genital examples."² But the question arises whether congenital syphilis is an important agent in the causation of such nervous disorders as infantile hemiplegia, cervical opisthotonos, and the clinical conditions which are due to sclerosis of the convolutions.

Hemiplegia.—Infantile hemiplegia is conveniently classified on clinical grounds into cases (a) having an acute onset, (b) having no definite onset. Many of the latter are, no doubt, due to meningeal hæmorrhage occurring during labour; but this cause cannot always be invoked. In fifteen cases of this class I found evidence of congenital syphilis in the family or personal history in four or five instances, without any history of difficult labour. Hemiplegia with acute onset is particularly common under the age of 3 years, and although a certain number follow the acute specific fevers, the greater proportion arise without apparent cause. Embolism at this period of life may be practically excluded. There is reason to think that the lesion is usually either thrombosis or hæmorrhage, so the inquiry resolves itself into the causation of arterial degeneration in young children. Pathological investigations on the condition of the vessels in inherited syphilis are not numerous, but sufficient evidence has accumulated to show that arterial disease is not so uncommon as was formerly supposed.³ I have lately found marked arterial changes in an infant, aged 6 weeks, in whom there was advanced cirrhosis of the liver, with unmistakable evidences of congenital syphilis.

There is considerable divergence of opinion among purely clinical observers as to the influence of congenital syphilis as a cause of infantile hemiplegia. Osler⁴ ascribed only one case out of 120 to syphilis; but it must be remembered that many of his observations were made years after the attack, when the evidences of syphilis were not readily to be made out. Abercrombie, whose investigations were made soon after the attack, ascribed 4 at least to syphilis, probably 6, out of a series of 50 cases;⁵ 2 cases only out of 83 analysed by Sachs and Peterson were ascribed to inherited syphilis.⁶ Marie, Fournier, Hénoc, and Hutchinson evidently consider infantile hemiplegia as being rarely syphilitic. Clinical observations at hospitals devoted to children's diseases appear to indicate that syphilis may have a more important etiological share than is generally allowed. Out of 25 cases of hemiplegia with acute onset, I found no history bearing on syphilis in 9; in 3 instances special inquiries were not made on this point; in 5 there was a suspicion of syphilis, and in 6 the evidence was stronger; in 2 cases the children were certainly syphilitic.

CASE I.—In a child, aged 9 years, there was ulceration of the palate and caries of the nasal bones, as well as iritis and keratitis. The patient had been taking mercury for three months, when epileptiform attacks occurred. At the end of six months, in spite of treatment by mercury, hemiplegia supervened and the child subsequently became idiotic.

CASE II.—A boy, aged 10 years; hemiplegia had occurred when he was 1 year and 9 months old. He had interstitial keratitis and extensive choroidal atrophy.

CASE III.—Syphilis was suspected in a child, aged 14 months, who had two distinct attacks of hemiplegia.

CASE IV.—In another case, an idiotic child, probably syphilitic, was attacked suddenly with hemiplegia.

CASE V.—In another patient, hemiplegia occurred at the age of 7 years, and after the lapse of five years the limbs on the opposite side gradually became rigid, possibly from chronic meningitis or sclerosis of the convolutions.

Cerebral Sclerosis.—There is good evidence that sclerosis of the cerebral convolutions is sometimes due to inherited syphilis. In one case, in which there was slowly increasing rigidity of the arms and legs, with mental impairment, in a child aged 2 years, I found marked sclerosis of the convolutions. In the notes it was simply stated that the child had suffered from snuffles and a rash on the buttocks in babyhood, but I found afterwards that the father had been under the treatment of one of my colleagues for syphilis before the birth of the child.

² Syphilitic (Hereditary) Disease of the Nervous System, by Dr. Barlow and Dr. Judson Bury: *Dictionary of Psychological Medicine*, edited by Dr. Hack Tuke, vol. ii, p. 1259.

³ See article already quoted by Dr. Barlow and Dr. Judson Bury; also cases by Dr. Barlow, and by Drs. Turner and Sutton, in Vol. xxviii *Trans. Path. Soc.*

⁴ The Cerebral Palsies of Young Children.

⁵ Clinical Lecture on Hemiplegia in Children, *BRITISH MEDICAL JOURNAL*, June 18th, 1887.

