

globules by their size, granular texture, and by the action of acetic acid and ether upon them; by the first-named reagent, nuclei are disclosed in the corpuscles, while in ether they are insoluble, and thus distinguished from the fatty globules, for some of which they might be readily mistaken.

The milky appearance presented by chylous urine is occasioned partly by the oily matter and the granular corpuscles present, and partly by precipitated albuminous, or more probably fibrinous matter. Chylous urine, when first passed, and while still warm, does not usually present the same degree of opacity and milkiness which it acquires when it becomes cold. This depends on the solidification both of the fatty and fibrinous matters present. If the quantity of chyle present be very considerable, the urine will sometimes acquire a gelatinous or semi-solid consistence, owing to the coagulation of the fibrinous element.

In some of the cases of chylous urine which fell under the observation of Dr. Prout, the albumen did not coagulate on the application of heat, but it did when nitric acid was added, and hence he was led to consider that this albumen was in an imperfect state.

The proportion of fat present in chylous urine may be so great that it may interfere with the gelatinization of the spontaneously-coagulable albumen or fibrine, but as soon as the fat has been removed by means of ether, the solidification will, in some cases, take place.

ON A

SUCCESSFUL CASE OF EXCISION OF THE HEAD OF THE FEMUR;

WITH REMARKS UPON THE SUBSEQUENT TREATMENT OF THE LIMB.

By P. C. PRICE, Esq., M.R.C.S.,

SURGEON TO THE GREAT NORTHERN HOSPITAL, SURGEON TO THE BLENHEIM FREE DISPENSARY AND INFIRMARY, &c.

OF late years the treatment of hip-joint disease, in its various stages, has elicited considerable attention, and some surgeons have essayed to depart from the old routine of practice of allowing the unhappy patient, a victim to this terrible affection, to sink without attempting any operative measure whereby life might be prolonged, and a useful limb retained. This bold departure from ordinary practice has been frequently followed with the most brilliant success. It consists in the removal of a part or the entire hip-articulation which has become so involved by disease that its integrity is destroyed, and the life of the sufferer placed in imminent danger.

I conceive that a full and truthful record of a case in which the operation was performed, and by which life was retained, and, in addition, a highly useful limb given to the patient, to be more fruitful of argument, and far more convincing, than the most hopeful encouragement afforded by theory and advocated with enthusiasm; while the great advantage attending judicious operative interference tends to point a moral which the most obnoxious opponent cannot gainsay, and which at once refutes opinions shallow and untenable.

S. L.—, aged eight years and a half, once a fine, intelligent-looking little fellow, but evidently of a strumous constitution, came under my notice in the month of July, 1857. For nearly three years symptoms of mischief going on in his left hip were observed by his parents, but as they crept insidiously onwards, and the child complained but slightly of annoyance, little notice was taken of the advancing affection. Gradually, however, evidences of considerable destruction, implicating the joint, called forth the more earnest attention of his parents, while the evil forebodings demanded that the boy should be watched with great care. In January of the present year, he was confined to his bed. A swelling had for some time been slowly forming beneath the integuments covering the left buttock, which at this time burst, and it then became advisable to place him in an hospital. He remained an in-door patient for about six weeks, and was then discharged as a case for which nothing could be done. During many weeks the amount of discharge from the swelling, which proved to be an abscess, greatly distressed the health, so that the vital powers, step by step, began to flag, and to his parents an early death appeared not too probable a doom.

In the month of July, the little patient was placed directly under my care. It needed no great amount of perception to see that the child was suffering from extensive derangement of the hip-joint, and that, unless Nature could be assisted by Art, there was an unhappy fatality hanging over an already curtailed existence. Pale and dejected, not so much from acute pain as from the constant discharge and irritation produced by the flow of unhealthy-looking matter from the sac of a large abscess which had extended for a considerable distance beneath the integuments of the buttock, he refused nourishment, and obtained no sleep. The local mischief had deranged the functions of the entire system. The form of the child, once elegant, was now distorted. The left thigh, flexed at an obtuse angle to the trunk, was wasted, while the leg hung down impoverished and useless. The buttock had lost its natural contour. Swelling had obscured its outline, and a few fistulous channels, terminating behind the great trochanter of the femur, discharged an unhealthy semi-purulent secretion. In addition to the disfigurement of the hip and thigh, the spine was twisted, owing to the irregular action of its muscles, and to the position assumed by the little patient, to throw the weight of the body off the affected side. A probe passing along the fistulous routes, entered the cavity of the abscess, and came in contact with the structures immediately surrounding the articulation. No bony surface could be touched; the most careful examination failing to detect a direct opening into the joint cavity. Under chloroform the most diligent search was made, but to no purpose. Advantage, however, was taken to make a most searching investigation as to the exact position assumed by the head of the femur. It was plainly apparent that the thigh-bone was securely encased within the cotyloid cavity by means of the capsular ligament, remaining in a great measure or altogether intact. Rotation could be performed to some extent, but no grating sound could be detected. The motions of the joint were limited, owing to the consolidation that had taken place from local inflammation and retention of the limb in a uniform position.

