

Lastly, the pressure in this case was effected throughout by means of a conical leaden weight, the lesser end of which, about the size of an ordinary tourniquet pad, was applied over two folds of soft leather, to the oratory. To keep the weight in position, and to direct the pressure, a stiff iron wire, which has been inserted into its greater end while the metal was melted, was passed through a ring fixed in a cradle, large enough to stand on either side of his pelvis.

From the satisfactory results which have followed the use of the weight, applied in this way, I am induced to hope that its simplicity and facility of construction may render it useful in the country, where a more complicated apparatus cannot readily be procured."

35. *Fracture of the Neck of the Femur within the Capsule.*—Dr. BYANT showed to the Pathological Society, April 6th, a preparation from a case of this kind.

Charlotte F., aged 69, an inmate of the Kent County Lunatic Asylum, upon November 20, 1857, was pulled off the edge of her bed by a child, and fell upon her right hip. There was some pain in the neighbourhood of the hip-joint, but more particularly in the knee. The shortening was very trivial, and there was no oedema of the foot. The woman could partly flex her thigh, though not without pain, and there was no effusion. Some difficulty was experienced in detecting crepitus, which was accomplished, at last, by an assistant extending, and at the same time rotating the leg inwards. The long splint was applied, and kept on for some weeks; a bed-sore, however, appeared, and from this she sank exhausted, upon Jan. 8, 1858, seven weeks after the injury.

The specimen exhibited a genuine example of fracture of the neck within the capsule. The line of fracture was not direct, and upon one-half was not to be seen, unless some force were employed to separate the parts. The reparative process seemed to have progressed fairly, and if the bed-sore had not proved too much for her feeble powers, there seemed every reason to believe that perfect reparation would have taken place.—*Med. Times and Gaz.*, April 17, 1858.

36. *Resection of the Head of the Femur.* By HOLMES COOTE, M. D., Ass't Surg. St. Bartholomew's Hospital.—I performed, in the month of September, 1857, at St. Bartholomew's Hospital, the operation of resection of the head of the femur on a pallid and emaciated boy, who had been suffering from disease of the hip, of two years' duration, followed by dislocation of the head of the bone into the sacro-sciatic notch; the formation of numerous abscesses, which had left profusely discharging fistulous passages; permanent flexure of the femur on the pelvis to more than a right angle; and great distortion of the spine. The particulars of the case have already appeared in the pages of another journal, where it has been correctly recorded as one of the successful instances of the performance of this operation; and so indeed it may be termed; for the patient has since improved in health, the fistulous passages have healed up, the limb is coming into its proper position, and the curvature of the spine is lessened. But I write this to record a protest against the very operation which I have performed, being convinced that very many of the evils ensuing from hip-disease, especially in young subjects, and nearly all those which are supposed to indicate the propriety of resection of the head of the femur, are due to pressure and friction between the opposed ulcerating articular surfaces, which, by the application of proper instruments, and by a due appreciation of the value of patience, admit of removal more often than is supposed. And here I may remark, that surgeons would do well to study again the anatomy of joints, and the significance of the different ligaments. The researches of the Webers have not received due attention; nor have many subsequent monographs been read. It will not be generally believed that the thigh cannot be bent backwards on the pelvis—that it is immovably fixed when it falls in a straight line corresponding with the axis of the trunk. When the lower extremity is thrown backwards, as in the act of kicking, the movement is between the pelvis and the lumbar vertebrae. Nor does the thigh admit of much rotation outwards, the ilio-femoral ligament restraining motion in that direction. When the limb is extended on the pelvis, the articulating surfaces are firmly

pressed together; but when the thigh is bent forwards on the pelvis, and the limb is inverted and adducted, the articulating surfaces are held loosely together; and the movements are unchecked, inasmuch as the posterior part of the capsule has no direct attachment to the femur, but forms a loose fold, like an orbicular ligament. How often do we read of bending backwards the thigh on the pelvis—of its free range of external rotation! How commonly is extension, i. e. bringing the limb to the straight line with the trunk—practised in surgery! The first two movements are impossible without rupture of the capsular ligament; the last amounts to absolute cruelty to a patient suffering from ulceration of the bone.

To return to the operation of resection of the head of the femur: The success which I have met with in the case above alluded to gives me no desire to repeat the operation; for more mature reflection and experience, combined with re-examination of pathological specimens, have led me to conclude that many of the morbid changes, and still more of the attendant suffering, are due to the imperfect carrying out of some of the most obvious and simple principles of treatment; namely, the proper application of warmth, perfect immobility of the limb, and relief of the articulating surfaces from friction and pressure. Moreover, when the head of the bone is exciting ulceration in the acetabulum, or pain and disease, after dislocation, in the neighboring soft parts, the symptoms may be arrested, the limb may be brought into place, and the patient's health greatly improved by the application of an apparatus for extension—not forced or sudden, but slowly acting, and capable of direction in whatever way will draw asunder ulcerating and highly sensitive surfaces.

I shall be told that these principles of treatment have been long attended to. But I may question that fact. How many children, with incipient disease of the hip, have none other than their usual clothing? How often is it that the limb, somewhat colder than the opposite, has no flannel roller, nor the covering of leather or gotta percha over the joint? As for the repose of the limb, the child is daily taken from its bed to be washed and dressed, to pass its evocations; and, among the poor, this movement goes on to a far greater extent.

