

## Retroperitoneal well-differentiated liposarcoma presenting as an incarcerated inguinal hernia

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**SUMMARY: Retroperitoneal well-differentiated liposarcoma presenting as an incarcerated inguinal hernia.**

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*A 69-year-old man was admitted with a complaint of left irreducible inguinal mass. On surgical exploration no evidence of hernia was found and the inguinal floor was overwhelmed by a large lobulated mass, arising from the retroperitoneal fat, that involved the spermatic cord. The mass was partially removed, sparing the elements of cord. The transversalis fascia was repaired by direct suture and a polypropylene mesh was located above. The histopathological diagnosis was well differentiated-type liposarcoma with myxoid features.*

*The liposarcoma is a malignant tumour of the adipose tissue that arises from the primitive mesenchymal cells. These neoplasms have been usually found in the soft tissues of limbs, trunk, mediastinum, retroperitoneum and occasionally in the spermatic cord. The clinical aspect is frequently a complaint of scrotal or inguinal painless mass, mimicking to an inguinal hernia and the diagnosis of tumor is performed mainly during surgery, as in our patient.*

*In the case of a firm not reducible painless inguinal mass without signs and symptoms of bowel obstruction, an abdominal tumor with inguinal or scrotal extension should be suspected and preoperatively excluded. The US and CT scan may be helpful to plane a correct therapeutic strategy before intervention.*

**RIASSUNTO: Liposarcoma retroperitoneale ben differenziato o ernia inguinale intasata?**

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*Un uomo di 69 anni veniva ricoverato con diagnosi di ernia inguinale sinistra non riducibile.*

*All'esplorazione chirurgica non veniva evidenziato un sacco erniario, ma il pavimento del canale inguinale era sovrastato per la presenza di una massa polilobulata che emergeva dal grasso retroperitoneale e coinvolgeva il cordone spermatico. La massa veniva asportata parzialmente, risparmiando gli elementi del funicolo. La fascia transversalis veniva riparata con sutura diretta e sopra di essa veniva posizionata una mesh piana in polipropilene. L'esame istologico deponeva per un liposarcoma ben differenziato, con aspetti mixoidi.*

*Il liposarcoma è un tumore maligno del tessuto adiposo che origina dalle cellule mesenchimali primitive. Questi tumori si localizzano generalmente nei tessuti molli degli arti, del tronco, del mediastino, del retroperitoneo e occasionalmente a livello del funicolo spermatico. In quest'ultimo caso il tumore si presenta come una massa, generalmente non dolente, che simula un'ernia inguinale. La diagnosi di neoplastia è di solito intraoperatoria, come nel nostro paziente.*

*Riteniamo pertanto che, in presenza di massa inguinale dura, non dolente, non riducibile, senza segni e sintomi di occlusione intestinale, vada comunque sospettato o escluso in fase preoperatoria che possa trattarsi di un tumore addominale con estensione inguinale o inguinoscrotale. L'ecografia e la tomografia computerizzata sono d'ausilio nel pianificare una corretta strategia terapeutica preoperatoria.*

KEY WORDS: Retroperitoneal liposarcoma - Inguinal hernia - Surgery.  
Liposarcoma retroperitoneale - Ernia inguinale - Chirurgia.

## Introduction

Liposarcoma accounts for 9.8-16% of soft tissue sarcomas and it is more often located in the limbs (41%), in the retroperitoneum (19%) and in the inguinal region (12%) (1).

The retroperitoneal liposarcomas are usually difficult to diagnose preoperatively and may be incidentally detected at the operating room during the repair of

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a suspected inguinal hernia or during a lipoma removal (2, 3). However it may represent an important diagnostic challenge for a surgeon, due to the surgical and oncological implications.

Herein we report the case of a retroperitoneal liposarcoma that presented as an inguinal mass.

## Case report

A 69-year-old man was admitted to our Department with a complaint of left painless irreducible inguinal mass, without signs of bowel obstruction. The patient's history included an episode of heart attack 2 years before, treated by angioplasty and medical therapy. The remainder medical history was unremarkable. Physical examination revealed a 7-cm firm mass, sensitive on palpation and not reducible.

Laboratory findings showed no significant changes, but an elevation of white cell count ( $12.13 \times 10^9/L$ ). Chest X-rays were also normal.

On surgical exploration no evidence of hernia was found. The inguinal floor was overwhelmed by a large lobulated mass arising from the retroperitoneal fat that involved the spermatic cord. The mass was partially removed, sparing the elements of cord. The *transversalis fascia* was repaired by direct suture and a polypropylene mesh was located above. The resected tumour measured 5x4x3 cm and weighed about 300 grams. At microscopy large hyperchromatic nuclei embedded in mature adipose tissue and atypical nuclei in the connective septa were found. The histopathological diagnosis was well differentiated-type liposarcoma with myxoid features (Fig. 1).

