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CASES

OF

FIBRO-CELLULAR TUMOR IN THE SCROTUM:

WITH REMARKS.

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The structures composing and contained within the scrotum are so various, and liable to so many different diseases, that tumors occurring in that region must frequently present the greatest difficulty of diagnosis. The integument is a favourite seat for the development of tubercular or carcinomatous growths. The cellular tissue may become affected, together with the skin, by hypertrophy and induration, or in it may be developed tumors of a fatty* or fibrous character, such as occur in the cellular tissue of other parts of the body; or, again, it may be the seat of inflammation, or of effusions of urine, pus, or blood. The testis and its appendages are subject to many and widely differing diseases; and lastly, into the scrotum the varieties of inguinal hernia may force their way.

It is only by carefully studying the features presented by each disease that we can hope to attain to a more certain diagnosis; and the more unusual the case, the more imperative is the duty of the surgeon to record its peculiarities. With this view the following case is offered to the Society.

Case.—W. W——, aged 70, first applied for advice in July, 1849, on account of a tumor occupying the scrotum, and presenting the following characters:—

The tumor, about as large as a bullock's heart, distended the whole left side of the scrotum, encroaching also considerably on the right half, particularly at the base, and almost entirely burying the penis. Somewhat oval in shape, it resembled, at first sight, an enormous hydrocele; but, on closer examination, was found to be uneven and rather lobulated, some parts being hard and brawny, others soft and fluctuating. A small protrusion at the lowest part of the tumor appeared to be the left testicle, pushed down before the growth, and either adherent to it, or firmly fixed by its pressure. There was some fulness about the abdominal ring, but the tumor did not appear to pass up as high as the ring; the spermatic cord hard, and about the size of one's finger, being felt for a very short interval between the tumor and the external ring. On examination with a candle no part was found capable of transmitting light. No impulse was to be perceived in the tumor or at the ring, on coughing or exertion There was no enlargement or induration of the inguinal glands. The introduction of a small grooved needle into a soft fluctuating part was followed by a few drops of blood only. The right testicle appeared healthy, and occupied its usual position.

History.—The patient was of a dark sallow complexion, and of cachectic appearance; a shoemaker; the father of a large family; very healthy throughout life, and generally temperate. He stated that the tumor had been *eight years* in arriving at its present size, during which time he had never consulted a surgeon about it. He first perceived the swelling and hardness just above the left testicle in the scrotum, and, he thought, not connected with the

* Med. Gaz., vol. xxxvi. p. 177.

testicle. No cause could be assigned for its appearance, he not remembering to have received any blow or injury to the part. It went on steadily increasing in size, carrying the testicle down in front of it. The tumor had never given him much pain, and was troublesome chiefly from its size and weight. The bowels had always acted naturally, and micturition was effected without difficulty.

The patient visited St. Bartholomew's Hospital, and was carefully examined. No positive diagnosis as to the nature of the tumor was pronounced; and, on account of the age of the patient, the little pain and slow advance of the growth, the uncertainty as to its character, and probable difficulty of fairly excising it, it was decided that no step could be taken to rid him of the disease.

He afterwards, in the course of the following winter, was admitted into another metropolitan hospital; where, under the idea that the disease was a large hernial protrusion, he was kept in bed for some weeks, with little or no diminution of the tumor, and greatly to the detriment of his health.

During the past nine months the tumor has steadily and rapidly increased, for some time confining him entirely to his bed, by its great weight and size. The mass became very nodulated, and the superficial veins much distended.

In August last one prominent part became red and painful, and then sloughed, giving rise to some hæmorrhage; from that time great portions of the tumor have successively become gangrenous. In September one of the distended veins gave way, and some three pints of blood were lost, but the hæmorrhage was stopped by a twisted ligature. From this time the patient never rallied, but became gradually weaker as the tumor went on sloughing, and some oozing of blood continued, and he died on September 28th, 1850.

During the last two months he had suffered much pain, chiefly in the glans penis, and about the base of the tumor; and took large doses of morphia, which, with lotions of chloride of lime to the tumor, formed the only treatment.

