CASE OF MORBUS COXARIUS OF SIX YEARS' STANDING.

IN WHICH EXCISION OF THE HEAD OF THE FEMUR WAS SUCCESSFULLY PERFORMED.

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This engraving, from a drawing by Dr. Westmacott, of King's College, shows the condition of the limb before the operation.

GEORGE HUGHES, aged 18 years, of strumous habit, was admitted into the Union Infirmary, Spalding, November 9th, 1849. About seven years ago he had a severe attack of typhus fever, from which he very slowly recovered. Six months after the attack of fever, he first observed a swelling about the right hip, which was very painful and inflamed: poultices were applied, and, after a few days, the abscess gave way and discharged a quantity of matter; the hip and thigh were so painful, that he was unable to stand upon his leg, or walk with it; offensive matter continued to drain through a fistulous

opening for two years, during which time the leg became gradually shortened, and the knee projected somewhat over the left thigh; small portions of bone occasionally came away; the discharge began to lessen in quantity; the pain abated, and the abscess healed up, and continued well for two years, leaving a permanent shortening of the leg; he was unable to bear his weight upon it, and was obliged to walk about upon crutches. In December, 1847, he began to have pain about the hip again, accompanied with swelling, and after about a fortnight's suffering, it broke, and discharged about half a pint of matter; the discharge has continued more or less ever since; his general health began to fail; he became emaciated, and had profuse perspirations; he had an attack of chorea, which continued during several months; the convulsive movements of his limbs were very violent. He was admitted into the Spalding Dispensary, and underwent a course of treatment for the complaint, and quite recovered, and afterwards had several severe epileptic seizures, which, however, ultimately left him; he is now in a deplorable condition, being very much crippled, and considerably reduced by a constant drain upon his system through fistulous openings communicating with the diseased bone.

Present state of the Limb.—The right thigh is three inches shorter than the other, and the knee is inclined inwards over the left thigh, and the sole of the foot is turned outwards, the great toe pointing to the ground midway between the heel and the toes of the sound foot, against which it rests; the heel hangs opposite the lower third of the left tibia, and is exactly seven inches from the ground; the great trochanter projects backwards, and presses firmly against the integuments, as if it would burst through; the distance from the trochanter to the anterior inferior spinous process of the ileum is five inches; immediately below and behind the trochanter are three fistulous openings, through which carious bone may be felt. Considering this a favourable case for excision of the head of the femur, I called a consultation of my colleagues at the Dispensary, when it was decided that the head of the bone was luxated backwards, and that the carious bone felt through the fistulous openings was a portion of the head of the femur. Excision of the head of the bone was approved of.

Operation, November 12th, 1849.—Having placed the boy on his left side upon a table, I commenced by making an elliptical incision over the great trochanter about six inches in length, and dissected the integuments well back from each side of it. I soon found that the head of the bone was still within the acetabulum and diseased; nevertheless, having thoroughly laid bare the bone, I sawed through it below the great trochanter, with a straight metacarpal saw, and then turned the head of the bone completely out of the socket. The ligamentum teres was destroyed. Although the capsular ligament was also destroyed, I experienced some difficulty in removing the head of the bone from the acetabulum, owing to the edges of the cotyloid cavity overlapping the head, and firmly grasping the neck of the femur; I next made an incision of three inches in length over the fistulous openings immediately below

and behind the acetabulum, and removed a portion of dead bone, which proved to be a piece from the head of the thigh bone. Having made certain that no more necrosed bone remained, that the acetabulum was in a sound state, and no arteries required ligature; I brought the edges of the wound together by means of strips of adhesive plaster, and afterwards placed my patient in bed upon his back, and extended both legs, tying them together by means of handkerchiefs at the knees and ankles. This position was the most comfortable for him. The boy underwent the operation remarkably well, and with great fortitude. No *anæsthetic* agent was used. To take half a grain of the hydrochlorate of morphia in a saline draught immediately. Left him very comfortable.

10 P.M.—Found that he had lost a considerable quantity of blood, but by pressure by means of a linen pad and bandage, I completely suppressed it. To have fever diet.

13th.—Has passed a comfortable night; no further hæmorrhage from the wound; pulse 120; feverish and thirsty. To take a saline draught every four hours, and a pill containing a grain of opium at bed-time. An aperient draught to be given early in the morning.

