactory, she going out on the eighth day.

The foregoing cases are interesting as showing the certainty with which premature labour can be induced by means of the douche, when properly employed. In the *Medical Times and Gazette* for November 2nd of the present year, a paper was read by Professor Layarewitch, "On the Induction of Premature Labour by Injection to the Fundus of the Uterus." This operation, however, requires a special apparatus, and is not more effectual than the douche used in the ordinary way.

In two of the cases related the arm was the presenting part, and turning had to be performed. This operation is recommended by Sir James Simpson in cases of undersized pelvis, where the head is the presenting part. On the supposition that the head will mould itself to the pelvis, I have tried it myself in three cases, and seen it done once or twice by others, but the result did not equal my expectations. Of three cases I had myself, the child had to be delivered by the crotchet in all, and in one the uterus was torn from the vagina, the woman dying in half an hour; yet, those were cases considered favourable for the trial.

These cases are brought forward in order to show the facility with which premature labour can be induced.

PERMANENT HEMIPLEGIA OF THE RIGHT SIDE, SUBSEQUENT TO AN ATTACK OF PUERPERAL CONVULSIONS.

Esther W., aged 28, of fair complexion and sanguine temperament, born of healthy parents, was admitted to the Rotundo Hospital, September 19th, 1864, in labour of her seventh child. She has a very foolish expression of countenance, and complete paralysis of right, upper, and lower extremities. On examination the os was found about the size

of half-a-crown, labour came on towards evening, and she was confined at six a.m. on the morning of the 20th, her labour being easy and natural.

On making enquiry as to the cause of her present condition, she stated that she married at seventeen, was confined of her first child at nineteen, and enjoyed perfect health to within four days of her last confinement. About two years ago, she was seized with a fit while in bed, which rendered her completely insensible, in which condition she remained till after delivery. For this illness she was bled twice from the arm, blistered at the back of the neck, and put under the influence of mercury. Ever since this illness she has been subject to fits of an epileptic character, occurring once and sometimes three times a-week; the last of those fits took place on the morning of her admission into hospital. Her convalescence since delivery has been most satisfactory, not a bad symptom of any kind having occurred. Her mind is evidently much weakened, but if her attention is fixed she answers questions very sensibly; she talks slowly, and in a hesitating manner, and is inclined to laugh without any provocation. The tongue, when protruded, inclines to the left side, in which direction the mouth is also drawn. The right hand is firmly clenched, and she cannot raise it without the assistance of the other. Sensation is perfect in both upper and lower extremity. The occurrence of permanent paralysis after puerperal ecclampsia is very uncommon. I have been unable to find a case of the kind recorded. The explanation which I would give of this case is, that the primary attack was one of hyperæmic convulsions, some of the vessels at the base of the brain gave way, and a clot was formed, a portion of which becoming organised, would account for the recurring fits, as also for the permanent paralysis.—*Medical Press and Circular.*

FOOD FOR BABIES.

From an interesting article on "Food for Babies," published in the London *Medical Times and Gazette*, we make the following extracts.—

Of milk, we have that of the ass, goat, and cow. Asses' milk is by general consent the best substitute for the woman's for most delicate children; and, dear as it is, it is well worth the money. The goat's is a rich milk, with a strong curd, and only adapted for robust children. The milk of the cow is, of course, the staple. And whilst for general purposes it is quite right that milk should be brought from any distant part of the country, it must be confessed that a few cows should be kept in town in hot weather, that their milk may reach the baby part of the population fresh, unshaken, and just as yielded by the animal. But

cows' milk is too rich in curd for the human baby, whose muscular movements are almost confined to breathing, crying, and the heart's action. So it must be thinned, and the simplest way is the common one of adding an equal part of water (the water being gradually diminished as the child grows older) and a small quantity of white sugar. It is a refinement to use the sugar of milk, instead of common cane sugar, but whether there is anything gained we never could satisfy ourselves.

The test of any kind of baby's food is found in the fact that the child thrives—that it is satisfied after its meals, not subject to fits of pain in the stomach and flatulence, nor yet to fits of colic in the bowels—and that the residuum, which is generally produced upon a napkin for inspection, does not show undigested food. All these things are self-evident. A child ought regularly to grow, to be plump, and to gain in weight every week, and if it do not, something is wrong. Secondly, the child ought to be satisfied and go to sleep after its food; but here the junior practitioner ought to be aware of one physiological fact—when a child is in pain in the abdominal organs, it often displays insatiable hunger, has a tendency to suck greedily, and this though the stomach and bowels may be loaded with undigested food. Ignorant nurses kill many a child by inattention to this point. The child cries after food; therefore they say the food is not good enough, "the milk does not satisfy," &c., and forthwith they give the child some half-solid pap, and dose the mother with over-rich food and alcohol. A purgative dose of oil is the best remedy when a baby is unreasonably hungry after food; castor oil is generally used, but any oil or soft fat will answer the purpose. The old custom of giving a bit of the fat of pig is founded on reason and experience. Lastly, the practical fact remains that no undigested food ought to be found in a baby's napkin. Any mother may be taught that lumps of curd and masses of undigested starch can give the child no nourishment, but decompose in the bowels, and cause first pain, next diarrhœa. A healthy baby's napkin should not be offensive—of course, it has a faint peculiar odouer, but certaintly it does not stink, and if it do, either improper food has been given, or proper food has not been digested.

