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UNIVERSITY COLLEGE HOSPITAL.

LARGE CYSTIC TUMOUR OF THIGH: OPERATION: WITH REMARKS.

Under the care of JOHN ERICHSEN, Esq., Professor of Surgery at University College, and Surgeon to the Hospital.

[Reported by D. B. REID, JUN., Esq.]

ESAU CRAVEN, aged 14 years, a country boy, was admitted under Mr. Erichsen into University College Hospital on the 24th of February, 1856. He is a native of Boston, in Lincolnshire, where he now resides, and whence he was sent by Mr. Tuxford. He appears strong and healthy, has plenty of flesh, good muscular development, and a rather ruddy complexion.

About eighteen months ago he first noticed a swelling on the inner aspect of the upper third of left thigh. The tumour gradually continued to increase for thirteen months, when it was tapped by Mr. Tuxford, and some pints of turbid serous fluid were evacuated. This operation was followed by the general collapse of the tumour, which appeared to consist of a single large cyst. The sac rapidly filled again, and the fluid was evacuated a second time, and aqueous solution of iodine was injected. Shortly after it refilled, and, on this occasion, the cyst was injected with tincture of iodine, after the withdrawal of the fluid. The injection was not followed by any symptoms nor signs of inflammation. The sac having filled for the fourth time, the boy was brought up to Mr. Erichsen. The only cause which the boy can assign for the disease is the friction of the inner aspect of thigh against the saddle in riding, to which he was subjected before the appearance of the tumour. He states positively that he never suffered any pain in the swelling, unless slight aching after more than usual exertion; it never inconvenienced him, except by its bulk. His father states that the boy's general health has been unimpaired by the disease, and that he has not lost flesh.

On examination, an enormous tumour is found occupying the inner and posterior aspect of the upper two-thirds of left thigh. Its general circumference is oval, and its outline is best marked inferiorly. Superiorly, it extends up to Poupart's ligament, or as far as the attachment of the adductor muscles to the pelvis will permit, as it is evidently situated under those muscles. Anteriorly and externally it extends to the femoral vessels, which seem rather pushed outwards. The surface is perfectly smooth and regular. Deep fluctuation is detected throughout, though it is more superficial at the most prominent points internally. No hard nodules can be detected anywhere.

Posteriorly, the tumour appears as an enormous additional buttock, situated below the natural one. The fold of the nates is higher on the affected side, and quite horizontal in direction, being pushed up by the tumour. On flexion of the knee, no muscles can be felt acting over the posterior aspect of the tumour, though below it, the hamstrings are readily felt in action. On rotation and ab-

adduction, the adductor longus and gracilis muscles are readily felt very tense, and stretching over tumour. Standing up, the maximum circumference of left thigh, five inches below the top of trochanter, is twenty-five inches; at the same level on the opposite side, seventeen inches; the difference between two sides, eight inches. The maximum length of the tumour is ten and a-half inches.

To ascertain the nature of the fluid contained in the tumour, Mr. Erichsen withdrew about one ounce of it by means of a "suction trocar", no air being admitted during the operation. The fluid was found to be thick and viscid, resembling, in consistence, white of egg, of yellowish white colour and turbid appearance, with numerous small crystals of cholesterine in suspension. Under the microscope, the fluid was found to contain a few cells of about the size of blood-discs, all of them being very degenerate, most of them containing nothing but granular matter, but a few, however, containing tripartite nuclei. Many of those cells were partially broken up, and had discharged their contents. Some larger cells were seen filled with granular matter. With acetic acid some tripartite nuclei were brought out, but the cell contents were chiefly granular. On heating some in a test tube, it solidified entirely, forming a cake of albumen.

In going over the case to form the diagnosis, Mr. Erichsen mentioned that there were three points for consideration: 1st. Was the tumour of the nature of a cold abscess? 2nd. Was it the result of the breaking up and liquefaction of a fibrous, or other solid tumour? 3rd. Was it cystic disease?

1st. With regard to the first case, there was no evidence of any cause for the formation of a chronic abscess in the thigh. The boy always had good health, never received any injury in the part, and did not suffer from any disease of the spine, nor of the bones of the pelvis. There was no impulse on coughing in the tumour, and, consequently, it did not communicate with the abdomen or pelvic cavity. Mr. Erichsen related the case of a man lately in one of the wards who suffered from such an abscess in the leg, from which he had evacuated a large quantity of fluid, resembling very closely, in general characters, the fluid in the case before us. It was easy to account for the few degenerate pus cells found in the liquid, as the effect of the injection of iodine. Taking all these circumstances into consideration, and the fact that the boy never suffered from the general symptoms of suppuration, Mr. Erichsen concluded that it was not an abscess.

