

ever, all healed with the exception of one, which has nearly healed. The boy has increased in weight, and now is heavier than boys of his age (ten years), weighing fifty-six pounds. According to Bowditch's tables, a boy of that age should weigh sixty-four pounds. He is fifty inches tall, which should give in the average boy a weight of sixty pounds. Considering that he has lost one entire lower extremity, which may be estimated as weighing at least ten pounds, it will be seen that he is above the standard in weight, an evidence that the carious process is arrested in progress.

Absolute economy of blood — of the utmost importance in all hip amputation — is vital in cases reduced to the physical extremity seen in cases of hip disease undergoing this operation.

For controlling hæmorrhage neither digital compression nor abdominal tourniquets are to be trusted, although the former can be used in children with less risk than in adults, and is still used by Marshall. Davy's lever in the rectum has caused death by perforation of the gut, and has little but novelty in its favor.⁴ Trendelenburg's method of compressing the flaps by means of a rubber tube which is placed over the thigh and is wound round both ends of a steel rod passed through the thigh, the vessels being compressed between the rod and the rubber tube, presents no advantages over an elastic compression properly applied. The best way is that described by Mr. Jordan Lloyd.⁵

The limb should be elevated and stripped of blood, and an elastic bandage is doubled and passed between the thighs,⁶ its centre lying between the tuber ischii of the side to be operated upon and the anus. A pad in the shape of a rolled bandage is tied over the external iliac artery, the ends of the rubber are drawn tightly upwards and outwards (one in front and one behind) to a point above the centre of the iliac crest of the same side. The front part of the band passes across the compress, the back part runs across the great sciatic notch and prevents bleeding from the branches of the internal iliac. The ends of the bandage are tightened, and should be held by the hand of an assistant placed just above the centre of the iliac crest. Mr. Lloyd suggests that a short piece of wooden rod can be slipped under the elastic, and is a convenience in holding this rubber band. This elastic bandage should not be allowed to slip down below the iliac crest or over the tuber ischii. This can be done by the hand of an assistant or by passing a bandage under the elastic and tying it to the patient's shoulder.

The method of disarticulating, so popular in the operating classes, and known as Lisfranc's method, is not readily done if an elastic tourniquet is used. To check all bleeding it will be found most convenient to amputate as if at the upper part of the thigh, and tie all bleeding points, removing the remaining fragment by a lateral incision. This is practically the method recommended by M. Furnaux Jordan. A lateral incision is made as in excision of the head of the femur — the head of the femur is excised in order that it be out of the way, the lateral incision is prolonged and the shaft of the femur separated for two or three inches in its length from the surrounding muscles — taking care that the periosteum remain with the muscles. A cir-

cular amputation of the thigh is then done, the bone sawn through, or if entirely freed from the surrounding tissues by the lateral incision, pulled out from the flaps. The vessels are tied and the tourniquet removed.

The operation in this way can be done without the loss of any appreciable amount of blood. There is time for due deliberation, as there is no danger of a death upon the table by a sudden gush of hæmorrhage.

The following conclusions would appear to be justified: amputation at the hip-joint, in hip disease, should be regarded as the very last resort, contra-indicated by extensive amyloid degeneration of the viscera, or a moribund condition of the patient.

The chances of mortality are not greater than the chances given in amputation of the thigh in general.

The chances of a permanent cure (barring the mutilation) would appear to be greater than after excision at the hip-joint.

The amputation should be done subperiosteally whenever it is possible. An elastic tourniquet gives the best means of preventing hæmorrhage.

Preliminary excision of the head of the femur, in freeing the upper part of the shaft, will be found to facilitate the amputation.

NOTE.—We have examined the stump of the patient shown by Dr. E. H. Bradford, at the meeting of the Surgical Section of the Suffolk District Medical Society, on December 1st, 1886, and upon whom he had three years before performed subperiosteal amputation at the hip-joint after suppurative hip disease; and we found in the centre of the stump a hard resistant mass, having on palpation the characteristics of bone. This mass was about two inches thick and four or five inches long, and projected downwards slightly flexed in the natural axis of the limb.