⁶ A Study of Cerebral Palsies of Early Life, based upon an Analysis of 140 Cases, *Journal of Nervous and Mental Disease*, May, 1890.

Disseminated Sclerosis.—Dr. Moncorvo has brought forward some evidence that disseminated sclerosis in the child may be syphilitic. In a case of this kind occurring in a boy, aged 8 years, a brother was brought to me with a typical syphilitic. In two other cases of this disease I had reason to suspect syphilis.

Idiocy.—The etiology of idiocy is too large a question for discussion now, but I may briefly say that some non-congenital cases are indisputably of syphilitic origin. It is difficult, however, to determine the relative frequency of this cause. Sclerosis of the convolutions or extensive chronic meningitis is sometimes the underlying condition, and the mental defect may or may not be associated with rigidity of the extremities.

Convulsions.—It is important to bear in mind that convulsions may indicate actual structural changes in the brain. Infantile eclampsia may be almost the sole indication of syphilis affecting the higher nervous centres, and it is a clinical fact that seizures of this kind will sometimes yield to mercury, when bromide of potassium and all other remedies have failed.

Cervical Opisthotonos.—In this condition the head is strongly retracted, and attempts to put it forward give rise to pain. The fontanelle is often bulged, and the sutures may widen out. Hydrocephalus, indeed, often supervenes. Paralysis of the cranial nerves and optic neuritis are not generally present. The active symptoms, with partial or even complete remissions, may last for months. Sometimes death ensues at a comparatively early period, sometimes the patient lives to be hydrocephalic, sometimes recovery takes place. This condition is due to simple (non-tuberculous) meningitis, chiefly at the base, more especially affecting the membranes between the medulla and cerebellum. Sometimes there is spinal meningitis, particularly on the posterior surface. Cervical opisthotonos is sometimes associated with clear evidences of congenital syphilis and a causal connection may reasonably be assumed, at any rate in some cases. The frequent coincidence of the two states can scarcely be fortuitous. It is curious, however, that mercury will sometimes be of little use in such cases.

THE TREATMENT OF SO-CALLED IMPASSABLE URETHRAL STRICTURE.¹

By G. BUCKSTON BROWNE, M.R.C.S.

SO-CALLED "impassable urethral strictures" or "difficult strictures" may be defined as cases in which no instrument can be passed in the usual way into the bladder. In many of them the greater part of the urine is passed through perineal fistulæ, and in some perhaps no urine has been passed through the external meatus for years. Such cases mean great discomfort, suffering, and distress to the patient, and frequently great trouble and anxiety to the surgeon. Happily patients so afflicted are not met with now as often as they were formerly, for the art of surgery is much more widely spread than it used to be, and urethral stricture is well and successfully treated in its earlier stages in all the large centres of civilisation. At the same time, severe cases still occasionally come to us for treatment from remote parts of the world, and even here in London the dread of surgical interference is so great in some minds that patients do not apply for aid until their condition is extremely deplorable. It is to the treatment of these cases that I wish to draw attention, for after an experience of many years I am convinced that very frequently the mode of giving relief is unnecessarily severe, tedious, and dangerous, and that if we apply a few plain surgical principles we shall be able materially to simplify our methods to the great advantage of suffering patients.

Many surgeons, on taking charge of a difficult case of stricture, will often spend weeks in groping through all the dark places of the perineum with instruments introduced through the penis, until by skill or by chance some fine instrument is passed into the bladder; it is then tied in, and worn for some time, or it is used as a guide, and a larger instrument is screwed on, and with more or less success is passed in. Other

¹ Read before the Harveian Society of London, November 17th, 1892.

