A CASE OF SEMINOMA WITH UNUSUAL METASTASIS

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It is unusual for a seminoma to break through the capsule, invade the scrotal skin and metastasise primarily to the inguinal lymph nodes before the para-aortic glands are involved. In a review of the literature I have been unable to find a description of this. The following is an illustrative case.

A 34 year old male Chinese was first admitted to Hospital in August, 1955 with a right inguinal hernia of three months duration which had become irreducible three hours before admission. At operation an indirect inguinal hernia containing small bowel was found . The gut was reduced, the sac excised and a herniorrhaphy was performed, with drainage of the right scrotum — an unusual procedure, the reason for which cannot be ascertained from the notes.

The drain was removed on the second day, and post-operative convalescence was uneventful. His follow-up notes state he had a "granuloma" at the site of drainage which later healed.

He was not seen again until June 1958 when he was readmitted complaining of pain in the right groin for three days. He claimed that ever since the operation the right scrotum had grown progressively larger. Further he noticed that since October 1957, that is, approximately two years after the herniorrhaphy a swelling had developed in the right groin.

On Examination: He was a well built, healthy adult and the relevant local findings were: the left scrotum, testis and cord were normal; the right scrotum contained a very hard non-tender rounded swelling about 4" in diameter. The surface was felt to be slightly bossed with one area anteriorly which was softer than the rest.

The body of the testis and epididymis could not be felt as separate entities. The cord above the swelling was normal. The skin over the lump was freely mobile and a faint scar which was visible in the antero-lateral aspect marked the site of the drainage wound. Another lump two inches in diameter was felt in the right groin just medial to the femoral vessels. This too, was very hard in consistency and not fixed to the overlying skin. A diagnosis was made of seminoma testis with metastasis in the right inguinal lymph nodes. There was no clinical evidence of secondaries in the para-aortic glands or elsewhere.

Investigations: Hb.96%. Total and differential white count — all within normal limits. Peripheral blood picture revealed no abnormality. Chest skiagrams showed neither evidence of secondaries, nor of tuberculous lesions. Excretion urography showed normal calyces, pelvis, ureter and bladder. No calcification was seen in the scrotum. Kahn and Wasserman tests were negative. Freidman's test: The test animal died the day following the injection of urine.

Operative Findings: Examination under anaesthesia showed no palpable evidence of involvement of the para-aortic nodes but a possible involvement of the right external iliac nodes. At operation it was not possible to obtain a plane of cleavage between the tumour and the skin around the drainage scar and hence the tumour together with this part of the scrotal skin was excised completely. The enlarged inguinal lymph node was also removed.

A course of deep X-ray therapy to the para-aortic and external iliac nodes was begun on the fifth post-operative day. The Freidman's test repeated post-operatively was negative. The patient was last seen at the radiotherapy follow-up clinic on 8.3.61 with no evidence of secondaries.

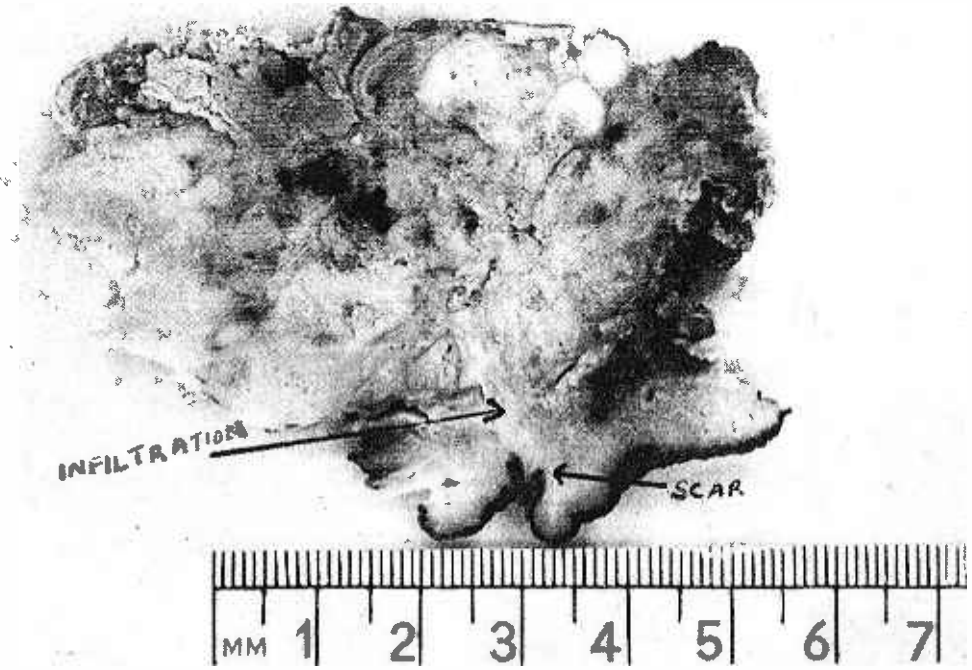

Fig. 1.