GEORGE H. MONKS, M.D., *Secretary.*

J. COLLINS WARREN, M.D., *Chairman.*

A REPORT OF FOUR CASES OF EXCISION OF THE HIP PERFORMED IN 1882.¹

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HAVING an opportunity to show what may be considered a successful result after excision of the hip, it was thought that a presentation of the results in three other cases, performed at about the same time, might prove instructive.

These four excisions were performed at the Boston City Hospital during my service as Interne. At that time, being interested in the comparative merits of the operation, I was surprised to find how difficult it was, in this vicinity, at least, to discover patients on whom the operation had been performed, or even to obtain any definite information from surgeons who had performed the operation, as to whether it had proved successful or otherwise. This fact has induced me to report these final results in this little group of four cases, comprising my personal experience with the operation.

CASE I. A boy, four years of age, entered the Hospital February 17, 1882, with a history of pain in the right hip, and slowly-increasing lameness of six months' duration. Examination showed muscular spasm, limitation of motion, tilting of the pelvis, pain and grating on movement of the right hip, and a fluctuating swelling, extending from the great trochanter

⁴ Brit. Med. and Surg. Journal, September 13, 1885.

⁵ Lancet, May 26, 1883.

⁶ The writer has used large rubber tubing in preference to the rubber band described by Mr. Lloyd. If pulled tight the pad is not necessary. It has also proved convenient to use the tubing long enough that the ends may be brought (after the tubing is fastened on the affected side) to the well side and then fastened.

¹ Read at a meeting of the Surgical Section of the Suffolk District Medical Society, held December 1st, 1886.

to the middle of the thigh. The child was placed in bed, and a double T-splint, with extension, applied. This treatment relieved the pain, but as no improvement followed, on March 10th Dr. W. H. Thorndike excised the hip. Considerable pus was evacuated, and the head of the bone, which was softened and eroded, was removed just below the great trochanter. The acetabulum was not diseased. The wound was dressed antiseptically, the patient placed upon a frame, extension and fixation of the limb applied, and an immediate improvement in general condition followed. Two months later the wound had closed, with the exception of two small sinuses leading down to the acetabulum.

On June 3d symptoms of an acute attack appeared, consisting of headache, constipation, vomiting, slow pulse, and stupor, followed by coma, dilated pupils, and convulsions, with death four days later. No examination was allowed, but, from the symptoms, a diagnosis of tubercular meningitis was made.

CASE II. The patient, a boy ten years of age, entered the Hospital February 18, 1882, with a history of slight lameness of the left leg, and stiffness in the hip-joint for more than a year, with, during the past three months, increasing pain and swelling of the leg. Examination showed the left leg flexed upon the abdomen, much limitation of motion, grating in the joint, and a large, fluctuating swelling, extending from the trochanter to the middle of the outer aspect of the thigh. Under ether, the leg was extended, and a T-splint and extension applied. The abscess, however, slowly increased in size, and two weeks later a spontaneous opening formed. The patient now grew rapidly worse, and on March 4th Dr. Thorndike excised the head of the femur, just below the great trochanter. This was found to be extensively diseased, as was the acetabulum, the greater part of which was also removed. The patient died thirty-six hours later, apparently from shock.

CASE III. A boy, seven years of age, entered the Hospital January 14, 1882, with a history of a fall three weeks before, followed by pain in the left hip and knee. It is probable, however, that the symptoms in this case were of much longer duration.

Examination showed the leg flexed upon the abdomen, pain on motion, and muscular spasm. Under ether, the leg was extended, a double T-splint, with extension, applied. This treatment relieved the pain, but two months later an ovoid, fluctuating swelling appeared on the groin, which slowly increased in size. This was incised, and the joint found to be so extensively diseased that an excision was deemed advisable. On June 13th Dr. C. D. Homans performed the operation, removing the head of the bone above the great trochanter. The after-treatment was similar to that of the preceding cases.

