In doing this operation, it is to be borne in mind that a sufficiency of the condyle must be loosened; otherwise, in straightening the limb, the internal tuberosity of the tibia will impinge on the stump of the condyle, and this will effectually prevent a complete reduction of the deformity. The chisel ought to be so directed that the lowest part of the incision shall correspond to the lowest level of the external condyle, which should always be carefully ascertained before an operation is commenced.

I must acknowledge my great indebtedness to my surgical colleagues Mr. Arthur Cæsar and Mr. Reeves for many of the cases, and for their beds which they placed at my disposal, as well as for help at the operations.

SHORT NOTES OF A DOZEN CASES OF SUBCUTANEOUS OSTEOTOMY.*

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As osteotomy is one of the subjects chosen for discussion at the Surgical Section of this meeting, I have been induced to record very briefly the chief points of interest in some of the cases which have been under my care. These cases may be conveniently arranged in three groups.

1. Those rachitic distortions of the legs in which the tibia was operated upon.

2. Those in which there has been much inbending of the knees, relieved by division of the internal condyle of the femur.

3. A case of osseous ankylosis of the hip-joint in a flexed position, straightened by dividing neck of femur.

I will now proceed to relate as much of the history of each case as is considered necessary.

CASE I.—John Edward H., aged 6, was admitted into the Children's Hospital, Pendlebury, on August 16th, 1878. For some months previous to this, he had been brought as an out-patient. He had had splints applied with the object of correcting the deformity of his legs, but did not derive much, if any, benefit. The mother stated that the boy commenced to walk at eighteen months of age. At that time, his legs were quite straight; they, however, soon gave way. He was very late in cutting his teeth. The wrists were expanded and the head was large. The ribs were distinctly "beaded". Both legs were bent outwards and slightly forwards. On August 29th, the right tibia was divided subcutaneously with a saw about two inches above the ankle-joint. The wound was covered with lint soaked in collodion, and the limb placed in the straight position between two side-splints. On September 21st, the left tibia was operated upon in a similar manner. The progress of the case was uninterruptedly good; and, when the boy was discharged on September 30th, his legs were quite firm and straight. On July 29th, 1879, his legs were in as good a position as on the day he was discharged.

CASE II.—Sarah N., aged 5, was admitted November 29th, 1878. She was very late in cutting her teeth. She began to walk when a year and seven months old. The right leg was curved outwards and to a certain extent forwards. On December 7th, the right tibia was divided subcutaneously with a saw at the point of greatest concavity. She was discharged cured on January 7th, 1879.

CASE III.—Jessie Ward, aged 5, was admitted May 24th, 1878. The child was brought up by hand. She had many evidences of rickets in the expanded epiphyses, and a large head with flat top. Both legs were very much deformed; the right one was the worse of the two. On May 25th, the left tibia was fractured and the leg forcibly straightened. On June 15th, the right tibia was divided and the limb placed on a back-splint. She was discharged with the limbs in good position on September 2nd, 1878.

CASE IV.—Edwin H., aged 4½, was admitted February 24th, 1878. This boy began to walk when two years and a half old. Seven or eight months afterwards, his mother detected his legs becoming bent; since then the deformity had gradually increased. He was a stout, light haired, intelligent boy, with a large rickety head and beaded ribs. The extremities of the long bones were enlarged, and the legs curved in the upper half. This curvature differed very markedly from that which is usually found in the lower third of the tibia, and involving a much larger extent of bone. There was also a forward curve of both femora; there was no undue movement at the knee-joint. On March

8th, the left tibia was sawn partly through, about the centre of the gradual but extensive curve. The limb was fractured, and secured to an outside splint. On March 28th, the splint was removed. The leg was quite firm and perfectly straight. A piece of felt was moulded to the outer side of the leg, and fixed on by a gum-and-chalk bandage. This boy was readmitted on the 30th of May last, and the right limb was straightened by fracturing the tibia. He was discharged June 30th, 1879.

CASE V.—Jessie W., aged 6, was admitted May 30th, 1879. She was a strong, well nourished, healthy looking child, with both legs very much curved outward and forwards in the lower third. On June 14th, the right tibia was partially sawn through about an inch and a half above the ankle. When the bone was broken, the outward curvature was immediately corrected, but the anterior curve became more marked; this difficulty was, however, overcome by division of the tendo Achillis. The leg was fixed between side-splints. On June 19th, the leg was placed on a back-splint, and side-splints were applied. On July 6th, the leg was taken out of the splints. The limb was straight and firmly united. On July 12th, a similar operation was performed on the left leg. The same difficulty was encountered; and it was met in the same way.