While the patient was under the influence of chloroform, the fistulous channels were enlarged, and the walls of the abscess cleared of a thick, gelatinous substance, which forms a frequent lining of strumous cavities. By daily injecting a weak iodine solution into the abscess, the swelling and discharge rapidly diminished, and at the end of a few weeks, with the aid of judicious treatment and good nourishment, the little fellow somewhat improved. The general health being thus fortified, I the more readily and hopefully determined to do something definite to arrest the destruction which was still advancing in the interior of the articulation.

The most careful consideration of the various features exhibited by the case induced me, without further hesitation, to adopt such operative measures as might seem needful, and more especially as the health of the child was gradually failing, and as the position assumed by the limb was such that, even anticipating the happiest termination of the case, it must remain not only an unsightly but a thoroughly useless member, I conceived that the operation best suited would be the removal of the head of the femur and such parts of the acetabulum as might be found involved in disease.

Aug. 5th, 1857.—Dr. Meadows having placed the child under chloroform, with the assistance of my friends, Messrs. Henry Smith, W. Wood, and Mason, I cut down upon the articulation, and removed such parts as were implicated in disease. The steps of the operation were the following:—There existed, as already stated, at the back part of the greater trochanter, one or two fistulous openings. These were laid freely open by a longitudinal incision of three or four inches in length, and the wound further enlarged by making a small transverse incision in a direction backwards. The capsular ligament was easily exposed, but was to all appearance complete. On reaching the interior of the articulation, the head of the femur was found bared, which at once relieved the mind of any misgivings. By proper rotary movements, the head of the thigh-bone, after being released by division of all tissues that kept it in position, was dislocated from the cotyloid cavity, its escape being evident to all by the peculiar noise which accompanied the luxation. The bone was sawn through immediately below the trochanters. The floor of the acetabulum was healthy except in one or two spots, which were removed by the gouge. The ligamentum teres was entirely destroyed, the synovial membrane pulpy and thickened; no fluid within the joint, and the mischief apparently confined to the cartilage covering the head of the femur, which was totally destroyed except around the circumference. There was little or no hæmorrhage; two ligatures were, however, applied, and the wound well cleansed

before being closed by means of stitches. The thigh, which was flexed at an obtuse angle to the body, was gradually straightened, and brought into a direct line, and retained so by a long splint, as here represented.

In the evening of the next day, the little fellow, when asleep, managed to fall out of bed, owing to a fright occasioned by a terrifying dream. The limb, however, being firmly protected by the splint, received not the least damage. To run through the daily history of the recovery would serve no purpose. Suffice it to say that, owing to the excellent management of my friend Mr. Wm. Wood, who for several months had taken great interest in the case, the most satisfactory termination followed.

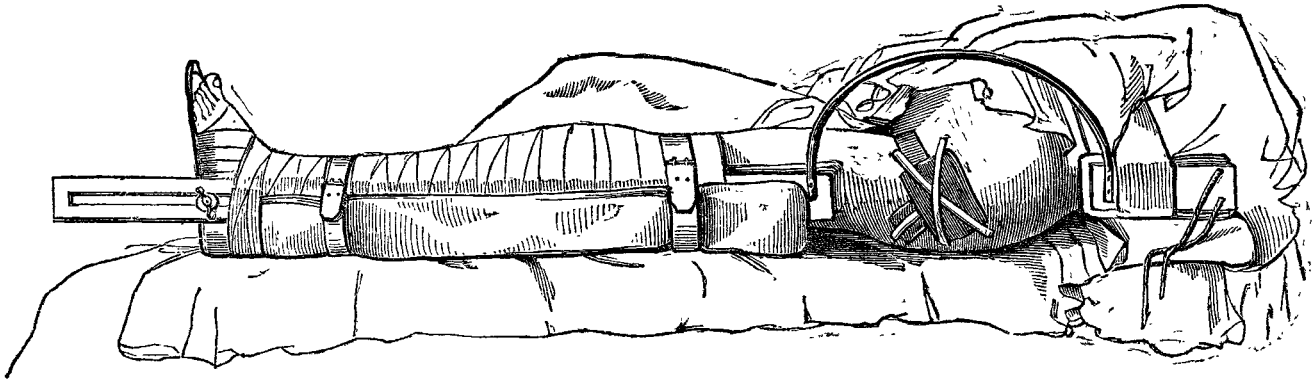
The splint was only shifted once during treatment, and that more for the sake of cleanliness than any other object. In nine weeks the little fellow was taken from his bed, and placed on crutches. The wound had almost closed, and the thigh-bone became bound to the pelvis by tissues, which formed an admirable false joint. Many of the movements belonging to a normal hip articulation could be performed, and little doubt could be entertained of the great usefulness of the limb. Subsequently he went to Margate to recruit his health, and has since returned greatly improved. The limb is about one inch and three-quarters shorter than its fellow.

