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Case Report

# Spermatic Cord Liposarcoma in the Context of a Recurrent Inguinal Hernia, Case Report

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ABSTRACT

**Introduction:** The spermatic cord sarcomas are rare entities, with only 46 cases reported in the last 5 years worldwide. The majority of those were misdiagnosed as inguinal hernias and treated with hernioplasty, delaying the correct treatment.

**Case report:** We present a 56-year-old male who was operated 3 times for right inguinal hernia recurrence. Because of a persistent right spermatic cord bulk, he had a right radical orchiectomy, and the pathology reported the diagnosis of liposarcoma. Afterward, we requested a PET/CT which revealed a hypermetabolic lesion of 33x32mm in the right scrotum. We performed an oncological resection and classified the tumor as a stage III liposarcoma.

**Conclusion:** The reported case illustrates the classical presentation of these tumors and their evolution. Despite the radical treatment, due to the biology of this cancer, the prognosis is bad if patients are not operated properly from the beginning.



## Introduction

The primary paratesticular tumors are very rare, representing the 7-10% of all intrascrotal tumors [1-3]. About 75% of those tumors have their origin in the spermatic cord [1, 4]. According to the SEER (Surveillance, Epidemiology and End Results), in the USA between 1973 and 2007 an incidence of 362 cases of paratesticular tumors was reported (0.3:1'000,000 people) from which 46.4% (168 cases) were liposarcomas.1 The low incidence of this pathology conditions a challenge in the diagnosis, with most of the information being obtained by case reports or small series of some institutions, reviews or experts opinion only [1, 5].

The international literature of the last 5 years presents only 46 publications about this topic, being 90% case reports [6]. One of the biggest case series is one of Oleksandr and cols., from the Miami University reported in 2015, with 42 cases (1990-2012). The typical presentation consists of a slow-growing painless tumor that mimics an inguinal hernia in adults [7, 8]. Patients must be treated with ipsilateral radical orchiectomy with a wide resection of adjacent tissues. Because of the spread nature of the liposarcomas and the heterogenous follow up of the reported cases, the treatment of the inguinal, pelvis, and para-aortic regions is not well established, so the lymph node management is not standardized [1, 5, 7, 9].

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The prognosis of those patients according to Radelli, is determinately related with the success of the first oncologic resection. On the other hand, the impact of chemotherapy and radiotherapy is not yet fully established [10]. In general, the survival for the disease at 5 years is 92% with a recurrence rate of 26% and distant metastasis in 24% in the same period [1, 10].

**Case Report**

A male patient of 56 years-old male who was referred to the oncology service with a histopathological diagnosis of a spermatic cord liposarcoma. The patient had a history of dyslipidemia and three right inguinal hernioplasties in 2012, 2014 and 2016 secondary to recurrent inguinal hernia. Interestingly there were no previous pathological results of the resection of the pre-herniary lipomas. Previously, the patient was sent to urology for evaluation of a spermatic cord tumor. The urologist decided to perform a radical right orchiectomy 01/05/2017; with pathology report of well-differentiated sclerosing variety liposarcoma without defined margins.

After the referral to our service, we requested a PET/CT (Figure 1) that revealed in the right scrotal region a hypermetabolic tumor of 33x32mm consistent with persistence of disease. With the commented diagnosis and without evidence of distant metastasis a surgical exploration was scheduled the 05/26/2017, founded tumoral recurrence. Therefore, an oncological resection with a right inguinofemoral lymphadenectomy of levels I, II, III y IV.