2nd. With regard to the existence of a solid tumour, which had liquefied internally, Mr. Erichsen thought the evidence was against the supposition. In the early condition of the tumour, no hardness nor solidity was detected. With the most careful examination of the swelling in its present condition no hard lump could be found, but a uniform elastic sensation was communicated to the touch. Again, when the tumour was tapped the whole collapsed equally.

After excluding those two diseases, the only conditions which could simulate cystic disease in this case, no other diagnosis could be arrived at, except that the case was that of a large single cyst lying among the adductor muscles of the thigh. This, however, is a very unusual situation for a cyst to form. In the muscular interspaces of the neck such growths are not uncommon; but in the thigh they are very rare. Mr. Paget refers to two such cases, however, one of which very closely resembles the instance under consideration, and a third case had come to Mr. Erichsen's knowledge. The disease was clearly non-malignant. The long

existence of the disease, viewed in connexion with the boy's good general health, were almost conclusive on this point.

With regard to treatment, Mr. Erichsen thought it useless, after what had already been done, again to try injections, setons, or other means of inducing inflammation in the cyst. He thought that excision offered the only sure prospect of relief.

In considering the question of operative interference, the first difficulty which presented itself was the doubt as to the nature of the connexions of the wall of the cyst with the surrounding parts. Should it be found, after freely exposing the tumour, that its walls were attached to the surrounding muscles by loose cellular tissue, the excision would be rendered comparatively easy. On the other hand, if the wall is thoroughly incorporated with the surrounding parts, the extraction would be found exceedingly difficult, if not impracticable. The second difficulty which was expected during an operation for excision was that of hæmorrhage. The cyst appeared to extend so deeply among the branches of the profunda, that those vessels would be in danger during an operation there.

Under these circumstances, Mr. Erichsen judged it expedient to expose the whole tumour by a full incision, and then to act according to circumstances. Should the walls be surrounded by loose cellular tissue, to excise the whole thing; if not, to evacuate the cyst, and then to remove as much of the walls as possible, leaving the rest to slough out, and the wound to heal from the bottom. During the operation, he would be guided considerably by the amount of hæmorrhage, and the power he had of arresting it.

Feb. 27th. General condition good; bowels open. In the morning, he complained of slight tenderness in the tumour. In the afternoon, a slight erythematous blush is found in integuments covering cyst; it does not appear to arise from the exploratory puncture, which has healed up some time ago. Operation in consequence deferred. *Sumat pil. calomelanos et colocynth ij horâ somni.*

Rx Liq. ammon. acet. 3ij; mist. camph. 3j. *M. Fiat haustus 4tis horis sumendus.*

Hot fomentations to part. Middle diet.

Feb. 28th. Blush nearly gone; tenderness less; health otherwise good. Diet half extra.

March 5th. Quite recovered. The patient being brought under the influence of chloroform, the operation was performed this afternoon. An incision, seven and a-half inches in length, was made along the inner aspect of the thigh, commencing just below the ramus of the pubes. On dissecting up the anterior lip of integument, the gracilis muscle was found expanded and stretched over the inner aspect of the tumour, while the adductor longus was seen stretching over it anteriorly. After turning aside these two muscles, the lower part of the cyst was exposed, covered by several layers of thickened fascia and muscular fibres. These latter seemed derived from the surrounding muscles, but they looked very much as if some deep muscle had been expanded over and intimately connected with the wall of the cyst. After dissecting away these muscular fibres and some layers of fascia, it was found that the tumour lay between the adductor magnus behind and the adductors longus and brevis in front. The wall of the cyst was found, inferiorly, to be connected to the surrounding muscles by loose cellular tissue, which was easily broken through by the finger, or divided by the scalpel. Superiorly, however, the walls were firmly adherent to the surrounding parts, and blended with them. The cyst was now cut open, and the fluid evacuated. Room now being obtained for the introduction of the finger, the cyst was found to run up under the adductor brevis to the pelvis, the ramus of the pubes as well as the borders of the thyroid foramen being distinctly felt from the inside of the sac. All the wall of the cyst which could be dissected from the surrounding parts was now carefully cut away, and what remained firmly adherent to the muscles was rubbed with caustic potash. The wound was then plugged with lint, and some water-dressing applied.

During the operation, which lasted about three-quarters of an hour, but little blood was lost: a few ligatures were applied to some spouting vessels. The fluid evacuated during the operation contained several small soft light-coloured masses of fungus.

In the evening, the wound was dressed. The inferior portion was brought together by sutures and isinglass plaster, superiorly being left open. Water-dressing and a bandage. Very restless all night. Headache and vomiting, with heavy expression about eyes. Ordered—

R Tincture opii xxxv; aque 3iss. *M. Fiat haustus.*

March 6th. This morning, appeared very weak, oppressed, and restless. Pulse 160, very weak and small, not easily counted. Surface warm. Was treated with stimulants, brandy, and egg mixture. Wound looking quite healthy, but considerable serous oozing from it superiorly.

