



Oncology

A rare case of liposarcoma of the spermatic cord

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ABSTRACT

We present a 42 year old man, who was admitted in the Urology Department with symptoms of unilateral, painless, hard and firm slow-growing mass of the left scrotum for 4 months. Pelvic computed tomography (CT) scan showed a 8 cm3 mass lesion in the left hemiscrotum. Left radical orchiectomy and wide excision were performed and a yellowish soft tissue mass measuring closely attached to the spermatic cord was resected during surgery. Histopathologic evaluation revealed a tumor mass composed of well-differentiated liposarcoma.

Introduction

Primary spermatic cord tumors are rare, accounting for 7–10% of all intrascrotal tumors and affects patients of all ages. They are generally present as asymptomatic, slow growing, firm, palpable paratesticular masses. Although most of them are benign comprised primarily of lipomas, approximately 25% are potentially life-threatening malignant tumors. The most common reported malignant histological types include liposarcomas, leiomyosarcomas, rhabdomyosarcomas, malignant fibrous histiocytoma, and fibrosarcomas. Management of these malignant tumors has been difficult because of their rarity, therefore there is little consensus regarding optimal surgical and conservative treatment strategies.

Case presentation

We present a 42 year old man, who was admitted in the Urology Department with symptoms of unilateral, painless, hard and firm slow-growing mass of the left scrotum for 4 months. Local examination revealed a large smooth solid mass about 20 × 15 cm in the left upper scrotal area, which was firm, non-tender and mobile from side to side and also there were no constitutional symptoms or voiding complaints. Testes were normal. Scrotal ultra sound (US) with 7-MHz linear array transducers revealed a heterogeneously hyperechoic mass lesion measuring at least 20 × 15 mm in the left hemiscrotum with some relatively hypoechoic parts. Pelvic computed tomography (CT) scan

showed a 17 × 14 mm = 8 cm3 mass lesion in the left hemiscrotum. The mass contained fat and soft tissue with the density ranging from –110 to 50 HU (Fig. 1). The US and CT patterns were compatible with the fat-containing tumor, especially liposarcoma. Pre-operative imaging didn't reveal any lymph node or distant metastasis. Testicular tumor markers, such as AFP (α-fetoprotein), β-HCG (β-human chorionic gonadotrophin) and LDH (lactate dehydrogenase), were in normal ranges.

Open left radical orchiectomy and wide excision were performed and a yellowish soft tissue mass measuring closely attached to the spermatic cord was resected during surgery. Histopathologic evaluation revealed a tumor mass composed of well-differentiated liposarcoma with dedifferentiated components, which included nests of poorly differentiated large lipoblasts arising from the areas of myxoid, sclerosing, or well-differentiated liposarcoma (Fig. 2). The testis and spermatic cord showed no pathological changes. The resected margins were negative and free of neoplastic cells. No adjuvant treatment was done, and follow up with CT and MRI scans after 6 months were recommended.

Discussion

There are no protocols for liposarcoma of the spermatic cord due to its rarity. The common histological types of the spermatic cord tumor are liposarcoma (46%), leiomyosarcoma (20%), histiocytoma (13%), and rhabdomyosarcoma (9%). The classification of soft tissue tumors recognizes five categories of liposarcomas: well differentiated type,

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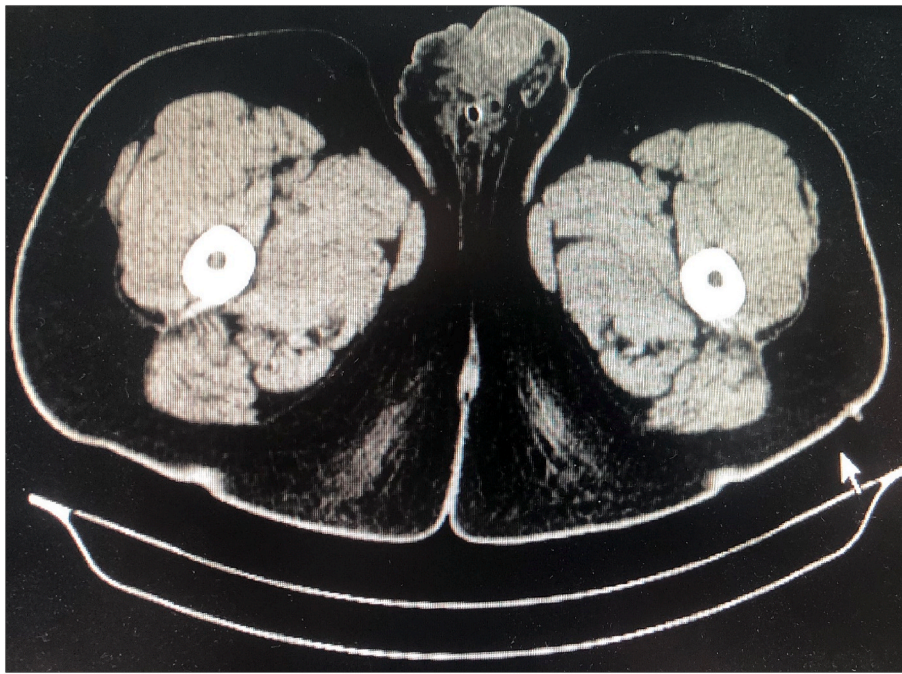


Fig. 1. CT scan of tumor mass at the left hemiscrotum.