surgeons will at once proceed to more heroic measures; the patient is tied up in the lateral lithotomy position, the urethra is opened from the perineum, and search is made for the opening of the stricture. This may or may not be found, but a way is cut into the urethra beyond the stricture. Such patients are, of course, exposed to all the risks attendant upon an opened perineum. With regard to filiform guides, there are many objections to be urged against their use; but the chief are that they are often misleading and that frequently they break. This latter accident is not an imaginary one. I here exhibit one of these guides, which I recovered from a patient's bladder, where it had lain for many months, having been left there after an unsuccessful operation, and which had caused the patient during the period of its residence the greatest misery. I look upon operations which consist in opening the perineum in order to search for the orifice of the stricture as unnecessary, for surely if an instrument can be passed by looking it can be passed by feeling, and, if so, the instrument may just as well be passed through the penis and directed through the stricture by the sense of touch, and the patient spared all the risks of a perineal incision. These risks are very real ones; for a perineal incision into the urethra is a dangerous wound. There is always the possibility of hemorrhage, and I would emphatically point out that such wounds do not always heal. Almost every year I meet with cases of unhealed perineal incisions into the urethra, and it cannot be denied that the suffering caused by such a fistulous opening is very great. In men of refinement such a condition is often wellnigh intolerable, and renders life in many cases not worth living. I lay stress upon this matter because the condition referred to has been made light of by some, but it is only a very few years ago that a gentleman so afflicted, failing to obtain relief after several attempts to close the wound had been made without success, committed suicide by shooting himself through the head. The object of this paper is to attempt to prove that the worst cases of urethral stricture can be treated *tout d'un coup*, that is, all at one operation, and put at once into a satisfactory state without any painful preliminary instrumental treatment and without any perineal incision, and only detained in bed for some less time than a fortnight.

We are indebted to Syme, the Napoleon of surgery, as Mr. Mitchell Banks calls him, for the invaluable dictum that if urine comes out from a bladder through a urethra, a surgeon should be able to press an instrument through that urethra into the bladder. But may we not go still farther and say that in all cases of urethral stricture, whether urine issues or does not issue from the external meatus during an act of micturition, a surgeon with skill and patience should be able to pass an instrument through the stricture and into the bladder? Secondly, may it not be asserted that when once an instrument has been fairly passed into the bladder, it may at once be withdrawn, and replaced by one a size larger, by a surgeon who has confidence in himself; and, thirdly, may not all strictures be in this way dilated up to No. 6 or 7 English, and when once so dilated may not Civiale's urethrotome be introduced and the stricture or strictures cut, so that 15 or 16 or 17 be at once passed fairly into the bladder?

Personally, I answer these three questions in the affirmative. So far I have never failed to carry out successfully the procedure about to be described. This procedure is not a brilliant operation; it cannot be undertaken in a crowded operating theatre, but must be carried out in the tranquillity of a ward or of a private bedroom, and the surgeon must have arranged to have practically unlimited time at his disposal. It is no use undertaking a bad case of stricture if pressed for time, or if harassed by frequent calls and messages, and therefore the evening is often the time most suited in every way for the undertaking.

The instruments required are very simple. Some blunt-ended English gum bougies, varying in size from No. 3 to 10, a foot-rule marked in inches, a Civiale's urethrotome, also accurately marked in inches, a No. 11 or 12 soft gum catheter mounted on a stylet for tying in at the close of the operation, and, finally, a complete set of well-burnished steel sounds. These sounds are far preferable to silver catheters, which, when small, easily bend, and so destroy all accuracy of manipulation. The sounds are each two sizes larger in the shaft than at the point, the smallest being No. 2 in the shaft and

less than No. 1 at the point (marked 0-2), the next being 3 in the shaft and 1 at the point (marked 1-3), and so on up to the largest, No. 17 (marked 15-17).