In other cases, in order to diminish the proportion of curd, it is useful to give *cream* diluted with new milk and water; and, to prevent the curd of cows' milk from coalescing into hard lumps in the stomach and passing undigested, the milk may not only be diluted with water, but with effervescing soda-water (this is called artificial asses' milk) or potass-water or lime-water. Sometimes a very little of the solution of magnesia is added.

But this purpose (*i. e.*, the making the curd softer and more diges-

tible) is generally effected by mixing it with cereal food or the starches. Theoretically speaking, we do not want the nitrogenous elements of the cereals, because the cow's milk contains enough of them. Hence, arrow-root or sago may suffice, if it be understood that the child is to live upon the milk, and that these starchy elements are superadded to modify the milk, and not to be substitutes for it. Still, general experience is in favour of some cereal. Barley-water made from pearl barley, and mixed with an equal part of milk, is an admirable food for most children. Robinson's patent barley deserves praise. Oatmeal gruel and milk agrees well with the robust. Brown and Polson's preparation of maize, and the maizena, seem favourite preparations. On the whole, however, wheat tends to displace the other cereals. The flour of wheat is often baked or boiled, and when so cooked is boiled afresh with water and milk. Or it is made into biscuits, of which Robb's, Lemann's, the Norwich knobs, "tops and bottoms," and rusks, are popular samples; or into farinaceous food—that is, a powder composed of wheat flour or biscuit, with or without admixture of other cereals, and already acted on by heat, so as to require little or no cooking (Hard's, Neave's, &c., &c.).

This is the place to notice "Liebig's soup," a compound of milk, wheaten flour, and malt, with a small quantity of bicarbonate of potass. The object of the malt is to convert the starch of the wheat into sugar, and to save the stomach the trouble of that process; whilst the cow's milk is enriched with the phosphates of the wheat and the added alkali. The thanks of society at large are due to Liebig, not only for the care and patience with which he has worked this idea out, and the liberality with which he published it, but likewise for the impetus which it has given to the study of the whole subject of infant food in connection with mortality.

The original recipe prescribes ½ ounce of wheaten flour, ½ ounce of ground malt, and 7½ grains of bicarbonate of potash, to be well mixed with 1 ounce of water; then 5 ounces of cows' milk are added, the whole is heated gently till it thickens; then it is removed from the fire, stirred till the starch is converted into sugar, as indicated by the liquid becoming thin, again boiled and stirred for some minutes, and lastly strained. For use, this requires to be much diluted for young babies, less for older ones. * * * * * *

As for results. We believe that of any six infants one would refuse to swallow it; one would take it without benefit; but that the remaining two thirds would take it greedily and thrive on it. We have known it to put a stop to so many of the miseries arising from undigested or indigestible food, that it has, we think, already earned for itself a perma

nent place. What form of it will ultimately be the favourite is another question.

The objections to Liebig's food in its common form are, first, the time, trouble and nicety—it cannot be prepared in less than twenty minutes, and not every nursemaid or mother has the intelligence sufficient. Secondly, there is the considerable amount of indigestible husk, often very difficult to separate by straining, and consisting of spicula that look very formidable to any tender mucous membrane. Thirdly, as a theoretical objection, we mention its too saccharine nature and the absence of fat.

The first objection has been met by Savory and Moore, who have put together and prepared the ingredients in such a way that they only need the addition of water and milk, and no straining nor boiling. Mr. Mellin's preparation, if it can be got, of course avoids all trouble of cooking; and we may say that the malt he uses is most scrupulously cleansed from husk. There is also to be procured at Mr. Van Abbott's a preparation called "Liebig's Food for Infants concentrated," the invention of Mr. Ed. Lœflund, chemist, of Stuttgart; it is a thick syrup, containing a concentrated solution of the wheat and malt elements. It has, when mixed with milk in due proportion, a sweet, somewhat empyreumatic, bitter taste, and this is the general character of the food, however prepared; but there is a distinct acid treacly reaction in Mr. Lœflund's syrup. Mr. Mellin has made an extract in the form of granular powder, soluble in cold water, very palatable, free from acidity, and much more portable than Lœflund's syrup. Lastly, we must notice the very ingenious malt biscuits made by Spiking, of Dover Street; these contain the malt and wheaten flour in the form of a biscuit; of course they are portable, and keep any time, and require no more cooking than Robb's or any other nursery biscuit. * * * * * *