Post-mortem examination.—On removing the integuments from the base of the tumor, a dense fascia was exposed, tensely stretching over it, continuous with the aponeurosis of the external oblique muscle, which it appeared to have lifted from its insertion into the front of the os pubis. The tumor appeared to have thus, as it were, pushed its way into the external ring and inguinal canal; but the *internal* abdominal ring was free, though compressed and somewhat displaced by the growth.

The great omentum lay perfectly free, and apparently healthy; nor did the intestines present anything abnormal in situation.

The tumor itself appeared to consist of two distinct portions: the upper part, or base, forming about two-fifths of the whole, was perfectly white, lobulated, and very tough; and on section the edges everted greatly, and the substance looked fibrous and glistening: the lower part, of which some portions had sloughed, was more dense and compact, of darker, blood-stained colour, having somewhat the appearance and consistence of congested liver. One projecting nodule, near the part which had sloughed, appeared red and fluctuated, and on incision some thin pus escaped.

The penis was pushed to the right side of the tumor; was much compressed and wasted.

Mr. Paget kindly furnished me with the following account of the microscopic examination of the tumor:—

All the parts examined consisted essentially of a tissue resembling in its minute characters the common areolar tissue. The masses were very tough, but when dissected for the microscope they appeared composed of delicate and soft undulating filaments, variously interwoven. Many such filaments floated out singly from the sides of the specimens, like filaments of the most organized fibro-cellular tissue. When acetic acid was added, it made the tissue transparent, and brought into view abundant nuclei imbedded in it, as in the fibro-cellular tissue of the child—nuclei that were well defined, oval, and rather elongated.

In the white portions of the tumor none but the forms described were found; in the dark-coloured portions there were abundant products of inflammation infiltrated into the same tissues. In all these portions blood was found, as if effused; and with it were corpuscles exactly like inflammatory exudation-cells, elongated fibro-cells, granular matter in free granules, or granular

cells,—all such forms as commonly occur in the substance of inflamed organs.

This tumor was evidently analogous to the fibro-cellular growths which are met with in the cellular tissue in various parts of the body,—a growth differing from the œdematous enlargement of the whole scrotum—the *elephantiasis scroti*—in that it did not involve the integument nor the whole cellular tissue, but rather was contained in a proper cellular capsule. The growth was altogether of a more solid and compact consistence; and, although it felt fluctuating at parts, this seems to have been owing to its extreme elasticity and the tension of the integument over it.

Tumors of this description are not of very uncommon occurrence in the labia externa of females;* but they rarely present themselves in the scrotum. Mr. Lawrence states, in a clinical lecture†, that he had never met with such a tumor in the scrotum; and I have not been able to find any published record of a similar case.

In the museum of St. Bartholomew's Hospital is a drawing of a tumor which presented very much the same characters as the one related, and for whose history I am indebted to Mr. Paget's notes.

Case.—A carpenter, aged 74, in good general health, was under Mr. Stanley's care, on account of a tumor in the scrotum: it had been growing four years, and he thought it was caused by rough riding many years previously, but gave no very clear account of it. The tumor was supposed to be an enlargement of the testicle. A collection of fluid, like hydrocele, was felt in the lower part, and was tapped. A large hernial sac existed above the tumor; and being in doubt how far this might extend into the scrotum, Mr. Stanley did not recommend the removal of the mass. The patient left the hospital, and the tumor increased, until, at death, it weighed 24 pounds, and measured about 18 inches in length and 8 inches in breadth, hanging, a huge mass, between the thighs.

After death, a large hernial sac was found at the upper part of the tumor, quite above it, and so loosely connected with it, that the tumor might have been removed without opening the sac. At the lower and front part lay the testis, flattened and expanded, with its epididymis similarly altered, but, like it, of healthy structure. The tunica vaginalis was thickened, dilated with serous fluid, and flattened over the tumor. The tumor formed an oval mass, easily separated from the adjacent tissues; its whole surface was divided into lobes, obscurely and imperfectly separated in the central parts, but on its exterior standing out prominently: its chief part consisted of tough, elastic, cellular tissue, closely and compactly interwoven; in many parts infiltrated with bright yellow fluid, and in all parts very moist. It was of a pale, nearly white colour, streaked here and there with pink, where vessels principally collected. Parts near the surface were softer and more gelatinous, almost like the texture of firm gelatinous polypi. By microscopic examination the structure was found to be exactly resembling that described in the first case.