I directed attention to these points in an article on Disease of Joints, which appeared in the *British and Foreign Medico-Chirurgical Review* in 1855; and I have seen no reason to change the opinion there expressed, that these points "merit, in their more complete and scientific application, greater general attention than they have hitherto received in this country."

I have not the space to enter minutely into the morbid changes in hip-disease of young subjects, concerning the origin of which so much has been written; nor to quote the opinion of those who, on the one side, say it is originally an inflammatory affection of the synovial membrane, or, on the other, that it commences in the cancellous texture of the bones. Pathological investigation shows that, however analogous the constitutional peculiarity may be in all cases, the disease does not always begin in the same way. In many cases, the inflammation of the synovial membrane goes hand in hand with a similar process in the spongy texture of the bones composing the joint; there are others in which the latter morbid changes are either absent or exist in a very slight degree. The destruction of the ligamentum teres, the oxidation of pus in the bones, the ulceration of the cartilage, the separation of the epiphysis, are stages familiar to all; but the point to which I would direct attention is the following—that the more serious changes seem in great measure due to the robbing of the ulcerated body surfaces—a process which keeps up the morbid action which is often the precursor of fatal accidents. How comes it that we sometimes find the base of the acetabulum perforated, with the head of the femur impacted in the hole (*Museum of Royal College of Surgeons*, No. 940); or separation of the three imperfectly united bony elements of the acetabulum, the ilium, ischium, and pubis? Is it probable that the matter, which in McDowol's case communicated with the small intestine and external iliac artery, and in R. Adams' case found its way into the vein cava inferior, would have made a passage into the abdominal cavity, had the head of the femur been prevented from robbing against and ulcerating the acetabulum?

I cannot but think that, if care to prevent these accidents be not taken, the patient is exposed some risks by the actual dislocation of the bone from its articular cavity. Preparations are to be seen in the Museum of St. Bartholomew's Hospital, where the shaft of the femur had been slowly driven into a cavity in the cancellous texture of the ilium, near to the acetabulum.

The instrument in use at the Royal Orthopædic Hospital for slowly drawing the femur, when dislocated, to its proper place, or for keeping up slow extension, combined with immobility of the limb, when the head of the bone still remains in the articular cavity, is described in Mr. Tamplin's work on *Deformities*, p. 38; or may be seen at the maker's, Mr. Fergusson, of Giltspur Street. It is fixed to the pelvis, and attached by a broad webbing strap to the abdomen. From this a steel bar passes down the outer part of the thigh, where it is fixed by a broad leather strap. Three screws at the junction of the steel bar with the pelvic band allow of three movements—1. Flexure; 2. Abduction; 3. Elongation. "The foot, leg, thigh, and hip, must first be bandaged with a flannel roller; for, unless the natural temperature is kept up, the restorative process cannot go on." (Tamplin, *On Deformities*, p. 185.)

I will add, in conclusion, that this treatment may be daily seen in practice in the Royal Orthopædic Hospital; and that I should indisputably try it, not for weeks, nor even months, but for years, if possible, before resorting again to so serious an operation as resection of the hip-joint, which, however successful in its issue, leaves the patient in a crippled state for at least an equal period of time, and which likewise shows, in a large proportion of cases, a fatal result.—*British Med. Journ.*, Jan. 2, 1858.

37. *Excision of the Knee*.—[Mr. HUMPHRY read a paper on this subject (March 9th, 1858), before the Royal Medical and Chirurgial Society, the following abstract of which, with the debate to which it gave rise, is of great interest as showing the present opinions of some of the distinguished London surgeons on the subject. There seems to us to have prevailed in Great Britain for a few years past quite a mania for resections, but it would now appear that more sober views were beginning to be entertained on the subject.]

Mr. Humphry's paper contained an abstract of thirteen cases operated on by the author. Of these, one (a little child in whom the operation was performed on account of acute suppuration of the joint) died; in four, amputation was required, the patients all recovering; and the remaining eight did well, retaining, or with the prospect of retaining, a useful limb in each case. In none were any severe constitutional symptoms excited by the operation, from which it might be inferred that the operation is not in itself one of much danger. Nevertheless, the processes of reparation are more difficult than after amputation; there is likely to be protracted discharge and recurrence of abscesses, etc., and therefore, when the patient is of strumous temperament, or in a very reduced state, amputation is to be preferred to resection. The results of excision are likely to be favourable in proportion as the disease for which it is performed is slight and not acute. Amongst the most suitable cases are those in which the severe stages of disease have passed by, and left the joint crippled, and the limb, consequently, useless. The cases also in which simple inflammatory disease, commencing in the synovial membrane, involves the cartilage and hence, destroying the former to such an extent as to leave little hope of a useful joint, are well suited to excision. But where the disease remains long confined to the synovial membrane, inducing great thickening and various other changes in it, the prospects of excision are less good, because the subjects of this form of disease are generally of strumous temperament, and some portions of the morbid structure are liable to be left, and so become sources of irritation and suppuration. Nevertheless, the author would not altogether decline to perform the operation in this latter class of cases, inasmuch as the remaining fragments of the diseased membrane may fall into a quiescent state and disappear, and the cases do well, provided the bones become firmly united to one another; and if the health begins to fail, the limb can still be removed. The operation is also well suited to some other cases of rarer occurrence, such as certain cases of chronic rheumatic arthritis, knock-knee in the adult, unreduced