CASE VI.—Alfred K., aged 6, was admitted February 7th, 1879. His family history was good. He had never been a strong boy. His legs had been growing forwards and outwards since he was two years old. The forward curve being very pronounced, it was deemed advisable to remove a wedge of bone from the tibia; the thicker portion of the wedge corresponding with the convexity in the bone. On February 15th, the operation was performed under the carbolic spray. An incision one inch in length was made along the subcutaneous surface of the left tibia in the long axis of the bone. The periosteum was then carefully separated from the bone by a crucial incision, a wedge-shaped piece of bone removed from that part of the tibia where the deformity was most manifest, and the leg placed in the straight position. The edges of the wound were approximated by wire sutures. The wound suppurated for a few days, but eventually healed soundly. The procedure adopted proved perfectly successful, and the boy was discharged with a straight left leg. This boy was readmitted on June 27th, and the right leg was subjected to the same treatment, with equally gratifying result. There has been but little suppurating from the second operation-wound, and that from the superficial parts only. The boy is still an inmate of the hospital.

These six cases belong to the first group; and as in three of them both legs were operated upon, we have in all nine osteotomies; simple subcutaneous division of bone in seven, removal of a wedge of bone in two.

In the second group, we have five cases, where the internal condyle of the femur was divided or otherwise operated upon to relieve the deformity usually known as "knock-knee".

CASE I.—Clara E., aged 7, was admitted September 18th, 1877. She was the subject of double genu valgum of an extreme kind. Other members of the same family were rickety. On October 24th, the internal condyle of the left femur was divided according to the plan known as Dr. Ogston's. The deformity was easily remedied after the separation of the condyles. On November 14th, the limb, which was found to be quite straight, was put up in a plaster-of-Paris bandage. On November 21st, the internal condyle of the right femur was divided. The result was equally satisfactory. This girl has presented herself on many occasions at the Children's Dispensary. Both legs maintain their corrected positions.

CASE II.—Edith H., aged 11, was admitted September 18th, 1877. Her legs began to give way seven months ago, without any very obvious cause, as her general health appeared to be quite good. The distortion of the left knee was very obvious, but it was not so much developed on the right side. A wedge-shaped piece of bone was removed from the left internal condyles. Although the operation was performed antiseptically, yet there was a good deal of suppurating afterwards. Eventually, however, the wound healed soundly, and the limb remains quite straight. Ogston's operation was performed on the right internal condyle. This patient was exhibited to the members of the Manchester Medical Society at the July meeting. It would be obviously very unfair to draw any conclusions from the observation of a single case; but the result of the operation on the left limb was entirely superior to that on the right.

CASE III.—Fanny V., aged 5, was admitted November 6th, 1877. Both knees were very much deformed; there was also much distortion of the tibiae and femora. The inbending of the knees had become much worse the last six months, and had now advanced so far as to make her quite unable to walk. On November 21st, osteotomy (Ogston's) of the internal condyle of the left femur was performed.

* Read in the Section of Surgery at the Annual Meeting of the British Medical Association in Cork, August 1879.

† I am indebted to the Resident Medical Officers at the Children's Hospital for the particulars of these cases.

On February 9th, 1878, a similar operation was done on the right side. The result in this case was not so good as we had anticipated. This is to a great extent to be attributed to the curvatures existing in the long bones. We fear that, before any permanent benefit can be obtained, it will be necessary to resort to osteotomy of some of them.

CASE IV.—Emma W., aged 13, was admitted February 3rd, 1878. She was a strong and, to all appearances, a healthy looking girl, with considerable bending inwards of the right knee, which began twelve months previous to her seeking advice. There was no evidence of rickets. On March 2nd, Ogston's operation was performed on the right internal condyle. There was no difficulty in straightening the limb, which was encased in a plaster-of-Paris bandage. Since her discharge from the hospital, she has presented herself at the dispensary. She complains of pain in the right knee-joint. The movements of the articulation are, however, quite free and painless, and nothing abnormal can be detected on the most careful examination.

CASE V.—Eliza H., aged 5, was admitted March 26th, 1878. There were evidences of very advanced rickety distortion of nearly all the long bones. Her teeth had all fallen into early decay. There was double genu valgum of an extreme degree. The deformity commenced two years ago. On September 13th, division of the left internal condyle (Ogston's plan), with tenotomy of the biceps, was performed. The limb could then be placed in a good position. The right leg was forcibly straightened. This could not be accomplished until the tendon of the biceps was divided.

The only case in the third group is one of faulty osseous ankylosis of the hip-joint. In order to render the limb more useful, the neck of the femur was divided subcutaneously.

CASE.—Mary J. H., aged 11, an inmate of a girls' industrial schools, was admitted into Hospital January 22nd, 1878. She was quite well until five years ago, when she sustained an injury to her left leg. Since then the thigh had become flexed at right angles to the pelvis, to which it was firmly ankylosed. There was no movement of limb independent of the pelvis, even on the application of considerable force under chloroform. The left lower extremity was very much shortened and wasted. There was very marked lordosis. On February 16th, the neck of the left femur was divided with a saw, according to the plan suggested by Mr. W. Adams. We found it essential to tenotomise the sartorius and adductor longus muscles, before the result could be considered at all satisfactory. By the application of a long outside splint and weights, however, we succeeded in getting a straight, although wasted and shortened, limb. By the aid of a boot with a high heel, she is now able to move about with comparative ease and comfort.