Case.—A tumor has been described by Mr. O'Ferrall, in the Dublin Medical Journal,* which has so many features in common with the above cases, that I think it may be classed with them.

The patient was 44 years old; the tumor hung down nearly to the knees, drawing the integuments from the pubis and groin; the skin over it was smooth, and traversed by large venous trunks, from which occasional severe hæmorrhage took place. The consistence of the mass was unequal; some parts being of a cartilaginous hardness, others soft and elastic. The right testis was healthy; the cord of the left side could be felt for about an inch of its extent, and then appeared lost in the tumor. The patient pointed to a spot at the lowest part of the mass, where, from the sensation on pressure, he believed the left testis was situated. There were no enlarged glands in the groin. The tumor had been perceived ten years; first as a hard swelling, about the size of a marble, on the cord. It enlarged slowly, and without pain. The tumor was removed by operation, and the patient quickly recovered.†

* In museum Roy. Coll. Surg. is one weighing 10 lbs. In museum St. Bartholomew's, series 35¹⁴, is one described by Mr. Lawrence in Med.-Chir. Trans. vol. xvii. p. 11.

† Medical Gazette, vol. xxxvi., p. 177. Mr. Earle amputated a similar tumor in 1831.

* Vol. i. 1846, p. 521.

† This man died, a few months after the operation, of acute phthisis. Both lungs were thickly studded with miliary tubercles. In the substance of the right lobe of the liver was a solitary hard tuber. No reproduction of the tumor in the scrotum, nor any other deposit in any organ or tissue.

The morbid growth was found to be enveloped in a loose cellular capsule. On section, it appeared like one of the larger varieties of fibrous tumor of the uterus, and consisted of a number of lobules, separated by condensed cellular tissue. Some parts appeared to have undergone a change approaching the character of encephaloid disease; and, on microscopic examination, Dr. Houston found them to present "the mixture of fibres and cells characteristic of malignant structure."

The left testis was found in the position indicated by the patient; it was atrophied, but otherwise unchanged, and lay enveloped in its moist and polished tunica vaginalis. The cord above was lost in the tumor.

Mr. O'Ferrall appends some very interesting remarks to the case, but chiefly in reference to his operation: he considers the tumor to have originated in the cellular tissue in the neighbourhood of the spermatic cord, and then, as it increased, to have carried down the testis in front of it.

These three cases prove satisfactorily that the cellular tissue of the scrotum may become the nidus for the development of a growth similar to the fibro cellular tumor of the labium. Whether that disease commenced in the dense fibro-cellular tissue immediately investing the cord, its fascia propria, or in the loose cellular tissue of the scrotum, seems doubtful. I think the histories rather indicate the former. It is, perhaps, only a coincidence that in these cases the tumor implicated the *left* cord and *left* side of the scrotum; but possibly the greater length of the cord on that side may render it more obnoxious to any injury which might induce the disease. In their slow progress, almost entire freedom from pain, as well as in their lobulated outline and unequal consistence, these tumors resemble the fibro-cellular growths occasionally met with in other parts of the body. That they may attain to an enormous size without destroying the integrity of the testis is perfectly shown in the two last cases; and in the first I have no doubt the testis remained unimpaired until sloughing of all the most dependent parts of the growth took place; as, up to that time, the patient distinctly indicated a point at the inferior apex of the mass where pressure produced the same sensation, both to himself and the surgeon, as on pressing a sound testicle. They do not appear to involve the tunica vaginalis, nor, in two of the cases, did the tumors exert pressure on the veins of the cord so as to induce hydrocele or hæmatocele. Mr. O'Ferrall's case sufficiently proves that they may be removed successfully even when of great size; the chief difficulty being the severe hæmorrhage from so vascular a tissue as that of the scrotum. In my first case, even at the age of 70, the patient should, I think, have been relieved of his burden, had we been able to decide the nature of the morbid growth; as it entirely took away all comfort, by its size and weight, and quickly destroyed him by repeated hæmorrhage and sloughing.

There are many other points of considerable interest which present themselves on a perusal of these cases; particularly as to the diagnosis of the tumor from hernia, malignant or sarcomatous enlargement of the testis; from hæmatocele, or hydrocele with thickened sac: as to the operation, the means for preventing hæmorrhage, &c.: to enter into which would far exceed the limits of a paper of this description.