From the foregoing history of the case various conclusions of a practical bearing are to be drawn. The usual phases of hip-joint disease in one of its destructive forms can be readily traced step by step with its exhausting effects upon the constitution. The disease had advanced to that stage in which all remedial means short of operative interference are generally useless, while a timely resort to decisive measures saves life, and

affords the patient an immunity from further suffering, and a most excellent chance of retaining a valuable limb.

There is an opinion, perhaps, too generally received, that dislocation more frequently takes place in the later stages of hip-joint disease than is in reality the case. To a superficial observer, the great distortion that very often accompanies this form of joint disturbance, may possibly seem an *argumentum ad finitum*, but to the surgeon whose experience is greater, the deformity is of less importance as a diagnostic sign. While not denying the frequency of complete or partial luxation of the head of the femur in the later stages of morbus coxæ, yet, I believe, it is too often supposed to have taken place at a period anterior to its actual occurrence. Unusual opportunities afforded by an institution specially adapted for the reception of scrofula in its various forms, has convinced me of the correctness of my observations. It is, therefore, of primary importance to discover at what period of the disease an operation is a desirable and judicious proceeding. Till within a very short period, it was considered that operative measures were only justifiable in those instances in which disarticulation and luxation had taken place with more or less destructive caries or necrosis of bony substance. This case, however, with a few others of recent occurrence, amongst which I may particularly mention those lately under the care of Mr. Fergusson, Mr. Bowman, and Mr. Holt,* prove that, provided a correct appreciation of the nature and extent of the disease can be formed, the surgeon is fully authorized in resorting to an operation.

Passing over many features of interest I must allude at some length, however, to the plan of treatment followed in this case, which, I believe, to be applicable in very many instances in which removal of the head of the bone is accomplished.



The accompanying sketch—a faithful representation of my little patient's limb retained in position by the splint—was taken by my friend Mr. Siccama, and subsequently copied on wood by Dr. Westmacott. It is introduced with these remarks, as affording practical evidence of the great advantage to be gained by the application of the long side-splint *immediately* after the operation.

There are several plans of treating the limb after removal of the head of the thigh-bone. Mr. Heath† has described a swing, by which certain advantages are alleged to be gained. Some surgeons have preferred to leave the limb to assume of itself a position; while others have adopted plans of treatment in accordance with their own judgment and the requirements of individual cases.

The apparatus here delineated consists of a long, narrow side-splint, made of wood, and of such a length as to reach from about three or four inches beyond the foot to near the axilla. It is interrupted at that part which corresponds to the buttock by an arch of strong iron rod. Extending for about eight inches in the lower part of the splint is a slit of about an inch in diameter, which allows the footboard to be arranged at any distance or angle which is required, and to be so fixed by means of an ordinary screw. The upper portion, duly padded to fit the side, is fixed to the trunk by means of a broad roller or straps. Extension is obtained by means of the perineal band or from the opposite thigh, as recommended by Mr. Fergusson. In this case, it was found more convenient to make extension from a fixed point in the bed-frame, the little patient being kept in a uniform position. To insure extra quietude, the limb with its splint was attached by means of straps to long, heavy sand-bags. I am certain too great stress cannot be laid upon the importance of correct after-management, and provided attention be paid to various points of detail, many features of success will be obtained.

In almost every instance of extensive disease of the hip-joint which is submitted to operation, there is more or less distortion. The thigh is generally drawn forwards towards the trunk, and retained in such a position by means of muscular force. It is evident that such a condition should be rectified, or else the operation is unattended with that degree of usefulness which is desirable.