It will be noticed that in several of these patients both limbs were operated upon; so that the twelve cases constitute nineteen osteotomies. In sixteen of these the operation was made by a saw introduced through a small puncture in the skin. The bone-*débris* which resulted from the working of the saw did not produce any local irritation or inconvenience, for we obtained primary union of the skin-wound in all.

A wedge-shaped piece of bone was removed in each of the remaining three osteotomies. This was accomplished partly by a saw, and partly by a chisel. We succeeded in obtaining union without deep suppuration in one of these only.

Before drawing these remarks to a close, I should like to mention that of late, in every case of extreme rickitic distortion of the legs, I have attempted to fracture the tibia before resorting to operative measures. In some, I have been quite successful, even in children of six years of age. In others, although the bones have given way, the fracture has not been exactly at the desired situation, but generally higher up. The distortion of the limb has therefore not been thoroughly corrected. Again, in young subjects, it is quite possible by division of the biceps tendon, together with some of the ligamentous structures on the outside of the knee, to forcibly straighten a genu valgum. Osteotomy must therefore, in my opinion, be reserved for cases which we are unable to treat satisfactorily in any other way.

BIRMINGHAM.—The vital statistics of Birmingham for the second quarter of this year are less favourable than those for the corresponding period of 1878, the death-rate being 22.04 as against 21.35. The increase is entirely due to a larger mortality from local diseases generally, more particularly bronchitis, induced, no doubt, by the unusually cold weather which prevailed throughout the quarter, and to atrophy and debility. It is satisfactory to observe a marked diminution of the mortality from zymotic diseases, which numbered 265, against 384 in the same period in 1878. This considerable fall is due to the fewer deaths from each of the zymotic diseases except measles and whooping-cough, which were slightly more fatal than in the same period of last year. The epidemic of scarlatina seems to have now died out.

SURGICAL MEMORANDA.

COLOTOMY THROUGH THE PERITONEUM.

In two cases recently, both aged men suffering from cancer of the upper part of the rectum, I have during the operation of colotomy been compelled by the presence of a meso-colon to open the peritoneal cavity, and to incise the gut through its peritoneal covering. The cut edges of the bowel, brought through the opening in the peritoneum, were stitched to the skin as in the ordinary operation. No bad effect followed. In one of the cases, omentum appeared first at the opening in the loin. The operations were not done antiseptically, but care was taken to prevent the introduction of any foreign material within the cavity of the abdomen. In July last I performed colotomy for the relief of cancerous stricture of the upper third of the rectum, in a woman whose age was twenty-eight.

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TREATMENT OF SPINAL DISEASE BY SAYRE'S METHOD.

My experience of this treatment has been somewhat extensive, both amongst private and hospital patients, during the past two and a half years, and, beyond occasional faintness, sickness, and discomfort from the suspension, I have not witnessed any untoward symptoms; and, since the adoption of Golding-Bird's modification of the apparatus, with the increased dexterity of application which experience gives, even these symptoms have become of rarer occurrence.

When freshly prepared plaster-of-Paris is used, and care is taken that a sufficiency of bandage encircles the waist, there need be no fear of not having a perfectly firm and efficient casing. Care must be taken not to crack the plaster during the process of lifting the patient on a mattress. Latterly, I have obviated this difficulty by using a board with a foot-piece, upon which the patient rests during the change of position. The use also of a starched bandage over the dried plaster bandage prevents its crumbling and prolongs its utility. In one of my cases, a plaster bandage so protected was worn with benefit six months. Most patients feel more comfortable, and in better health, with than without the unyielding jacket. The digestion mends; the cough and dyspnoea, so frequently a source of trouble to the patient and anxiety to the parents, disappear; and walking, which in some cases before was out of the question, becomes a possibility; and, where the case is not so advanced, able to be indulged in with a degree of comfort not before known.

It is, therefore, no misapplication of terms to call such results "brilliant"; and not attainable, at so little expense, either of time, personal discomfort, or money, by any other treatment. Much of the non-success of the treatment has, I apprehend, been due to a want of knowledge of its *rational*, and carelessness in its application. Very much of its success depends upon attention to the details. Were its advantages sufficiently appreciated, every practitioner, either in town or country, would be in a position to treat successfully with a class of disease which hitherto has fallen into other hands.

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TRANSIT OF A NEEDLE FROM THE STOMACH TO THE HAND.

THE following case is interesting, as illustrating the long period a foreign body may remain in the human frame without causing material disturbance; and the curious course sometimes taken in its journey from the stomach to the external world.

J. S., aged 26, a soldier, stated that, about eight years ago, he accidentally swallowed a needle. It caused no inconvenience until about three years since, when he felt something in the inner side of his right arm, which a surgeon, to whom he showed it in South Wales, stated was the needle, but did not remove it. A few days ago, he complained to me of "something pricking" in the interspace between the metacarpal bones of the right middle and fore fingers. On examination, a foreign body could be felt, which, on deep-seated pressure, protruded between the knuckles. This was cut down upon, and the needle removed. It was an ordinary sewing-needle, blackened on the surface and the point bevelled, apparently from friction against some hard substance in its transit. The wound healed by "first intention".

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