capsular ligament after the head of the femur has been for some time retained in the lower portion of this cavity. The effect of this would be to prevent the ascent of the head of the femur when the extension is removed, but I have not as yet performed this operation.

Dr. Brown, quoting from the *Medical News*, for October, 1884, states that excision of the hip-joint has been performed for the so-called congenital dislocation by Drs. Hensner, of Bremen; Margary, of Turin; E. Rose, and C. Reyher; but upon what principle, or with what object such an operation could be performed, I am at a loss to understand.

There can be no doubt that during the period of childhood and active growth, much may be done by long continued recumbency and extension to diminish the conspicuous deformity, as well as other consequences certain to result if no treatment be adopted; and according to the statement in Dr. Brown's case, the great improvement gained will probably remain through life.

CLINICAL REMARKS ON THE TREATMENT OF ANGULAR CURVATURE OF THE SPINE.¹

By RICHARD DAVY, M.B., F.R.S.E.,

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LAST year we had under observation four typical cases, in all their misery, of angular curvature of the spine. My purpose to-day is to briefly relate each of these cases, and conclude with some general remarks on their treatment.

CASE I.—T. B., aged 4, Peckham; admitted into Percy Ward on February 23rd, 1886; discharged on April 8th, 1886. The general appearance of this boy is well shown in the diagram. The upper seven

of his dorsal vertebrae were involved; he could not remain long in his self-assumed attitude; he was restless and peevish; moped away in a corner and lay down, though in reality he was a good-tempered fellow. He had a fall when about one year old, and the disease and deformity had steadily progressed. There was no abscess. In 1885, I applied a jacket for him, which had to be removed on February 24th, 1886, by reason of usage. His general health had been looked after; he had had deep-water baths; and on April 8th, 1886, I placed him on his stomach in the hammock and set him up stiff in plaster, working in shoulder-bridges of plaster for the support of a circular air-pillow. His mother was pleased to see her boy playing about the ward, and his own spirits have increased wonderfully; he is now an inmate of a children's home.

CASE II.—J. B., aged 9, school-boy, Leicester, was admitted into Mark Ward under my care for angular curvature in the lower dorsal and lumbar region on January 4th, 1886. When three years old he

fell out of a perambulator; and shortly afterwards he lost power in his lower limbs, and the deformity began. Sensation was perfect; there was no loss of control of the urine or faeces. My dresser, Mr. Godwin, made an accurate sketch of the boy, which has been lithographed, and is annexed.

On getting up he was compelled to seize his ankles with his hands, and then walked in lithotomy position, being unable to bear his weight in any other way; and even this form of progression was undertaken with much preliminary balancing and trepidation. The boy was well fed and well nursed, and had his jacket set on in the hammock in February, 1886. From that time he gained strength and vivacity; he was daily exercised, and learnt to balance himself with his hands on his knee-joints. As his weakness seemed to depend upon laxity of the knee-joints, I set up both legs in a light columnar support of plaster, and so gave extra power for the use of his legs in walking. Within a few days he learnt his new balance, and we all had the pleasure of seeing this boy first creep round the bed or a table on his fortified legs, and eventually walk out of the ward with the aid of a stick. I have heard that, since his dismissal on May 27th, 1886, he continues to make good progress, and that with the aid of crutches he can get about comfortably.

CASE III. *Fractured Spine; Acute Angular Displacement; Fractured Sternum; Paralysis of Extremities; Death.*—E. K., aged 64, was admitted into Henry Hoare Ward, on Friday, February 12th, 1886, at 4 p.m., much collapsed, and with his head lopping on his chest. He had fallen 14 feet, at Marlborough Buildings, Queen Victoria Street, and was picked up insensible. He was carefully placed in bed and wrapped around with warm blankets. He could sluggishly move both arms, but neither of his legs very much; sensation was impaired over both arms, and absent in both legs. He was drowsy, and in answer to questions repeatedly drawled out "I can't move." He incontinently passed faeces, but not urine. He had a left inguinal hernia. His urine was drawn off once with a full-sized catheter, and he was given a little milk and brandy, warm tins of water at the sides of his body, and a screen around his corner bed. He remained conscious to the last, and died on Saturday morning, February 13th, 1886, at 2 a.m. (eleven hours after the accident). From his friends I gleaned that he had been a healthy man, but in 1880 he fell 40 feet, breaking his ribs; since then he has had asthmatic attacks every winter.