The night before the operation some aperient medicine should be administered, and an hour or two before the operation the patient should have a hot sitz bath and an enema of warm water, in order thoroughly to clear the rectum. He should be directed not to pass water for at least an hour before the appointed time, for it is desirable that there should be some urine in the bladder. If an operating table is not available, the bed should be made firm and level by placing the leaf of a table on a board under the mattress. Each leg is wrapt up separately in a small blanket, and a third blanket is placed across the body. The perineum and pubes are thus left exposed. The patient is then completely anaesthetised. The anaesthesia must be complete, for the urethral reflexes are the last to be anaesthetically abolished, and the success of the operation depends upon the patient being absolutely quiet. One or two of the blunt ended soft bougies are now introduced into the urethra, and the exact distance of the stricture—or in cases of multiple stricture, of the anterior stricture—from the external meatus is accurately ascertained and measured. A careful attempt is now made to pass the smallest of the steel sounds or dilators through the stricture. This will probably not be possible in severe cases unless the surgeon stands on the patient's left, or sits down on the bed on that side, and guides the point of the instrument with his left forefinger in the rectum. The finger in the rectum gives great security, and by its aid the operator is able to keep the dilator correctly in the middle line, and he will at once know if his instrument passes out of the urethra and into the tissues in front of the rectum. No force must be used, but steady search must be made for the orifice of the stricture, and firm but gentle pressure exerted when it is found. Indeed, the surgeon must steal in "little by little," as Ambroise Paré says, referring to another subject, "and must not break suddenly into the field of Nature." The operator will, after a little while, find the stricture yield under his hand, his instrument will advance a little, and he will be gratified and feel safe and successful if he becomes aware that the end of the sound is firmly grasped by the stricture. There must now on no account be any hurry. If the instrument is so tightly grasped that it feels almost immovable, by waiting the grasp will be found to relax and the dilator can be pressed a little further. When fairly through the stricture, even if the sound cannot be carried into the bladder, it may be withdrawn, and the next sized one introduced; this will dilate still more and sound after sound may be passed till No. 6 or No. 7 has been put well through the stricture. If a No. 4 or No. 5 is now used it will only be lightly held by the dilated stricture and its point can be manipulated and directed carefully into the bladder. The sound is known to be in the bladder by the shaft being absolutely in the middle line and the point felt to be free in a cavity, for owing to the fact that there is urine there, there is room for the play of the point in the bladder. When once a sound has been fairly passed into the bladder and at least a No. 6 or No. 7 put well into the stricture, the urethrotome may be employed. Its successful introduction is not always an easy matter. Leaving the No. 7 sound lying in the urethra the operator should now change sides, and, standing on the patient's right, he takes out the sound and at once slips in the urethrotome. I frequently shake it in rather than pass it. This instrument should pass with ease into the bladder. If it does not something is wrong, and the knife must not be used till the urethrotome is fairly placed. Perhaps a sound or two may have to be passed again before the straight urethrotome can be introduced without let or hindrance into the bladder. When in proper position it is carefully withdrawn until the bulb is an inch beyond where the stricture is known to be, the blade is then protruded and a free incision is made from behind forwards for a good inch in the floor of the stricture. The blade is then sheathed and the instrument withdrawn. Full sized sounds are then passed, probably Nos. 13, 14, 15, 16, and 17 in succession, and then the soft catheter, mounted on a stylet, curved so as exactly to correspond with the curve of the sounds, is passed in, the stylet removed, and the catheter tied in. The urine which is in the bladder will issue by the catheter and so show that all is right. Should there be any

doubt about the catheter being in the bladder it should be withdrawn and on no account should any water be injected through it.

This is a brief description of the steps of the operation I recommend for the immediate and complete relief of bad cases of stricture, but of course for such a variable form of disease all kinds of modifications are frequently necessary. I would lay great stress upon the importance of not being in a hurry to pass small instruments into the bladder; they may be satisfactorily through the stricture, but may be arrested beyond by reason of their very smallness, for although it is certain that on the bladder side of the stricture the urethra is roomy enough, still its walls are sure to be irregular owing to rupture or to fistulous openings, and in these the fine point of a small sound will easily become caught. It is well, therefore, to dilate the stricture gradually with sound after sound, and then taking a smaller one, which will be loosely held by the stricture, pass it carefully into the bladder. In some cases, owing to the fixation of parts by infiltration of tissues, no rigid instrument can be passed into the bladder. In such cases the stricture should be divided; and in a few days, after the parts have drained, and the urine come by the urethra, an instrument can be passed properly into the bladder. It is, however, impossible, in a short paper like this, to go fully into every complication and difficulty. I am content to submit the principles of the procedure for consideration.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

ON THE DIAGNOSIS OF EARLY ECTOPIC GESTATION.

The following case serves to illustrate Dr. Edis's paper in the *BRITISH MEDICAL JOURNAL* of October 22nd, and brings out very prominently the important point in the diagnosis of this dangerous condition, namely, sudden attacks of severe pain, recurring at intervals.