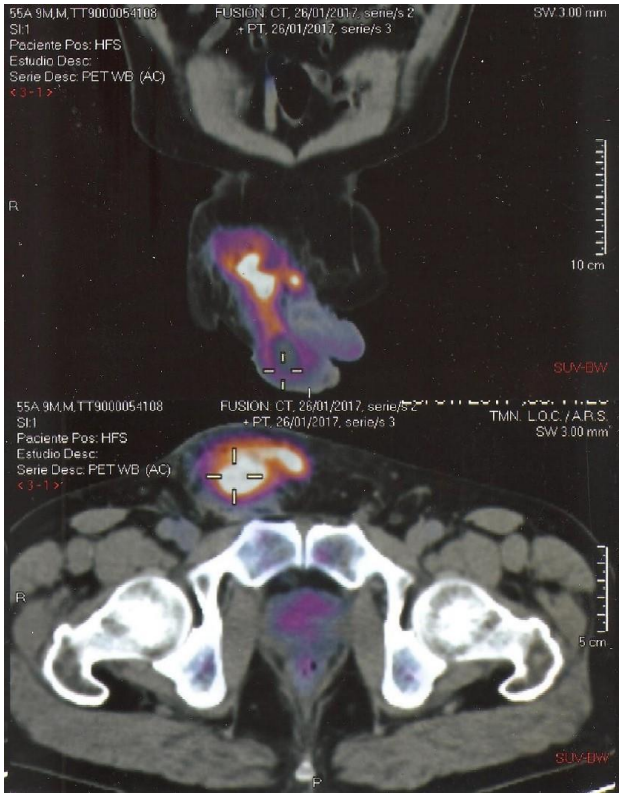


**Figure 1:** PET/CT scan with 18F-FDG where we can see a hypermetabolic lesion with SUVmax of 3.1 and diameter of 33x32mm.

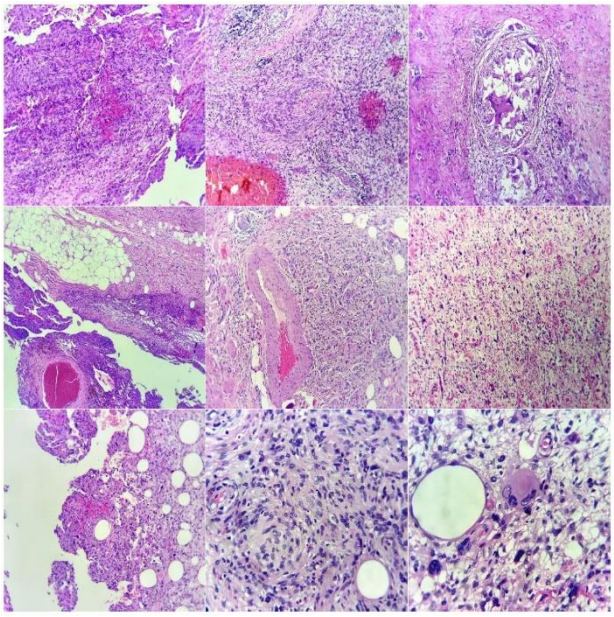

**Figure 2:** Microscopic slices of a poorly differentiated liposarcoma. Mature adipocytes with vacuoles with variable cell size and fibrous septa with an abrupt transition to non-lipogenic zones containing atypical neoplastic cells with large hyperchromatic nuclei.

The histopathology analysis reported a poorly differentiated liposarcoma of 6.5x5x4 cm, poorly differentiated, in 20% of the tissue with negative margins, without linfovascular infiltration and without lymph nodes metastasis (Figure 2). The patient was referred to radiotherapy to receive a total of 60 Gy in 30 divided sessions. On 08/18/2017 a CT scan was performed, revealing recurrence in the right inguinal canal of 40x19 mm, infiltrative lymph nodes in the right mesenteric chain and blastic lesions in sacral bone, iliac and T9 (Figure 3).

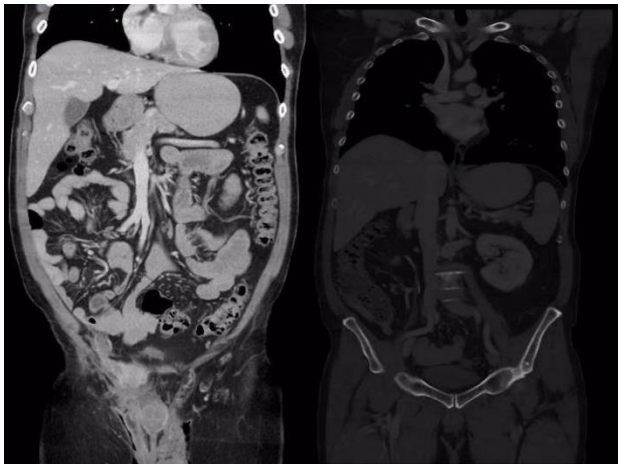

**Figure 3:** Coronal slices of a contrasted thoracoabdominal CT scan with abdominal and bone windows. A recurrent tumor in the surgical field of the right spermatic cord is observed and a blastic lesion in the left iliac bone.

However, low suspect of malignancy, a PET CT was performed 6 weeks after radiotherapy, without metabolic changes compatible with neoplastic activity (Figure 4a y 4b). Adjuvant chemotherapy was hold

for the high risk of hematologic toxicity and the patient continued on surveillance.