14th.—Had a good night; the bowels have been well relieved; there is a sanguineous discharge from the wound; the limb feels easy.

15th.—Slept well during the night; bowels relieved. To continue the saline draughts and the opiate pill at bed-time.

16th.—Passed another good night; removed the dressings from the wound, a great portion of which is united by the adhesive inflammation.

17th and 18th.—Doing well; the febrile symptoms much less; wound discharges a thick, clear pus, and is rapidly filling with healthy granulations. A linseed poultice to be applied; and to take two glasses of port wine daily.

December 1st.—Up to this date the boy has progressed most favourably, having had no drawback; the wound is nearly filled up with granulations, and the discharge is much less in quantity, so as only to require two poultices during the day. To continue the wine, and to have four ounces of meat daily, with milk night and morning. The hip is quite free from pain. The boy is in excellent spirits, and his appetite is very good. He is very desirous of sitting up.

7th.—Continues improving; very little discharge. To discontinue the poultices, and dress with simple cerate. He sat up to-day half an hour for the first time.

20th.—Going on remarkably well; sits up all day, and is able to walk about the infirmary with crutches; the wound is healed over, except a portion about the size of half-a-crown; very little discharge, and only requires dressing once a day; appetite continues good; he now takes half a pint of ale daily, instead of the wine; has discontinued the opiate some time since; there is not the least pain about the hip, and he can bear to press his foot upon the ground.

January 2nd, 1850.—Progressing most favourably,

wound nearly well, the cicatrix is firm, and free from pain; there is great facility of motion at the hip-joint, as he can move the thigh most freely in all directions; when standing upright, the heel is exactly four inches and three quarters from the ground; he is much stouter than he was, and as he has expressed a wish to return home, he will be discharged from the infirmary in a few days. In contrasting his present condition with that prior to the operation, the advantages gained are the following:—viz., a perfect freedom from exhausting discharge, hectic fever, and excruciating pain; and, instead of a fixed and crippled state of the limb, a straight leg and perfect pliability at the hip.

23rd.—The wound is healed over with the exception of a portion the size of a fourpenny piece; he has had no return of pain, and he continues to gain flesh daily; he can bear his whole weight upon the limb, without producing the least inconvenience.

Description and Pathological Condition of the Head of the Thigh Bone removed.—The piece of bone excised measures exactly two inches and a quarter, from the upper extremity of the great trochanter to the edge of section below the neck of the bone; which, instead of forming an obtuse angle with its body, runs in a straight line from the trochanter to its head. The head of the bone has lost its globular shape; is much flattened and spread out; the whole of the cartilage is gone from the articulating surface, upon which are four carious cavities; there is also a carious cavity upon the upper and anterior surface of the trochanter; the neck of the bone is firm and in a healthy condition.

Remarks.—Excision of the head of the thigh bone has been performed but few times in this country; in fact, it is only within the last few years, that the operation has been revived by Professor Fergusson, of King's College, London. The attention of surgeons, however, has been recently forcibly directed to this subject by Mr. Henry Smith, of London, who has displayed considerable talent in an article upon it published in the *Lancet*, 1848. The Profession are certainly under great obligations to Mr. Smith, for the lucid and philosophical manner in which he has recalled their attention to this interesting surgical *procedure*, which, as he justly observes, is calculated to elevate the "science of surgery." The result of several cases recorded held out great encouragement to attempt the removal of the diseased bone by operation; and, indeed, as Mr. Smith remarks, and very truly, "one of the chief rules of surgery is this, that wherever any foreign substance is lodged or produced in any part of the body, causing irritation and disease, the same should be removed by the art of the surgeon if it can be got at." Acting upon this principle, I was induced to operate in the case I have detailed, the result of which is most satisfactory, and will prove very encouraging to future operators, as well as a powerful argument in favour of Mr. Smith's views, as regards the propriety of removing the head of the thigh bone when in a carious condition; indeed, it is the only chance the patient has, save and except the remote one of