About 12, noon, he became much worse. The radial pulse could not be felt, while the respiration was deep and sighing. Considerable thirst and pallor, great general uneasiness and restlessness. The bandages were withdrawn, and the wound opened up to look for hæmorrhage, but none was detected.

Mr. Erichsen saw him in the afternoon, and ordered several of the sutures to be withdrawn, and a large poultice to envelope the whole of the upper and inner aspect of the thigh. Kept up with beef-tea, brandy, and wine; and to have effervescing salines, to allay thirst and nausea. In the evening, he rallied a little, and radial pulse was again felt.

March 7th. No sleep last night, though he had a draught of morphia. Constant exhibition of stimulants during night. Considerable lividity of surface, especially of face, lips, and extremities. Quite pulseless; sighing respiration; no cardiac murmur nor complication. Lungs healthy; no dulness of bases. Surface cold; face swollen. Frontal and occipital headache. No affection of vision. Urine scanty, of most offensive odour, turbid, greenish brown, with considerable deposit of same colour. Notable quantity of albumen. Under microscope, an enormous quantity of rudimentary or ill-formed renal epithelium. Much granular matter and debris. Many casts of very large diameter, perhaps twice or three times the diameter of a pus-corpuscle, containing granular matter and rudimentary epithelium cells. No renal pain or tenderness. In the afternoon, the lividity considerably increased, and the boy sank, and died at 4.30 p.m.

POST MORTEM EXAMINATION forty hours after death. Body, that of a well-formed lad. Posteriorly, cadaveric congestion exists to a considerable extent. Nape of neck, back, and posterior aspects of arms being deeply stained, of a dark claret colour. *Heart.* Moderate size. Healthy appearance. Over surface of left ventricle and corresponding auricle are a number of dark purple hæmorrhagic patches, closely resembling those of purpura hæmorrhagica; otherwise the organ appears to be healthy. Walls of left ventricle and septum unusually thick. Cavities contain some dark blood and decolorised coagulum. The blood generally in the body is dark and fluid, and unhealthy looking. *Lungs* healthy and crepitant throughout: considerably congested posteriorly. *Abdominal organs* healthy generally, with exception of kidneys. *Left kidney* large, pale, and flabby, with little distinction between the cortical and pyramidal substances: appears to be in the early stage of granular degeneration. Weight, six and a half ounces. *Right kidney* decidedly smaller: appears more healthy. Weight, four ounces. In both, the capsules separate readily from the subjacent cortical substance.

On carefully dissecting the anterior part of the thigh, the structures are found to be healthy. The sartorius, adductor longus, and pectineus, apparently unconnected with tumour. The femoral vessels somewhat pushed to the outer side, but unconnected with mass. No trace of tumour shows itself anteriorly.

The incision made at the operation is seven and a half

inches long, and is seen to extend between the gracilis and adductor magnus, the former being considerably thickened and expanded; while the latter is much pushed up, forming a considerable prominence on the inner aspect of the thigh. The hamstring muscles, together with the great sciatic nerve, are pushed outwards.

On dividing and turning back the hamstring muscles, so as to expose the posterior aspect of the adductor magnus to its full extent, this muscle is seen to constitute a considerable portion of the posterior wall of the tumour. After clearing the glutei muscles, the wall of the cyst is seen to extend up above and in front of the adductor magnus and the quadratus femoris, ending high up between the obturator externus and the pectineus.

On cutting across the adductor magnus, it is found to be incorporated with the walls of the tumour, which looks as if it had been formed in the substance of the muscle. On pursuing the dissection more deeply into the substance of the adductor magnus, the walls of the cyst are found to be completely incorporated with the muscular fibres, forming a dense mass grating under the knife: the two are quite inseparable. The cyst wall looks semi-transparent, except on its internal surface; and appears to the naked eye to be composed of layers of muscular fibre, and of a dense homogeneous semi-transparent hard substance. On tracing the adductor magnus up to its superior attachment, it is still found to constitute the wall of the tumour, through which the tuberosity of the ischium, obturator foramen, and indeed the whole anterior wall of the left side of pelvis, may be felt. As the tumour is traced up, it seems to fade away in the substance of the muscle, and is found to extend as far as the upper border of the obturator externus.

By pursuing the dissection in front, it is found that the cyst becomes incorporated with the under and inner surface of adductor brevis, continuing as high as the obturator externus, to a point corresponding to where it was seen at the back.

The remainder of the cyst wall not removed during the operation, is so closely incorporated with the surrounding muscular structures, that it is impossible to say where one terminates and another begins, or to detach it from the parts among which it lies.

