CASE REPORT

# Metastatic Paratesticular Liposarcoma: Case Report and Literature Review

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## Abstract

**Objective:** Literature review and case discussion of paratesticular liposarcoma with cutaneous metastasis. **Methods:** Description of the case of a 69-year-old man with a diagnosis of paratesticular liposarcoma associated with metastatic nodule. Case discussion based on review of the available indexed literature through a data search in the PubMed digital database. Keywords used in the search were genitourinary sarcomas and paratesticular liposarcoma. **Results:** Sarcomas that originate from the urinary tract are rare, accounting for about 2% of urological tumors, with the paratesticular region one of the most frequent. **Conclusions:** Paratesticular sarcomas, although rare, should always be included in the differential diagnosis of scrotal masses. Surgical treatment with complete excision and free margins is mandatory to prevent recurrences. Adjuvant therapies, represented by radio- and chemotherapy, have a controversial role in the literature.

**Keywords:** liposarcoma, neoplasm metastasis, review [publication type], sarcoma, testicular neoplasms, urologic neoplasms.

## INTRODUCTION

Liposarcoma is one of the soft tissue malignant tumors most common in adulthood. Its location in the retroperitoneum has been well reported, but can occur elsewhere in up to 20% of cases.

Paratesticular tumors represent 7 to 10% of all intrascrotal tumors; of these, 90% originate from the spermatic cord and 70% are benign. Approximately 3% of malignant lesions of the spermatic cord are liposarcomas, able to reach 30 cm or more.[1-3]

Paratesticular liposarcomas originate from mesenchymal tissue, presenting slow growth and given its low incidence, it has not been possible for clinical studies to establish a proper treatment until now.

Regarding histology, paratesticular liposarcomas fall into four subtypes: well-differentiated, myxoid or round cells, pleomorphic and dedifferentiated.[1] The most common histologic subtype is well-differentiated, representing 40% of cases.[4] Despite the large size reached, they tend to present good prognosis.[5]

The objective of this case report and literature review, with a focus on diagnosis, treatment and follow-up, is that this pathology, although infrequent, must be part of the differential diagnosis of scrotal masses, particularly in elderly patients.

## CLINICAL CASE

J.G.O., a 69-year-old male, presented with right scrotal mass with 2 years of evolution, with recent onset of an ulcerated nodule in the inguinal region. Walking was hindered by the progressive increase of the mass. The patient denied local pain or urinary symptoms and referred to local discomfort as a "feeling of weight."

The patient was submitted to ultrasound, which evidenced a right paratesticular mass, computerized tomography of the abdomen and pelvis, which evidenced no other findings, and radiography of the thorax, which did not evidence metastasis. The tumor markers of alpha-phetoprotein, beta fraction of human chorionic gonadotropin (beta-hCG) and lactate dehydrogenase (LDH) were requested, with all values encountered within reference values.

The patient was submitted to right radical orchiectomy (Figures 1 and 2) and cutaneous nodule resection in the right inguinal region (Figure 3). The anatomopatholo-

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gical analysis showed high-grade dedifferentiated liposarcoma, with testicular and paratesticular region involvement and the inguinal nodule was diagnosed as metastatic tissue of liposarcoma. The patient is in the eighth month after the procedure, without recurrence.