An immediate improvement in the general condition of the patient followed; five months later the wound had nearly closed, there was but slight discharge from two small sinuses, the patient up and about on high shoe and crutches, with a moderate amount of motion in the joint. One month later he was discharged. Six months afterwards I saw him. He was then walking about on crutches; the leg was firmly ankylosed, and from one and one-half to two inches shorter than the other. There was also considerable suppuration from two sinuses leading down to the acetabulum. The boy's surroundings were very bad, and his general

condition poor. In July, 1884, two years after the operation, he died. The resident physician at the New England Hospital, where the patient remained for a few weeks during the latter part of the time, informs me that there was then a large, fluctuating tumor over the lower part of the back, a freely-discharging sinus over the site of the former operation, and that the urine showed evidence of disease. His mother says that shortly before his death "he was all swelled up." I, therefore, infer the cause of death to have been exhaustion from long-continued suppuration, with amyloid degeneration of the internal organs.

CASE IV. The patient, a boy four years of age, first entered the Hospital October 4, 1878, with a history of a fall six months before, which was followed by gradually-increasing pain and disability. Examination showed well-marked disease of the right hip. He was treated by rest and extension, and he left the Hospital six months later, wearing a Sayre's short splint. October 20, 1880, he was admitted to the Hospital, the symptoms being about the same as before, and remained two months.

On October 11, 1881, he again entered the Hospital, with a history of injury, followed by acute symptoms. The leg was found to be flexed almost at right angles to the body. This was extended under ether, and after three months of rest in bed, with extension, he was discharged on crutches, wearing a high shoe.

On January 31, 1882, he entered the Hospital for the fourth time, with the usual history. Examination showed pain on motion, moderate flexion and fixation of the joint, with a hard, elastic, semi-fluctuating swelling in the groin. A T-splint, with extension, was applied, but as there had been no improvement at the end of three months, Dr. Homans decided to excise the hip. This was done on April 10th, 1882. The head of the bone was removed two inches below the great trochanter, and the acetabulum, which was roughened, was thoroughly scraped. Careful general and special treatment resulted in closure of the wound, and the patient was discharged February 5, 1883, well, and has since remained in perfect health.

Thus, of these four patients the first died of tubercular meningitis; possibly the operation might have increased the danger of tuberculous infection, but of this it is impossible to say.

The second died from shock, though in this case the disease was so extensive and the condition of the patient so bad that probably the operation simply hastened his death by a few months.

The third died from the effect of long-continued suppuration. The operation was a failure, but it is improbable that death was hastened by it.

The fourth I show. The leg on the operated side is considerably smaller than the other. There is three and one-half inches shortening, and almost complete ankylosis, the limb being held in a position slightly adducted and flexed. This might be remedied, by making the leg slightly longer, but the patient objects to further interference. With a high shoe he walks long distances without especial fatigue and without artificial support, though with a decided limp.

This result would not be considered a brilliant one by those who expect free motion after every case of excision; but practically, if the two periods of four years before and after the operation be compared, the first of more or less pain and disability, interspersed with fifteen months' confinement in a hospital, and

the second of continuous good health, the operation may, I think, in this case be classed as a success.

In regard to the merits of the operation itself, the weight of surgical opinion in view of the very satisfactory results obtained by careful and continued conservative treatment, is that the operation should be limited to those cases in which it is either impossible to carry out such treatment, or where conservative treatment carefully carried out is unavailing. In other words, to consider excision of the hip as a life-saving operation. If then, the operation is, as a rule, to be reserved to those cases where conservative treatment has failed—cases of extensive destruction of bone and soft parts, in such cases any hope of preserving useful motion in such joints should be discarded, and the operation conducted in the hope of relieving the patient, exhausted by pain and long-continued suppuration, as speedily as possible.¹

A large incision should be made and the bone removed well down below the trochanter; all the diseased soft parts, including the periosteum, and the capsule, should be removed, all sinuses thoroughly scraped; the extremity of the femur placed as nearly as possible in apposition with the acetabulum, the soft parts united by deep sutures placed in layers to close the cavity and prevent retention of secretions, the limb placed on an immovable apparatus; dry non-irritating antiseptic dressings, preferably in connection with iodoform, applied, thus hoping to secure rapid closure of the wound and ankylosis. But, as in these cases of long standing it can scarcely be hoped to remove, at the first operation, all action or latent disease, if healing does not result, the suppurating wound should again and again be explored in the hope of final success. The ordinary procedure is, or has been, to treat both recent and advanced cases alike, simply removing the head of the femur through a small incision, leaving the periosteum with the attached muscles in the hope of obtaining a movable joint. If healing does not result, nothing more is attempted. I think this point has not been sufficiently insisted upon: that the operation having been undertaken with the object of relieving patients from the danger of a chronic exhausting disease, they should not be sent back to their wretched homes with unhealed suppurating wounds; but if persistent attempts to effect a cure by excision have failed, amputation should be undertaken as a last resort.

