ABSTRACT

An 81-year-old man consulted at our hospital for evaluation of a long-established left inguinal mass. The patient denied experiencing pain, food intolerance, constipation or urinary tract symptoms in the past. A physical examination revealed a 15x10cm painless mass in the left inguinal region, distinct from the testicle, with no palpable changes during Valsalva’s maneuver. Magnetic resonance imaging (MRI) showed a 79mm heterogeneous lesion of the spermatic cord which projected itself through the inguinal canal into the scrotal sac, displacing the testis inferiorly. Laboratory testings were negative for testicular tumor markers such as α fetoprotein and human chorionic gonadotropin-β. A surgical resection of the inguinal tumor with an “en-bloc” inguinal orchiectomy was performed. The inguinal floor was repaired with a modified Bassini technique without the use of a mesh. The histopathological report confirmed findings were consistent with a myxoid liposarcoma. No further treatment was indicated and the patient continued follow-up with bi-annual MRIs. 18 months later, the patient continues with no signs of recurrence.

Key words: liposarcoma, liposarcoma of the spermatic chord, abdominal wall surgery, inguinal mass.

Introduction

Sarcomas constitute a heterogeneous group of rare solid tumors of mesenchymal cell origin. Collectively they account for approximately 1% of all adult malignancies with an annual incidence of 2.5 cases per million population[1]. In adults, the most common soft tissue sarcomas are liposarcomas. Overall, they account for approximately 17% of all soft tissue sarcomas. Most cases arise from de novo, therefore, the development from a preexisting benign lipoma is rare. Liposarcomas usually appear as a slowly enlarging, painless mass in a middle-aged person with a slightly higher incidence in men.

These tumors are classified in three main biologic forms: 1) well-differentiated liposarcoma; 2) myxoid and/or round cell; and 3) pleomorphic. The latter being a rare high-grade with a high recurrence rate and poor prognosis. The well-differentiated and myxoid types have favorable prognoses. However these tumors locally recur after incomplete excision[2].

The anatomic site of the primary disease represents an important prognostic factor, influencing treatment and outcome. Extremities (43%), the trunk (10%), visceral (19%), retroperitoneum (15%), or head and neck (9%) are the most common primary sites. Scrotal location is relatively rare, accounting for 3.6% of all liposarcomas. The origin of intra scrotal liposarcomas include the spermatic cord (76%), testicular tunic (20%), and the epididymis (4%).
Case Report

An 81-year-old man with a medical history of follicular cutaneous lymphoma and an open left hemi-colectomy for colon cancer consulted at our hospital for evaluation of a long-established left inguinal mass. The patient denied experiencing pain, food intolerance, constipation or urinary tract symptoms in the past. A physical examination revealed a 15x10cm painless mass in the left inguinal region, distinct from the testicle, with no palpable changes during Valsalva’s maneuver. Magnetic resonance imaging (MRI) showed a 79mm heterogeneous lesion of the spermatic cord which projected itself through the inguinal canal into the scrotal sac, displacing the testis inferiorly (Figure 1). Laboratory testings were negative for testicular tumor markers such as α fetoprotein and human chorionic gonadotropin-β. Ultrasound-guided biopsies of the mass were requested and their histopathology analysis revealed myxoid stroma with fusocellular proliferation.

A radical resection was suggested but, a week prior to the surgical procedure, the patient was diagnosed with COVID infection during which he intercurred with myocardial infarction and ischemic stroke. He underwent a double coronary angioplasty with drug-eluted stents and required anticoagulation and antiplatelet therapy posteriorly. The case was discussed at a multidisciplinary meeting and a conservative management of the inguinal tumor was decided. The patient was reassessed 12 month later with a new MRI, which showed the inguinal mass increased in size (99mm) compared to the previous study, and a computed tomography (CT) with no evidence of metastatic disease. A surgical resection of the inguinal tumor with an “en-bloc” inguinal orchiectomy (Figure 2) was performed. The inguinal floor was repaired with a modified Bassini technique without the use of a mesh. The patient had an uneventful recovery and was discharged from the hospital on postoperative day two.

The histopathological report confirmed a 130x120x120mm low-grade fibro myxoid neoplasm (Figure 3). The surgical margins were negative. Immunohistochemistry showed strong reactivity for S100 and vimentin, whereas SOX10, desmin, CD34 and estrogen receptors were negative. These findings were consistent with a low-grade fibro myxoid neoplasm.

Figure 1: Pelvis MRI T2 axial and coronal images illustrating a left inguinal canal soft tissue density measuring 78 x 68mm.

Figure 2: A Intraoperative image of the liposarcoma. Left inguinal surgical approach with the spermatic cord lesion and left testicle in vivo. B: Intraoperative image of left inguinal mass (a) excision with radical orchiectomy (o).
Figure 3: A Hematoxylin and eosin staining: fusocelular and myxoid infiltrative neoplastic proliferation, made up of ovoid cells and finely granular chromatin. Scarce elongated cytoplasm arranged in fascicles accompanied by elongated, thin, curvilinear blood vessels with zones of perivascular cellular condensation. B: Immunohistochemistry positive for S-100.

with a myxoid liposarcoma. No further treatment was indicated and the patient continued follow-up with biannual MRIs. 18 months later, the patient continues with no signs of recurrence.

Discussion

Liposarcomas invade through local extension and rarely invade through the lymphatic route, making regional lymph node dissection lose its value and having no impact on survival. Nevertheless, high-grade subtypes are associated with high rates of recurrence and hematogenous spread; lungs, liver and peritoneum being the most common sites of metastasis. Surgical resection (with appropriate negative margins: >1cm) is the standard primary treatment in most patients with stromal cell sarcomas. Complete tumor resection is the primary prognostic factor for local recurrence, and liposarcomas are not the exception. Performing an “en-bloc” resection involving a high orchiectomy (including the surrounding tissue) is important to obtain negative margins [1].

Local recurrence rates for sarcomas, including liposarcomas of the spermatic cord, have been reported to be as high as 30-50%. Because of this, and despite the patient’s disease-free status, long term follow-up remains a crucial step in the detection of recurrences that might still be potentially curable. Current controversy arises on the use of adjuvant chemotherapy or radiotherapy. Being a rare and infrequent entity makes it hard for a single institution to accumulate enough cases to perform prospective randomized controlled trials. Extrapolated data from retrospective analyses support the use of adjuvant radiation on selected high-risk situations (tumor recurrence, high-grade tumors or residual disease). Concerning the role of chemotherapy, the use of adjuvant chemotherapy remains controversial and there is no definitive role in the management of localized liposarcomas [3].

In conclusion, myxoid liposarcomas of the spermatic cord are infrequent entities. As most soft tissue sarcomas, they have an indolent course and should be considered as a differential diagnosis of inguinal masses with no palpable changes during Valsalva’s maneuver. Complete surgical resection with high-orchidectomy “en-bloc” is encouraged.

References