We have now, we trust, set forth a pretty general view of infants' food, and shall add but three or four practical hints:—1. The advantage of adding cream from time to time, especially if the baby is constipated. Want of fat is the cardinal defect in Liebig's soup. 2. The expediency of adding a small quantity of some aromatic water to all infants' food, such as dill, anise, &c. There is a very popular food in some counties, consisting of equal parts of barley-water and milk, with one teaspoonful of good brandy to the pint. Bad for the babies' livers, some would say; but no harm is found in practice. 3. The expediency of giving delicate children small quantities of pure gravy or beef-tea sweetened, or a few grains of raw meat ground up to a pulp. If these agree, a child is almost safe. 4. No one kind of food can agree with

all childreh. It has provoked us to see children dying on a diet which did not suit them, without an effort to shift and combine various elements till the right thing could be found. 5. The importance of teaching the poor that food for babies should be *thin*, and that a thin food may be more nutaitious than a thick one. *Certes*, a modern baby who sucks a good creamy milk and water, or Liebig's soup, through Maw's bottle, may bless itself that it was not born in days when thick currant porridge would have been crammed down its throat with a spoon.

SYRUP OF CHLOROFORM.

Mr. T. B. Groves gives, in the *London Pharmaceutical Journal*, the following process for the preparation of a syrup of chloroform which, he says, manifests no tendency no separation:—Put into a twelve-ounce bottle one ounce of chloroform and about three drachms of ether; to the mixture add the same volume of the syrup to be employed; observe carefully the disposition of the fluids, the chloroform and ether will probably sink, then add *guttatim* more ether until the two liquids, on being shaken together, appear indifferent as to their position in the system; finally fill up the bottle with syrup, and shake well for a minute or two.

The syrup should not be too dense, or it will be difficult to impart to it sufficient agitation to insure the complete commixture of the fluids, The syrup should be composed of gum and sugar, of honey or treacle; syrup of sugar does not answer well, apparently on account of lacking viscosity.

The syrup, thus formed, has the same physical properties as chlorodyne, and like it, is readily miscible with water in any reasonable proportion (one to seven), and soluble in the water where the proportion of chloroform is within the limits of its solubility.

The advantages attending its use are these: 1. It does not need special precaution when being added to watery fluids, and in no case does it give rise to a deposition of large globules of chloroform. 2. When added in excess of saturation, the undissolved chloroform is deposited in *minute globules*, which, after lying together for days, show no disposition to combine, but may by a few shakes be dispersed evenly through the liquid, forming an emulsion sufficiently permanent to enable a dose to be measured without difficulty.

Canada Medical Journal.

MONTREAL, MARCH, 1868.

THE LATE ARCHIBALD HALL, M.D., L.R.C.S.E.

It is with deep regret that we chronicle the death of Archibald Hall, M.D., &c., Professor of Midwifery and Diseases of Women and Children, McGill University, which event occurred on Friday, 14th February, 1868. He was a comparatively young man, being at the time of his death in his fifty-sixth year. Archibald Hall was the son of the late Jacob Hall, who for many years was engaged in trade in this city. He was educated at the Royal Grammar School under the care of the late Dr. Skakel, and was regarded by his preceptor as a lad of great promise, as in early life he exhibited a strong love for the study of nature. It was the habit of Dr. Skakel during the winter evenings to deliver a course of lectures on various scientific subjects, principally astronomy and chemistry. On these occasions young Hall was his favoured assistant; this formed in the pupil a desire for the acquisition of knowledge, and he devoted much time to astronomy, which was his favourite study. Indeed he shewed a desire for research beyond his years, and the ground-work of his paper on the birds and animals of the District of Montreal was commenced during his early school days. Subsequently he dipped into Natural History, Botany and Zoology, which branches he followed with ardour.

When in his sixteenth year, young Hall decided on studying medicine, and was apprenticed to the late Dr. Robertson in the year 1828, who at that time was lecturer on Obstetrics and Diseases of

Women and Children, in McGill College. The mantle of the master seems to have fallen on the pupil, as Dr. Robertson was perhaps the most successful accoucheur of his day. During the trying time of the cholera epidemic in 1832, Mr. Hall, being an advanced student, was placed in medical charge of the cholera sheds at Point St. Charles. Although his daily duty was most arduous, he would repair to the house of his preceptor at night purposely to relieve that gentleman of his night work, who in consequence of his hard wrought professional duty during the day, was glad to seek and obtain as much repose at night as possible. We quote from a recent introductory lecture delivered by the Doctor before the class of McGill College at the opening of the session of 1866, which was published in this journal. "I never can forget the still quietude of the town, when called out during the night to visit for the doctor some new and unfortunate case. Nothing broke the calm serenity of the summer night, while walking or riding through the streets, except the occasional clatter of the feet of some man running for professional aid, or the pitiful cry of another labouring under the disease, and calling for assistance."