Thus the patient was screened for intrabdominal neoplasm. Postoperative ultrasonography (US) and computed tomographic (CT) scan revealed a large residual tumour in the retroperitoneum that runs in the deep inguinal ring up to the left hemiscrotum (Fig. 2). The patient died six days after the intervention due to an heart attack so it was not possible the second surgical look.

## Discussion

Liposarcoma is a malignant tumour of the adipose tissue that arises from the primitive mesenchymal cells and has been classically classified into five groups: well-differentiated, myxoid, lipoblastic, fibroblastic and pleiomorphic. The well-differentiated subtypes have been described as "tumours composed of mature fat cells, occasional atypical hyperchromatic cells and lipoblasts" (4).

These neoplasms have been usually found in the soft tissues of limbs, trunk, mediastinum, retroperitoneum and occasionally in the spermatic cord (5, 6). The inguinal area communicates directly with the retroperitoneum and a liposarcoma may be born by the inguino-scrotal adipose tissue or it may arise from the retroperitoneum and pass through the deep inguinal ring in the groin. The differential diagnosis is often very difficult in the case of a primary hernia while, as reported, a tumour should be easily suspec-

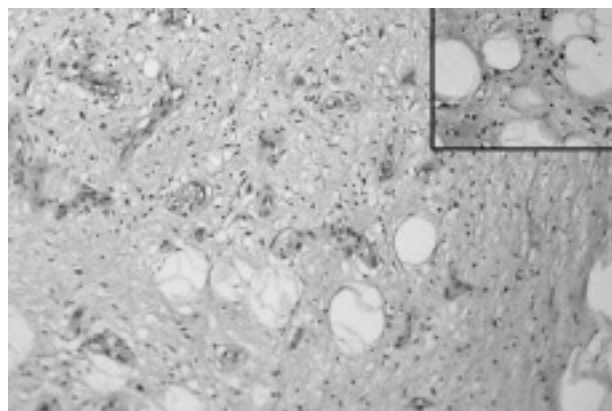


Fig. 1 - Histology of the well-differentiated liposarcoma: in evidence the large hyperchromatic cells in a context of mature fat cells (Hematoxylin and Eosin, x100). In the upper right panel: higher magnification of tumour cells (Hematoxylin and Eosin, x200).

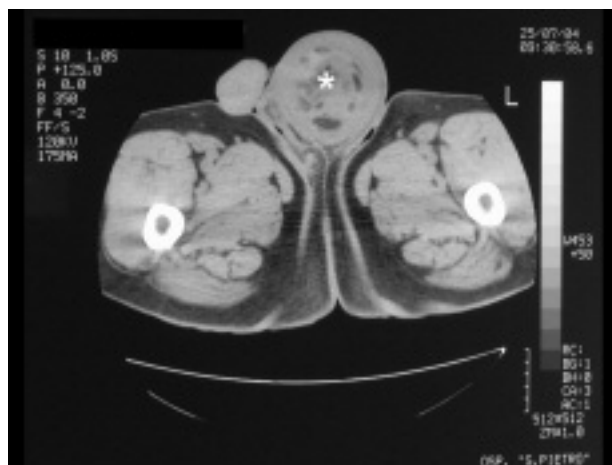


Fig. 2 - Postoperative CT scan of the distal portion of liposarcoma (star) that reaches the left hemiscrotum.

ted in patients experiencing recurrent hernias of the inguinal region (2).

The clinical aspect is frequently a complaint of scrotal or inguinal painless mass, similar to an inguinal hernia and the diagnosis of tumor is performed mainly during surgery, as in our case. The recommended treatment, as reported, is the removal *en-bloc* of the tumour, with eventual resection of spermatic cord and orchidectomy. The resection of hemiscrotum is not mandatory when the skin is not involved (5).

In our patient, due to the absence of a preoperative diagnosis of malignancy, we preferred to remove partially the mass sparing the testicle, performing a second surgical look after the definitive histological exam and the radiologic evaluation. However, after histology, the patient died and the second look was impossible.

## Conclusion

We firstly believe that, as reported by Roslyn et al., the routinely histological exam of all tissue removed during a hernioplasty is mandatory (7). Moreover in the case of a firm not reducible and painless in-

guinal mass, without signs and symptoms of bowel obstruction, an abdominal tumor with inguinal or scrotal extension should be suspected and preoperatively excluded. The US and CT scan may be helpful to plan a correct therapeutic strategy before intervention.

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