—Sergeant Boston Corbett, the man who shot J. Wilkes Booth, has become insane. His maniacal outbreak was characterized by his arming himself with a pair of revolvers, and dispersing the officers, and finally, the members of the Kansas Legislature, which body he served in the capacity of assistant-door-keeper.

²De la Coxalgie, par le Prof. Ollier. Congrès français de Chirurgie, 1885.

"As my experience increases and the longer I watch patients on whom I have performed the operation of excision of the hip, the less I am satisfied with movable joints. There are, of course, advantages in being able to bend the thigh and seat one's self, but it is of much greater importance to be able to walk all day, and to be protected from the danger of recurrence of disease by a good bony union. In those who preserve movable joints, the extremity of the femur is generally loosely attached, it always slips up more or less on the pelvis or rather the pelvis slips down on it, the weight of the body stretching the fibrous bands so that the pelvis is as it were suspended on the femur. We must consider not the immediate but the final results; and I repeat among my patients who work at laborious occupations, those whose femurs are ankylosed with the pelvis, are much better satisfied than those who preserve movable joints."

REPORT ON MENTAL DISEASE.

BY HENRY R. STEDMAN, M.D.

EPILEPSY WITHOUT UNCONSCIOUSNESS.

BALL,¹ in introducing a carefully-observed case of true epilepsy without unconsciousness, criticises as too absolute the definition of that malady which makes unconsciousness a necessary accompaniment of all attacks, and contends that this accepted formula, like all absolute rules, has its exceptions. Somnambulism, for example, is nearly always attended by obliteration of consciousness during the sleep-walking stage, but it is equally certain that some sleep-walkers do retain the recollection of what has happened during that interval; so it is with epilepsy. In the immense majority of cases consciousness is abolished during the attack, but in a very few exceptional instances this is not so. A case reported by Major is quoted by Bucknill and Tuke, and several similar cases have been met with by others. The medico-legal importance of such cases is readily appreciated. A man commits a crime while in the epileptic state, and is held to be irresponsible; but if we admit the accepted definition of epilepsy, he cannot be considered an epileptic if he retains the slightest recollection of what has happened during the attack.

The case in point is that of a married woman of thirty-two years. Her father, an habitual drunkard, died at the age of fifty-two. Several brothers and sisters died, when young, of convulsions. The patient began to have convulsions for a time when seven years old, and soon after her marriage, at the age of twenty-three, during pregnancy, she had attacks of an epileptiform nature. For seven years afterwards, during which time she has been under Dr. Ball's observation, she has had seizures, at variable intervals, of three different kinds. First, she has, but very rarely, genuine epileptic convulsions (*grand mal*), ushered in by a cry, facial pallor, etc., and attended by foaming at the mouth, and the characteristic convulsive movements of all the limbs of the tonic and clonic type. One of these attacks was witnessed by Dr. Ball. Somewhat oftener she has attacks of epileptic vertigo, "*absences*," of short duration (*petit mal*). But by far the most frequent seizures are characterized by delirious excitement. She gives a scream, turns pale, and cries out, "Oh! God leave me!" jumps out of bed, and runs about the room, indulging in all sorts of absurd conduct, and sometimes even violently attacking others. It is only in attacks of the last variety that she retains recollection of what has happened, and it has only been during the past year that this peculiarity has been manifested.

In one of these seizures (November 25, 1885) she said to her husband, "I am going to bite you," and then, putting her threat into execution, she bit him and spat in his face. On coming to herself, she remembered the occurrence perfectly, and said to him, "Didn't I say I was going to bite you, and didn't I really do so, and spit in your face?"

In another of these attacks, which occurred at night, she left her bed and went to her ironing-table. She also tried to find her needles, thread, and the rest of her sewing implements. The next morning, on awaking, she remembered this circumstance very clearly,

¹L'Encephale for July and August, 1886.

²The Neurological Review for November, 1886.