It was customary in those days, as it still is with all who can afford it, for medical students to repair to the mother country for the purpose of completing their studies at some of the centres of learning abroad. With this end in view, young Hall went to Edinburgh in the autumn of 1832. There we find him attending the medical classes of the University, and having fulfilled the required curriculum, he first presented before the Court of Examiners of the Royal College of Surgeons, and obtained their license to practice as a surgeon on the 1st of April, 1834. In August of the same year, he submitted to examination before the University of Edinburgh, and obtained the degree of Doctor of Medicine, having selected as his subject for the required inaugural dissertation, "the respiratory functions of plants." Shortly after obtaining the diploma from the College of Surgeons, and degree of Doctor of Medicine in the University of Edinburgh, he returned to Canada, and entered at once into the active practice of his profession in this city. From the local enactments of the day bearing on the practice of Medicine and Surgery in this country, it was necessary for him to obtain a license *ad practicandum* before the old Medical Board of

the province, which we find he procured at the City of Quebec on the 1st of April, 1835. About this period his literary habits were fully acknowledged in being elected on the 8th of July, 1835, a Fellow of the Literary and Historical Society of Quebec.

Although engaged in professional avocations, which, with all junior practitioners, is an arduous and unremunerative undertaking, we find Dr. Hall following up his favourite studies Botany and Zoology. In the year 1836 he forwarded to Edinburgh a collection of Canadian plants, and in 1839 he carried off the Gold Medal awarded by the Natural History Society of Montreal for a paper which he prepared on the Mammals and Birds of the District of Montreal. This important paper was published in the Society's transactions in six separate parts, which appear in the sixth and seventh volumes of the *Canadian Naturalist and Geologist*, 1861 and 1862.

Dr. Hall was always a worker, hence we find him becoming attached to the Medical Faculty of McGill College, in the year 1836. The same year he was elected one of the attending physicians to the Montreal General Hospital, a post which he held up to the year 1852, when he became one of the consulting staff to that charity. He lectured on materia medica and therapeutics, from the time of his appointment to McGill College to the year 1842; in the session of that year, owing to the death of Dr. Stephenson, and the retirement, through failing health, of Dr. Robertson, the chair of chemistry fell to his lot, and he steadily pursued that branch up to the year 1849, when in consequence of other changes he again lectured on materia medica. This position he held until the year 1854, when in consequence of the death of the Professor of Midwifery, the late Michael McCulloch, M. D., he was unanimously selected by his colleagues, and appointed by the governors of the University to fill that important chair, which he held up to the period of his removal by death. This appointment gave him the position of Physician Accoucheur to the University Lying-in Hospital. The members of the Faculty of Medicine in the University being the consulting staff of that Hospital.

As a writer, Dr. Hall was acute and bitter, he could dip his pen in the very gall of bitterness, but withall, a generous

foe. In the year 1845 he started the *British American Journal of Medical and Physical Science,* and the pages of that journal will be found teeming with articles of worth from his pen. That journal ceased publication from wart of pecuniary support in the year 1852. He again assumed the editorial conduct of the *British American Journal,* which was resusciated in 1860, but survived only three years in consequence again of pecuniary difficulty. In that journal he fought the battle of his college, in times of great medico-political excitement; and the present proud position of McGill University is in a great measure due to his unwearied watchfulness, and manly out-spoken frankness through the pages of his journal. It may be truly said of him that "although dead yet he speaketh." His ability and worth was fully appreciated by his fellow practitioners. In 1856 he was elected vice president of the College of Physicians and Surgeons of Canada East, and at the next triennial meeting in 1859, he was elected to fill the presidential chair.

Nor was his worth unrecognised abroad, for in 1852 we find him elected an associate of the College of Physicians of Philadelphia, and in 1862 his acumen as an accoucheur was recognised by election as honorary fellow of the Obstetrical Society of London, an honour alone conferred on members of the profession occupying a prominent position.

As a physician he was kind and courteous; an acute observer and successful practitioner; in his own department he was the friend of the junior practitioner, ever willing and ready to go at any hour, night or day, to render counsel and assistance to a brother in need of his advice; with him the chance of a fee was of a secondary moment, ever willing, every ready, ever anxious to assist in those serious cases which occasionally fall to our lot, he thought not of self, but his desire was to render service to a fellow creature in distress, thereby carrying out to the fullest extent the Christian attribute of going about and doing good. His remains were followed to the tomb by a large circle of friends and relatives, and as a signal mark of respect, the faculties and students of both universities, of McGill and Victoria Colleges, were present and joined in the mornful cortege.