Fig. 2.

Pathological Report

Microscopic: (Figs. 1 and 2)

No. 1. The specimen consists of the right testis, epididymis and spermatic cord, together with the overlying skin and subcutaneous tissue of the right half of the scrotum.

The testis and epididymis have been replaced and completely destroyed by an ovoid tumour which measures 8.0 cms. by 7.0 cms. by 4.0 cms. The tumour is soft in consistency and uniform grey in colour excepting where necrosis has occurred. In these necrotic areas the tumour tissue appears yellowish. At the lateral side of the tumour, the tumour has broken through the fibrous capsule of the testis and has invaded the subcutaneous tissue of the scrotum. It is of interest that this penetration of the capsule of the testis has occurred immediately under the scar of a previous operation on the scrotal skin.

The spermatic cord appears normal and shows no microscopic evidence of tumour.

No. 2. The right inguinal lymph nodes are markedly enlarged, the largest node measuring 4.0 cms. in maximum diameter. Almost all the nodes show metastatic tumour, the microscopic appearance of which is identical with that of tumour of the right testis.

Microscopic: (Fig. 3)

(1) The right testis and epididymis show testicular seminoma. The tumour has the usual appearances, being composed of masses of uniform cells, separated by fibrous trabeculae. Occasional foci of lymphocytes are present between the tumour cells. The tumour cells themselves are spheroidal in shape, uniform in size and show a small amount of poorly defined pale eosinophilic cytoplasm. The nuclei are large, relative to the total cell size, show a distinct nuclear membrane and vesicular nucleoplasm. Almost all the tumour cell nuclei show a prominent single nucleolus.

Blocks which include the old healed surgical scar of the scrotal skin and subcutaneous tissue and the underlying tumour show penetration of the testicular capsule by the tumour and invasion of the subcutaneous tissue of the scrotum underlying the old healed surgical scar.

(2) The right inguinal lymph nodes show metastatic seminoma. The metastases in these nodes are no doubt due to the invasion by the seminoma of the lymphatics of the subcutaneous tissue of the scrotum, which drain to the inguinal lymph nodes.

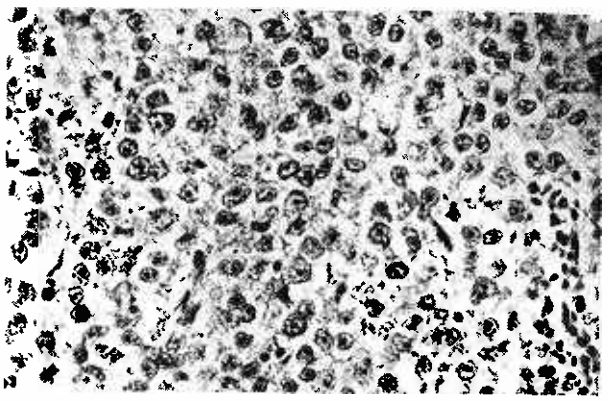

Fig. 3.

Comments: This case presents some interesting features. Firstly, the role of trauma in the aetiology of testicular tumours has always been a subject of controversy. Boyd considers that it plays no part although it is possible that trauma hastens the growth of a pre-existing tumour in some cases. But Dixon and Moore in a study of over a thousand Army cases report that a history of direct trauma to the testes preceding the tumour was given by 30% of the patients. In this case the patient ascribes his swelling to the previous herniorrhaphy. It is possible the tumour was in its infancy then, but one cannot disregard the fact that there was the likelihood of trauma to the testes especially since the scrotal sac was drained — a not very common procedure in herniorrhaphy.

Secondly, the mode of spread was unusual; again the possibility of trauma to the testes caused by the drainage tube, especially if one postulates an early tumour existing then, would account for this early breaking through of the Tunica Albuginea to invade the skin. It must be emphasized that both at operation and microscopically the invasion of the subcutaneous tissue was at the site of the old drainage wound. Fig. 1 shows this clearly.

Thirdly, the absence of spread to the para-aortic lymph nodes can again be ascribed to the previous herniorrhaphy. Injury to the lymphatics of the cord during the operation or their subsequent blockage due to fibrosis may account for the failure to spread along the normal lymphatic route.

ACKNOWLEDGEMENT

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