Mrs. G., aged 26, had one child only, seven years ago; her periods were regular up to July 18th, 1892; this was a normal period, and ended on July 24th. No period occurred in August, but she had the ordinary symptoms of early pregnancy. There was no period in September, but she was seized suddenly with a very severe attack of abdominal pain on September 10th, which lasted two hours and a-half; there was no discharge of blood from the vagina. She had severe pain again on September 20th, lasting two days; it was distinctly paroxysmal in character, but there was no discharge of blood. She had pain again on September 24th, lasting ten hours, but no discharge of blood. Pain recurred on September 26th, accompanied by a slight discharge of blood, and on September 27th she passed a membranous-looking clot. After this the pain, which had continued from the morning of September 26th, was easier. On October 1st she had another very severe attack of pain, which continued until October 4th, when I saw her for the first time. I found her very pale; there was a marked line of resistance in the right groin, and a swelling in front and to the right of the uterus. My diagnosis, founded on the history and the local examination, was ruptured tubal gestation sac, and I advised immediate operation. For this purpose she was taken to the Bristol General Hospital on October 5th. She had another severe pain on October 6th, and on October 7th I opened the abdomen, and found a large amount of fluid and clotted blood and a ruptured right Fallopian tube, which gave distinct evidence of pregnancy. I washed out the abdomen, tied and removed the damaged tube, inserted a glass drainage tube, and finished the operation. The patient is now (October 24th) practically well except for some inflammatory trouble on the right side of the pelvis.

I have now operated on six cases of ectopic gestation, with four recoveries, and in all of them the first symptom was pain and not hæmorrhage, and in most of the cases the pain recurred several times before the hæmorrhage set in. My im-

pression is that this latter symptom, coincident with the shedding of the lining of the uterus, does not, as a rule, appear while the ovum is still capable of developing, but does come on very soon after its death. Dr. Edis has done good service in bringing the subject forward in such a practical paper. I would only add a short sentence with which I concluded my paper in the *Bristol Medico-Chirurgical Journal* of June, 1892:—"The whole diagnosis may be summed up in a few words. When a previously healthy woman misses one or more periods and is taken with acute abdominal pain and fainting, and these symptoms recur at short intervals, and the vaginal examination reveals a periuterine hæmatocele either extending or not up into the abdomen, it is imperative to open that abdomen without delay."

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REMARKABLE CASES OF POLYDACTYLISM.

A MOHAMMEDAN servant, recently in my employment, one day complained to me about his right foot. I found that he had a supernumerary toe—quite distinct and separate—growing out from the outer border of his right foot at the root of the little toe. This supernumerary little toe was attached by dense fibrous tissue, but contained what appeared to be a nodule of bone, upon the extremity of which a healthy nail was supported. He informed me that he had been born with another similar supernumerary toe on the opposite side—but when a child it was removed on account of injury. This statement was probably true, there being a scar in the situation. This man was about 40 years of age, and presented no other abnormality. He informed me that his daughter had four supernumerary digits, that is, two little fingers and two little toes on both hands and feet, springing from the bases of the digits; also that his nephew, a little boy of 1 year old, had a supernumerary thumb on the left hand; these two children I saw subsequently, and can vouch for the veracity of his statements. Further, he told me that his father and mother both were born with similar deformities, namely, the father had a supernumerary little toe and finger on the right hand and foot respectively; that his mother also had one supernumerary little finger on the right hand, growing from the base of the natural one, but quite separate; and finally that his elder brother had a supernumerary thumb on the right hand. This was the father of the child above mentioned who had a supernumerary thumb on the hand also, but on the opposite side to that of his father; this was a distinct thumb provided with a nail and not a bifid digit. Therefore we have instances of this kind of congenital deformity occurring in three successive generations, and affecting the same fingers and toes all through, as will be seen at a glance by the diagram below:

The wives of the two sons were stated to be quite free from deformity; so it was apparent that it was inherited by the children from the male side. Unfortunately the man has been lost sight of now, otherwise it would have been interesting to go more into this case and gain some more information. I read with interest the article and case bearing on this same subject, in the *BRITISH MEDICAL JOURNAL* of September 17th, by Dr. Mill, and it is not my intention to refute the somewhat ingenious theory advanced by him as to the cause of these deformities, nor do I intend to advance one of my own, but I certainly think with him that "maternal impression," so called, may be put out of the question; but should the theory of "dichotomy of the cells of the ova" be