Examination of portion of Sac removed. It is very tough, strong, and leather-like. Generally the wall is between one-sixteenth and one-eighth of an inch thick. The external surface is dense and shiny, and in parts is blended with muscular fibre. The internal surface is bright red and velvety; and this appearance is given by a layer of bright red coloured matter with a finely mamillated surface. The internal coating consists of granular matter mixed with cholesterine and fat globules: no other microscopic structure is to be detected in it. This layer is readily peeled off from the subjacent stratum. The next coat is of brownish yellow colour, and its surface is covered by small arborescent blood-vessels. It is rather smooth. On scraping its surface and putting the matter so obtained under the microscope, no epithelium nor other structure is observed. This layer is with difficulty dissected up from the next; it is very thin, but tolerably strong. Under the microscope, it is found to consist of obscure cellular tissue and granular matter. The remainder of the wall is readily separable into four layers, which vary in thickness: they are all tough and fibrous, and of glistening aspect. They all consist of cellular tissue, and do not exhibit any other structure. The fungous growths found in the sac consist of granular matter, *débris*, and cholesterine.

The adductor magnus in the neighbourhood of the tumour appears considerably changed. It appears as if the cellular tissue between the bundles of fibres is considerably hardened and hypertrophied, the muscular tissue appearing to run into hard cartilaginous tissue grating under the knife. When examined under the microscope, this new product is found to consist of cellular tissue alone.

NORTH STAFFORDSHIRE INFIRMARY.

DISLOCATION OF THE MIDDLE CUNEIFORM BONE OF THE LEFT FOOT, AND CONTUSIONS OF THE LEG AND FOOT: FOLLOWED BY TETANIC SPASMS.

Under the care of S. M. TURNER, Esq., Surgeon to the Infirmary.

CASE. James N., a young man, aged 24 years, of a sanguine temperament, and full habit of body, was admitted under the care of Mr. Samuel Mayer Turner, at 6 P.M., on the 27th July, 1855, in consequence of the following accident. Whilst attempting to stop a truck of coals, his foot slipped, was caught by the wheel and twisted, and when he was down, his foot and leg were again struck.

On examining the limb, it was found that, in addition to a laceration on the lower and outer side of the leg, and several severe contusions, there was a dislocation of the middle cuneiform bone of the foot. The dislocation was very easily made out, the bone being forced up, and its square upper surface being very distinctly felt on the dorsum of the foot.

Reduction was easily effected by making extension from the toes, slightly bending the foot backwards, and, at the same time, pressing the bone firmly down, when it was felt to slip into its place with a slight snap. A flat piece of wood on the sole of the foot, and a firm bandage were applied to prevent the bone from again slipping from its place.

At night a good deal of pain and swelling came on; the bandage was obliged to be removed, leeches and fomentations were applied, and a purgative of calomel and colocyath given.

The following day the bowels were open, and the swelling decreased, though the pain was still severe.

July 29th. A good deal of erysipelas about the foot.

August 1st. The wound on the leg looks sloughy. Matter has formed in the sole of the foot, and the glands in the groin are painful and enlarged. The matter in the foot was let out with a lancet, leeches to be applied to the groin, and five grains of calomel given, to be followed by a purgative draught.

August 2nd. Leg still inflamed a great deal; the leeches to be repeated.

August 10th. Matter having formed over the shin, it was evacuated, and the part poulticed. There was also a great deal of swelling and vesication over the foot.

August 15th. He had several shivering fits; leg very much inflamed; ordered a quarter of a grain of opium every four hours.

August 20th. The wound on the leg, which is now the size of the palm of the hand, looks very unhealthy; a slough is also forming on the inside of the ankle; there is also much pain in the stomach, with flatulency. The dose of opium was increased to half a grain; the leg to be dressed with resin ointment, covered with a fermenting poultice.

August 22nd. Wounds still sloughing, and increasing in size. To take effervescing mixture, with carbonate of ammonia, and some brandy.

August 23rd. Sloughing still on the increase; the whole leg very painful. Tincture of benzoin applied to the wounds, under the poultice. Has been slightly purged; has a very anxious expression of countenance, and an impression that he is going to die.

About 2 P.M. the house-surgeon was suddenly summoned to the patient, who was said to have something in his throat. He was observed to have a violent moving up and down of the thyroid cartilage, the head slightly thrown back, and difficulty of breathing. He could open his mouth, but very little; and when questioned, answered with a great deal of stammering and indistinctness, and complained of great pain at the angles of his jaw. Chloroform was administered, and a very few inspirations relieved the symptoms; he then spoke distinctly, and said that he was first seized with cramp in the stomach, which appeared to pass