It is sometimes advisable and possible to accomplish the complete straightening of the limb at the period of first adapting the splint; but it not unfrequently happens that the contraction is of too long standing to admit of such a result. For this reason, mainly, I have had the lower portion of the splint constructed as described, so that, with little annoyance to the patient, the foot-board may be altered in position to suit the subsequent lengthening of the limb, and without in any great degree disturbing the entire apparatus.

Another plan, however, occurred to me, which has since been modified by my friend Mr. Swaine, the present house-surgeon to King's College Hospital, and latterly used with marked effect. It appeared that if the connecting portion of the splint corresponding to the wound in the buttock were so constructed that extension could be effected by the elongation of the apparatus without disturbing the encasing bandages, an extra value would be given to this plan of treatment. This, I imagined, would be best effected by making the connecting portion of the splint to work in the same manner as the extension apparatus now so frequently used in the management of various deformities. The advantages thus gained are at once evident, and need no enumeration.

The use of a long side-splint in the subsequent treatment of these cases is by no means new, but the improvements suggested will doubtless lead to the surmounting of various obstacles which not unfrequently present themselves.

Little notice has been taken of the importance of a judicious selection of a spot at which the incision for removal of the bone should be made. On all occasions where no sinuses exist, or

* THE LANCET, October, 1857.

† Ibid, Oct. 3, 1857.

the head of the bone is not luxated, the incisions should be carried as far forward as possible—over the great trochanter is perhaps the most eligible position,—as the wound can then be cleansed and dressed without recourse to any special contrivance in the patient's bedding. I have seen the head of the femur removed, on more than one occasion, through an incision made in such a position that the patient could not lie, with any degree of comfort, upon his back, nor could the dressings to the wound be changed without causing very considerable disturbance to the sufferer.

One objection, in particular, has been urged against the use of the side-splints: the complete state of rest at which the limb is kept being supposed to favour osseous ankylosis. Such a supposition is gratuitous and incorrect. The disposition of the soft tissues on that portion of the pelvis against which the cut surface of the thigh-bone is brought into relation, at once negatives the belief of bony consolidation taking place at an early period, although it cannot be denied that ultimately there is a possibility of osseous union arising. In Dr. Barton's celebrated case, in which he formed a false joint with the femur, permanent consolidation took place after a lapse of two or three years; and it is no unusual occurrence to find a natural cure following extensive hip-joint disease, resulting in an osseous binding of the thigh-bone to the wing of the pelvis.

Green-street, Grosvenor-square, Dec. 1857.

NEW OPERATION FOR HARE-LIP.

By ALLEN DUKE, M.D.,

SURGEON TO THE CHICHESTER INFIRMARY.

HAVING for a long time considered the blemishes arising from the use of pins, however early they may be removed, as most objectionable in operations for hare-lip, as well as for those for cancer and other operations on the face, I would, as a substitute, strongly advocate the use of *internal sutures* and the following mode of operating for hare-lip:—

The edges pared, not in the usual way, but by an oblique incision from before backwards, slightly concave, and the reflecting bands of mucous membrane, freely divided, are to be brought neatly together by two or more sutures, each armed by two curved needles, which are to be introduced immediately under the skin, carried completely through the remaining thickness of the lip, and firmly tied *internally*.

To facilitate the removal of the two upper ones, the ends of the sutures should be brought out at the angle of the mouth, and secured externally by adhesive plaster, strips of which are to be applied the more firmly to bring and retain in contact the skin. The sutures may be safely removed in the course of a few days. Should there be a fissure of the jaw, and any portion unnaturally project, it should not, as is usually recommended, be entirely cut off, put partially severed, the edges pared on both sides and neatly adjusted by sutures, in order to fill up the vacancy and preserve the natural rotundity of the fore part of the jaw previously to operating on the soft parts.

CASE 1.—Charles S—, aged three months, was admitted into the Chichester Infirmary on the 18th of March, 1856, with hare-lip and fissure of the palate. On the 28th the edges of the lip were pared by the wedge-shaped incision, (the thin edge being external,) and the sides approximated by two sutures, tied internally, and adhesive plaster or bandage, carefully applied, brought the external surface in close apposition.

April 8th.—Lower part of the lip quite healed, but at the upper part, under the nostril, there is a small hole. The union is very even and smooth, leaving no unsightly scar.