The *post-mortem* examination was made by Dr. Hebb, and I have to acknowledge the following abstract from his register:

February 16th, 1886. Body well nourished; rigidity present; superficial grazes over calvarium; the brain and membranes healthy; lungs emphysematous; much oedema. There is marked induration at the base of the right lung, due to fibrous thickening of the peribronchial connective tissue. This thickening spreads inwards and upwards, like the branches or root of a tree. No pneumonia, nor a trace of softening or breaking down. There are some old fractures of

¹ Delivered at Westminster Hospital.

the ribs on this side, with pleuritic adhesions. Left lung and pleura healthy. By aid of the microscope, the indurated lung shows fibrous tissue, enclosing numerous spheroidal foci of lymphoid cells. The general appearance is remindful of sarcoma; heart and pericardium healthy; liver and kidneys congested. There is a left omental oblique hernia.

At the conclusion of the *post-mortem* examination, I carefully macerated the cervical vertebrae, sternum, and left clavicle, mounted them, and have brought the specimen from our museum for your inspection. The left clavicle was completely smashed at its sternal end, which suggests that he fell on his left hand or arm. The sternum is broken about three-quarters of an inch below the junction of the manubrium and mucro; one jagged line of fracture on the front aspect, comminuted and depressed on the thoracic side. The ensiform cartilage is extremely well marked; bifid for an inch, and the right horn again is bifid for one-eighth of an inch. The cervical vertebrae are well developed above, but the fifth, sixth, and seventh cervical and first dorsal are bulged at their discs, chipped and splashed, with irregular, bossed nodules of dense bony projections. The anterior body of the sixth cervical vertebra only measures a quarter of an inch, whereas the fifth and seventh measure fully half an inch each. The sixth cervical vertebra is separated from the fifth cervical by a smashing up of the intervertebral tissues, and its laminae and the arches of the fifth cervical are fractured irregularly; the tips of the spinous processes of the fourth, fifth, and sixth cervical vertebrae are also broken. On examining the cord, the lower part of the cervical enlargement is much flattened, and is extremely soft; on incision, the grey matter is found to be the seat of marked extravasation, with much bruising of texture. The cord was put away for hardening in chromic acid. The white matter of the cord seemed to be intact.

CASE IV.—In Percy Ward at present (January 1887) there is a girl, aged 10, a typical case of angular lateral curvature of the lumbar spine, with double hip-joint disease of four years' duration, who has been readmitted for application of a jacket. The ilio-femoral joints were both ankylosed, and her right leg was so much adducted and flexed as to brush the left knee and thigh, and render walking or standing on both feet impossible. On June 26th, 1886, I performed posterior sub-trochanteric osteotomy of her right femur, and placed her leg in a straight position. On August 24th, 1886, her thigh having well united, I put this patient up in a plaster jacket; and she left the hospital on August 30th, 1886, improved in health, able to walk better, and without knee-brushing.

General Remarks.—Three of these cases show what an excellent plan of treatment the plaster jacket is in young cases of spinal curvature; and the more I use plaster in hospital practice, the better I like it; because the treatment is vested absolutely in the hands of the practical surgeon, independent of the vexatious delays of the instrument maker. I can also maintain that the use of hammock suspension for these plaster-settings is the best plan yet introduced for such applications. In Case 3 (fractured spine) the fracture of the sternum was undoubtedly caused by direct jam of the symphysis menti on the sternum; the fractured fifth cervical vertebra permitted this exaggeration, and the non-fracture of the symphysis of the lower jaw shows what a strong bone this must be. The peculiar sloping on the bodies of the spinal vertebrae may be old, but I find that similar results may be obtained by forcible *post-mortem* flexions of the spine, as well as by direct intense pressure on the cancellous vertebral bodies. If the changes I have shown you be old, then we may assume that the sloping discs gave point to the intense cervical flexion and rupture. In Case 4, we have a rare association of double hip-joint disease and lumbar curvature. This hip-joint disease was *bonâ fide*, with osseous ankylosis, not the distortion caused by a psoas abscess. I am especially pleased at the result of subcutaneous osteotomy in this case, and I will, in conclusion, say a few words on this operation. The instruments required are a heavy box-wood mallet, a cold chisel, and a thin scalpel. The position of the patient, I have always taught, should be on the back, and the femur to be operated on held up by an assistant at right angles to the table. The subcutaneous position of the back of the trochanteric portion of the femur can be easily made out, and a small cut made with the knife, down to the bone, and only just admitting the chisel. No important parts are divided; and the shaft here slopes off rapidly, giving an advantageous attack to the chisel. The weight of the patient's body gives a most firm counter-stroke to the point of the chisel, and the longest possible leverage is given to the surgeon over a solid fulcrum for snapping the femur. By the dependent position ensured, a valvular opening is secured on bringing the femur down to the straight; occlusion of the wound also is guaranteed, and the weight of the limb presses on the collodion pad. A large area of bone (pelvic and trochanteric) is left firm, on which the lower