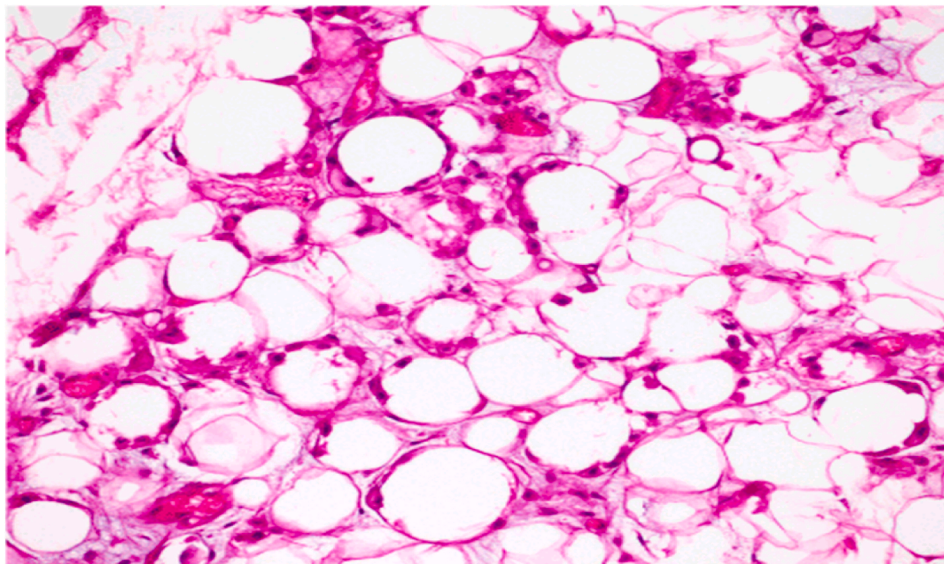


Fig. 2. Histopathology image of liposarcoma of the spermatic cord.

including adipocytic, sclerosing, and inflammatory subtypes; dedifferentiated type; myxoid type; pleomorphic type; and round-cell type. The average age of patients with liposarcoma of the spermatic cord is 55 years (range, 16.5–85 years).¹ In our case the patient was 42 years old and the tumor was well differentiated with myxoid and sclerosing subtypes.

Firm, painless, slow-growing fluctuant masses are common initial presentations. Most liposarcomas have a maximum diameter of 5–10 cm; however, retroperitoneal tumors measuring up to 15 cm have been described. Generally, liposarcomas are low-grade, well-differentiated lesions that spread by local extension; however, high-grade tumors may spread by hematogenous and lymphatic routes.² Sometimes the tumors are challenging to diagnose and are often mistaken as inguinal hernia, lipoma, hydrocele, epididymal cyst, or testicular tumors. If there are any little suspicions about the diagnosis, we should performed imaging

studies. CT is more useful for the diagnosis of liposarcoma than ultrasound examination. MRI provides good information for the precise localization of the tumor, but it cannot provide the complete type of the tumor.³ Our patient has the classical symptoms of liposarcoma and was diagnosed relatively early with physical examination, ultrasound and CT scan, with size of the tumor of approximately 2 cm.

Standard therapy of spermatic cord liposarcoma involves radical orchiectomy with wide local resection of the surrounding soft tissues and high ligation of the cord. Adjuvant radiation therapy for intermediate or high-grade lesions, lymphatic invasion, inadequate margin, or recurrence is usually performed to reduce the incidence of locoregional recurrence after surgery.⁴ The risk of local recurrence of liposarcoma is comparable to that of high-grade lesions, but, since their relapses tend to be localized, the prognosis remains good. The overall 5- and 10-year disease-specific survivals of spermatic cord sarcoma are 75% and 55%,

respectively. However, the high risk of local recurrence always necessitates long-term follow-up.⁵ In our case open left radical orchiectomy and wide excision were performed and because of histopathology result of the tumor, no adjuvant treatment was done. Close follow up was recommended, which includes physical examination, ultrasound, CT scan and MRI scan every 6 months.

Conclusions

Liposarcoma of the spermatic cord is a rare disease. The diagnosis can be difficult but important and also imaging examinations should be necessary performed to confirm the diagnosis. Radical surgery of high orchiectomy with wide resection of the tumor and surrounding tissues is necessary for long-term disease free survival.

Declaration of competing interest

The authors declare that they have no competing interests.

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