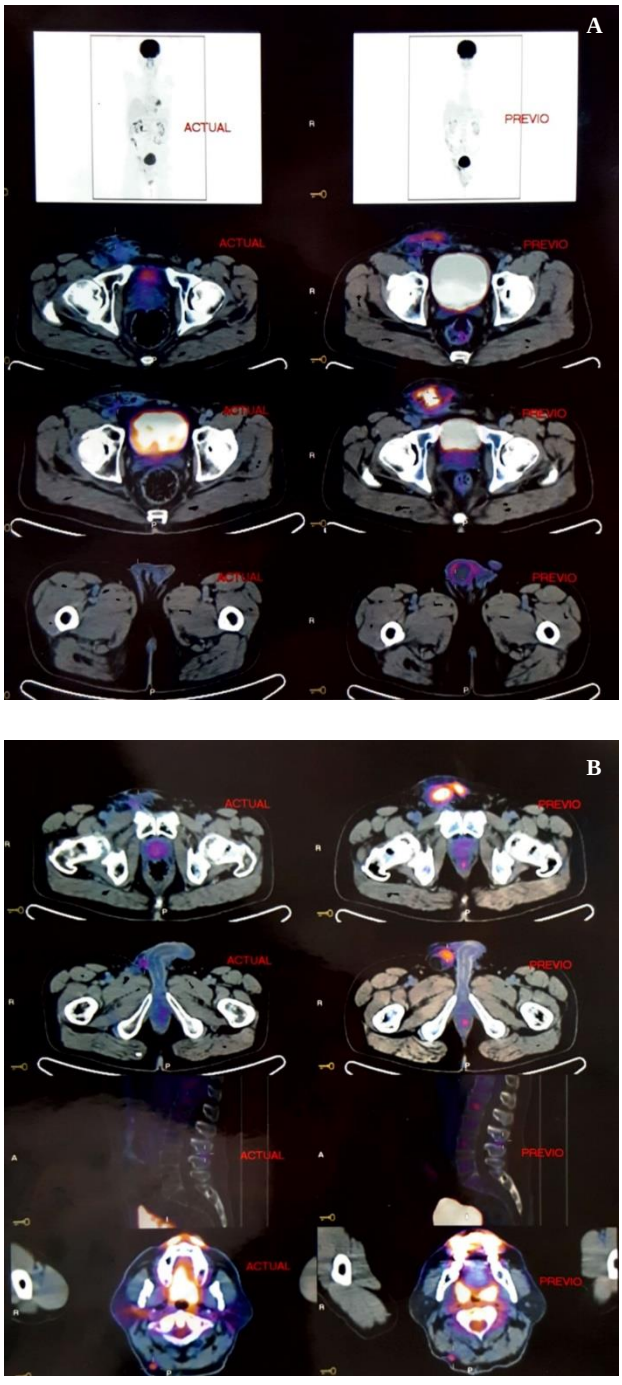


**Figure 4:** PET/CT multislice with iodized contrast and 444 MBq of $^{18}$F-FDG, with increased density of the right inguinal region fat, increased metabolism with SUVmax of 3.0 in relation with postsurgical changes.

## Discussion

The World Health Organization (WHO) classify the soft tissue tumors in 5 categories: well differentiated, poorly differentiated, myxoid, round cells and pleomorphic. The poorly differentiated liposarcomas, are locally aggressive tumors with metastatic potential that require optimal oncological resection to achieve local control of the disease [11]. Nevertheless, as mentioned before, the spermatic cord liposarcoma is an infrequent pathology and represents an atypical location for sarcomas, reason why there is not enough data to establish the guidelines for adequate management. The clinical presentation could be frequently confused with an unspecific volume increase, inguinal hernias, recurrence of inguinal hernias, lipomas or another kind of tumors [12-15]. The experience in the management is extrapolated from the treatment of retroperitoneal tumors, case series, case reports and expert's opinions.

This case matches with the international experience of the patients who were initially treated for recurrent inguinal hernias and then submitted to resection of paratesticular tumors [14].

## Conclusion

In rare pathologies without clinical guidelines for treatment, it is necessary to report the experience in different centers to help establishing standards of care. Despite the local control of the disease achieved with surgical resection, the prognosis of this cases is bad, due to local recurrence and metastasis potential. This case exemplifies the importance of case reports, the lack of reports in our country and the importance of pathological examination in every surgical sample (herniary lipomas).

## Conflict of interest statement

The authors report no conflict of interest.

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