fragment rests, either for the play of a false joint, or for bony ankylosis. The girl made an excellent recovery. I have performed the same operation thirteen times in this theatre, and without any failure. Spinal cases are by no means purely subjects for instrument makers, but they do call for the early diagnosis, as well as the best and most sustained energies, of the skilled surgeon.

PSOAS ABSCESS: WHEN AND HOW TO EVACUATE IT.

By EDMUND OWEN, M.B., F.R.C.S.,

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In the surgery of childhood there is probably no branch of practice which has derived such beneficial influence from the principles of antiseptic surgery as the treatment of psoas abscess.

So far as my experience serves, twenty years or so ago, most cases of psoas abscess went wrong under active treatment, and surgeons were shy of interfering with them; dealing with them in a half-hearted and apprehensive way, they dreaded the almost inevitable hectic fever and gradual and fatal exhaustion.

When using the words "antiseptic surgery," I do not mean to imply that everything in the way of improvement is due to the spray and gauze. I refer to no narrow ritual, but to the grand principles of modern surgery, whether practised by a Lister, Savory, Tait, or Gamgee. For now that the spray has, in every sense of the word, cooled down, and the atmosphere of surgical practice and criticism is less obscured by clouds of carbolic vapour, one is able to take a much wider and more liberal view of the entire question. One is, moreover, now much less inclined to take fright or offence at the principles of the memorable Address in Surgery which was delivered at the Cork Meeting of this Association, one great feature of which was the claim that every careful surgeon is an antiseptic surgeon.

Twenty years ago, if the surgeon could do so, he preferred leaving a psoas abscess alone; but if the collection of matter were bulging to such an extent as to cause a reddening and thinning of the skin, if, in short, Nature were forcing his hand, he would perhaps thrust into the abscess a cannula and trocar, or partially evacuate it by a valvular opening.

It was at about this period that Mr. Holmes wrote, in his well-known work on the *Surgical Diseases of Children*, that his experience led him to dissuade the opening of abscesses which were associated with spinal disease; that however effected, and with whatever precautions, it generally did more harm than good (Second edition, page 543). And Alexander Shaw, in his essay on "Diseases of the Spine," also spoke about "hesitation and delay," and held out the somewhat vain hope that the surgeon might possibly succeed in dispersing the collection by resolution (*System of Surgery*, 1870, vol. iv, p. 128). And by various other authors the important subject of the active treatment of psoas abscesses was dealt with in diffidence, or quietly shelved.

The chief reason or excuse for adopting the Fabian policy was that possibly the abscess might remain quiescent for all time, or that it might happily disappear altogether. Thus, in 1849, in his classical *Treatise on Diseases of the Bones*, Stanley wrote:—

"The knowledge of the fact that even in a small proportion of cases a psoas abscess has been observed to undergo no change prejudicial to the part, or to the health of the individual, furnishes a ground for not interfering with the abscess; but another and still better reason for abstaining from such interference is that the disappearance of the abscess may take place by the absorption of its contents." He goes on to say that the opinion has been expressed on good authority that this natural cure of a psoas abscess never occurs, but that, nevertheless, he is sure of the fact, and that he is thus brought irresistibly to the conclusion that a psoas abscess should not be opened until it is about to burst.

One of the points on which I would specially ask for an expression of opinion by modern surgeons is whether psoas abscess does often undergo this spontaneous cure. In my own experience the happy contingency has been so rare that I do not consider it as within the range of practical therapeutics. In many years of out-patient practice at a general and at a children's hospital, I have met with only one such case. My invariable experience—with that one exception—is that when in connection with a stiffened spine, an ovoid or fusiform tumour can be