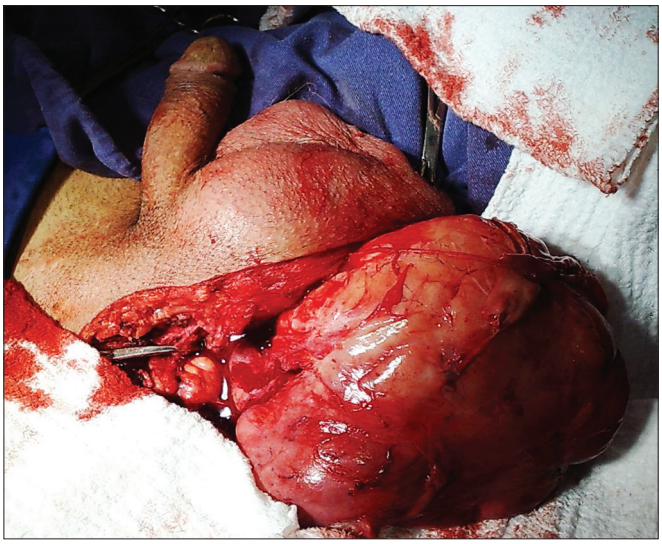

**Figure 1.** Orchiectomy.

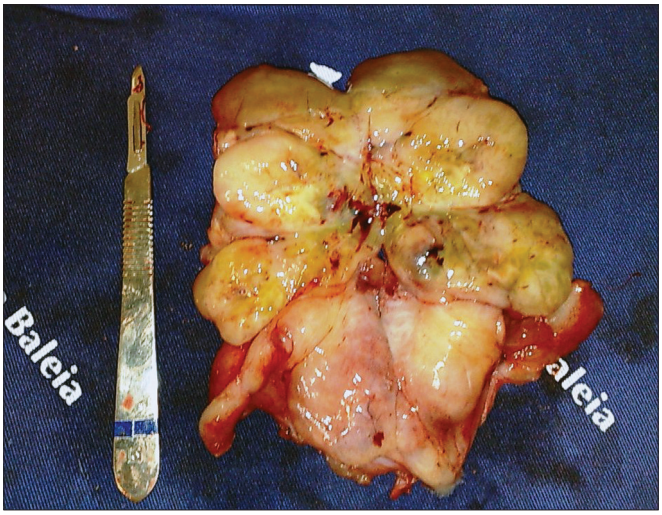


**Figure 2.** Paratesticular liposarcoma.

## DISCUSSION

Adult paratesticular sarcomas are infrequent, as they develop more commonly in the spermatic cord between the cremaster muscle and interstitial cells[6]. They are large tumors that usually develop unilaterally in the scrotum between the fifth and seventh decades of life[1].

Rhabdomyosarcomas are predominant in children and young adults.

Regarding symptomatology, the emergence of palpable, slow-growth scrotal inguinal mass can be cited,

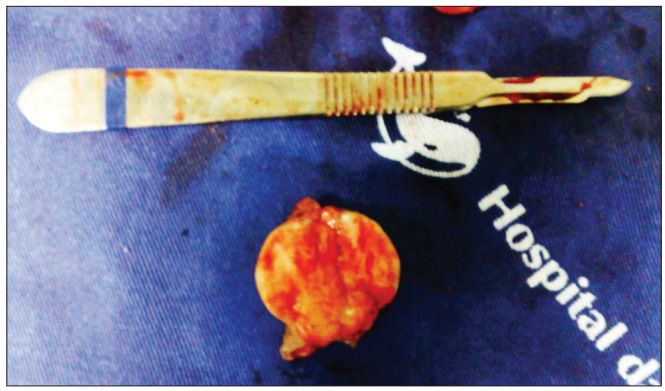


**Figure 3.** Subcutaneous nodule (metastatic).

which may vary from weeks to more than ten years,[4] with a "feeling of weight." The differential diagnosis is based on tumors with adipose component, which can also appear in this location as lipoma, aggressive angiomyxoma and angiomyofibroblastoma[3]. Inguinal hernia, hydrocele[7] and infectious diseases such as epididymitis are also part of the differential diagnosis.

The diagnosis is based on image exams, such as ultrasound, that can reveal evidence of hypoechoic heterogeneous solid lesions. Computerized tomography observes the tumor area with lower density than that present in the subcutaneous adipose tissue.[7] Magnetic resonance can be useful to assess the degree of local tumor extension.

Surgical treatment is through tumor excision with radical orchiectomy[8]. Some authors consider the use of adjuvant chemotherapy in cases of high grade tumors (classification according to the American Joint Committee on cancer - AJCC) which could be responsible for the few benefits observed[1]. The use of adjuvant radiotherapy, especially in cases of retroperitoneal tumors, has been reported.[1]

The frequency of local recurrence is common; the more undifferentiated the tumor, the greater the increase. In these circumstances, reoperation with wide local excision is recommended given that the role of radio- and chemotherapy has yet to be well established in these cases[7]. Dissemination occurs through the spermatic cord, arriving to the inguinal canal and later the abdominal cavity[6].

The presence of dedifferentiated liposarcoma (high--grade) confined to the scrotum, associated with metastasis (cutaneous nodule) in the right inguinal region has not been reported in the literature to date.

In a study of all histological types of spermatic cord sarcomas, the five-year survival rate was 75% and tumor recurrence reported in 50% of cases. Of the patients with liposarcoma, only 4% presented with metastasis at the time of diagnosis[6].

Due to the possibility of late recurrences, long-term follow-up of these patients is recommended. Radiography

of the thorax and bone scintigraphy, in cases with complaint of bone pain, are important in the follow-up for the diagnosis of distant metastases, which can occur, especially in high grade or dedifferentiated tumors[9-11].

## CONCLUSION

Paratesticular sarcomas are rare entities; nevertheless, they should always be included in the differential diagnosis of scrotal masses. The tumors are manifested by slow growth and can reach large dimensions at diagnosis.

Regardless of tumor size, radical orchiectomy with free surgical margins is recommended in order to avoid recurrence. When there is tumor recurrence, reoperation is the best treatment because radio- and chemotherapy have yet to be well established in these cases.

An extended period of follow-up is often required of these patients because of late recurrence.

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