an anchylosis, when the bone remains within the socket. Considerable discussion has taken place as to what part is first attacked in disease of the hip-joint. Sir B. Brodie thinks it commences first in the cartilages; Sir A. Cooper in the synovial membrane; but this is of little importance as to where the disease begins, inasmuch as the treatment would be precisely the same. The progress of the disease is as follows:—We have first inflammation about the joint: an abscess forms, which after a time gives way; ulceration of the cartilages takes place; the capsular ligament is destroyed, together with the ligamentum teres; and lastly, the globular head of the femur becomes diseased; the action of the muscles produces luxation of the bone, and the displacement is generally upon the dorsum ilii; sinuses communicate with the diseased bone, through which an offensive discharge escapes, with occasionally pieces of carious bone; hectic fever sets in; there is great constitutional disturbance; the system gradually gives way, until death terminates the painful scene, and the surgeon has to regret that the resources of his art did not enable him to effect a cure. I am happy to bear testimony to the fact, that we are now in a position to hold out to the unfortunate sufferers a chance of their complete recovery from this truly formidable disease, by an operation which may be effected with expedition and perfect safety. It is advisable that the disease should be so far advanced that dislocation of the head of the femur should have taken place before any attempt is made to remove it; indeed, it is the excessive irritation caused by the presence of the head of the bone in its abnormal position, coupled with the weakened state of the patient by the exhausting discharge, that renders surgical interference justifiable; nevertheless, it does not follow that the operation would not be proper or advisable even when the bone is still within the acetabulum. The case I have just detailed bears me out in this assertion, as well as one operated upon by Professor Fergusson.* In both cases an error in diagnosis was committed, but in neither instance had we to regret the operation, as the carious bone was effectually removed, and the acetabulum and pelvis free from disease. I do not, however, advise the operation unless we are tolerably certain the bone is dislocated, or that it is still *in situ*, with the great trochanter and neck in a carious state only. Then, under such circumstances, we should be justified in cutting down upon and removing the great trochanter and neck of the femur. The shortening of the limb where the head of the bone is still within the socket, is accounted for by the neck of the femur becoming softened from disease, the great trochanter is forced upwards, and the neck, instead of forming an obtuse angle, is in a straight line with the great trochanter. This will cause a shortening of the limb of several inches, the knee will project over the thigh of the sound limb, and the great trochanter be carried upwards and outwards firmly against the integuments, as in the case just given. My case is both interesting and instructive.

The boy, after years of suffering in a crippled and pitiable condition, is now in perfect health, and his deformity nearly removed; and all this was effected in the short space of six weeks, the large cavity filled up by healthy granulations, and nearly skinned over. Surely this is evidence enough—if, indeed, any were wanting—to shew us what Nature is capable of effecting where the cause of irritation is removed. Years had been lost in excruciating pain, accompanied by exhausting discharge, in endeavours to throw off the obnoxious substance, when, thanks to Mr. Henry Smith for his practical suggestions, I put in force the operation, and, after a few minutes, cleared away the carious bone, when Nature, as if grateful for my assistance, immediately set about repairing the mutilated part and is now completing the cure. Since operating upon the boy, the details of a most interesting case of resection of the head of the femur have been published by my friend Mr. Cotton, of Lynn.* Great credit is due to that talented surgeon for the clear and precise way in which he has given the particulars of his case to the medical profession, and the candour with which he has described the progress of it. The patient, a girl, was in a most pitiable state when admitted into the hospital, and was, as Mr. Henry Smith has so graphically described, “a pitiable object, harassed by pain, and worn down by slow and wasting hectic;” indeed, from the description given of the girl, none but such an enterprising surgeon as Mr. Cotton would have had the courage to have removed the head of the thigh bone from its unnatural position, in so apparently hopeless a case. The case is unique in its way; and from the severity of its symptoms, caused by the irritation of the carious head of the femur in its abnormal position, makes it a fair test as regards the propriety of the operation in these diseases. I am fully acquainted with Professor Syme's objections to this operation. With due deference, however, to the learned Professor, I think that his conclusions are rather premature. The case above narrated, together with those of Professor Fergusson, will go far to convince the profession of the safety of the operation, as well as to set aside the erroneous views propagated by Professor Syme, in reference to a proceeding with which he has himself had no practical acquaintance.

In the interval between the two last reports I have been favoured with a visit from Mr. Henry Smith, from London, who has carefully inspected the case, and it is his opinion, taking into consideration the shortness of the time since which the operation was performed, and the deplorable condition which the patient was previously in, that it is altogether the most satisfactory and interesting of those hitherto recorded.

* *Provincial Medical and Surgical Journal*, p. 683. 1849.