15th.—The opening at the upper part still remains, although the lower part is healed quite firmly. Caustic applied, and strapping continued.

May 6th.—The caustic and strapping have proved very beneficial. Discharged.

Oct. 2nd.—The child was this day brought for inspection, and the small opening was found to be perfectly healed.

CASE 2.—Creswell M—, aged six weeks, was admitted Jan. 6th, 1857.

Jan. 16th.—The edges were pared by the wedge-shaped incision, and brought together by two internal sutures, with adhesive plaster and bandage externally, as in Case 1. Ordered to take a little sedative mixture occasionally.

20th.—Plaster removed. Perfect union appears to have taken place throughout, except at the lowest part, which dis-

charges slightly. This would have been obviated had another suture been applied quite at the lowest part. The child sucks well.

23rd.—Dressed; looking well; sutures removed.

27th.—Perfectly united. A few strips of adhesive plaster applied, to act as a support for a few days. Discharged.

CASE 3.—Emma H—, aged nine years, admitted Oct. 27th, 1857, with hare-lip. Is also tongue-tied.

Nov. 3rd.—Frænum linguæ divided.

6th.—Operation on the lip performed as before, three internal sutures being applied, with plaster and bandage externally.

10th.—Plaster and bandage removed and re-applied. Apposition appears perfect.

17th.—Doing well. Two lower sutures removed, the upper one left.

24th.—Firmly united; the other suture has come away; plaster applied only as a support.

26th.—Plaster removed; no further dressing required. Discharged.

CASE 4.—Charles P—, aged five months, admitted the 10th of November, 1857, with hare-lip.

Nov. 13th.—Operation and dressing as in the last case.

15th.—Dressed; looking well; lower suture removed.

17th.—Dressed; union appears to have taken place.

24th.—Doing well; the two remaining sutures removed.

28th.—Perfect union has taken place; no further dressing required. Discharged.

Chichester, Feb. 1858.

FOURTH QUARTERLY METEOROLOGICAL REPORT FOR ST. THOMAS'S HOSPITAL FOR 1857.

By ROBERT DUNDAS THOMSON, M.D., F.R.S.L. & E.,

EXAMINER IN CHEMISTRY AT THE UNIVERSITY OF LONDON, AND LECTURER ON CHEMISTRY AT ST. THOMAS'S HOSPITAL, ETC.

THE weight of the atmosphere for each of the months of the quarter was nearly 29 $\frac{3}{4}$ and 30 $\frac{1}{4}$ inches, the instrument used in October not being strictly accurate. October was a wet month, compared with the corresponding period of last year, 4.1 inches of rain having fallen in October of 1857, and only 1.31 in the same month of the previous year. November and December were drier months than in 1856. The temperature of each of the months greatly exceeded that of the same months in 1856, the increment being in 1857 as .8, 4.5, and 5.6 respectively. The mean heat of the quarter has also been greatly in excess, 40.4; of that of the previous year, 45.7. The season has therefore been characterized by the remarkable advance of vegetation, the thermometer having never fallen to the freezing point during the quarter. The mean temperature of the quarter has been nearly that of the average annual heat of the metropolis. Several fogs occurred, but none of a very dense character. Considerable mortality has occurred in the northern districts, due to diseases of the season; bronchitis in a chronic form having made inroads on senile life, and the same disease, of a more acute type, having in a marked manner augmented infantile deaths.

Annual Summary.

The mean pressure for the year was 29.935 inches, approaching closely to that of last year, 29.913 inches, and likewise to that of the average at the level of the sea, or 29.92 inches. The amount of rain-fall, 19.91 inches, is less than in the preceding year, 21.73 inches. The rainy days were 116 against 134 in the preceding year. The mean temperature of the atmosphere, 52.3, exceeded the heat of 1856, 50.4, nearly by 2°, and the annual average of London, 47.7 by 2.6. The mean of the highest temperature was 60.3, and that of the lowest, 47.7. The year does not appear to have been so healthy as its predecessor, if we are to judge from the increased mortality of some of the larger districts; but the season has been characterized by the absence of any extensive epidemic. Diarrhœa, which was very prevalent in the fall of the year, does appear to have been more fatal than in 1856. It may be expected that this and other zymotic diseases, particularly those affecting the alimentary canal, which increase in fatality as we approach the Thames, may assume a milder phase when the soaking action of the sewage shall no longer influence the river borders, and when the foetid deposits in the channel of the Thames shall have ceased to evolve their volatile putridity.