

## **Spermatic cord liposarcoma and prostate adenocarcinoma: a synchronous association**

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### **Abstract**

Spermatic cord liposarcoma is rare, with fewer than a 100 reported cases in the world literature. We report on its presence in an elderly man who presented with a painless scrotal mass. The serum prostate specific antigen (PSA) level was also found to be elevated. Transrectal ultrasound biopsy of the prostate confirmed the presence of adenocarcinoma. This is the first report of prostatic adenocarcinoma in association with spermatic cord liposarcoma in the English literature. The treatment options for spermatic cord liposarcoma are discussed further.

### **Key words**

Spermatic cord, paratesticular liposarcoma, prostate adenocarcinoma, synchronous, scrotal mass

### **Introduction**

Paratesticular liposarcomas comprise only 0.056 percent of soft tissue sarcomas in general [1,2]. Fewer than a 100 cases of spermatic cord liposarcoma have been reported in the literature [1,2,3]. We describe the first case of its synchronous presence along with adenocarcinoma of the prostate.

### **Case Report**

A 70-year-old retired gold miner presented with a painless scrotal swelling which began as a small left scrotal mass and gradually increased in size over a period of 5 years. The patient had no systemic or lower urinary tract symptoms or history of antecedent trauma.

On examination a firm, rubbery mass was palpated in the left inguinal region extending into the scrotum. A cough impulse could not be elicited and the inguinal lymph nodes were not palpable.

The scrotum was diffusely enlarged, with a large, non-tender, irreducible, mass.. Digital rectal examination and urine dipstick analysis were normal.

The serum markers of testicular tumour were not elevated. The serum prostate specific antigen was elevated (22.9µg/l).

Scrotal ultrasonography revealed a large, solid, inhomogenous, poorly defined mass occupying the left hemiscrotum, not attached to the left testis.

Surgical exploration via a left, extended inguino-scrotal incision revealed a well-circumscribed mass in the inguinal canal extending into the scrotum (Figure 1). High ligation of the left spermatic cord with complete excision of the mass and ipsilateral testis was performed.

## **Pathology**

Macroscopically, the specimen consisted of a well-circumscribed, encapsulated, soft tissue mass originating from the spermatic cord and measuring 16 x 13 x 12.5 cm (Figure 2). The testis and epididymis appeared normal (Figure 3).

Histological examination showed features consistent with a well-differentiated liposarcoma, adipocytic type (Figure 4a). In occasional sections scattered large atypical hyperchromatic stromal cells, some of which were multinucleated, were seen (Figure 4b). No dedifferentiated component was identified. The testis showed focal, mild atrophy. The epididymis showed no significant abnormalities. The tumour resection margins were clear.

Transrectal ultrasound biopsy of the prostate revealed an adenocarcinoma (Gleason score 2+3).

Magnetic resonance imaging (MRI) of the region did not reveal any metastatic disease.

Despite adequate counseling, the patient refused further treatment.

## **Discussion**

In the paratesticular region, neoplastic disease may arise from the spermatic cord (commonest), epididymis, mesenchymal layers surrounding the testis or the true appendages [1].

Since the first reported case of paratesticular liposarcoma (1952), its aetiology remains unknown [1,3,4].

These tumours occur most commonly between the ages of 54 and 88 years and show a right sided predominance [1,3].

They may spread via the local, haematogenous and lymphatic routes [2,3].

The well-differentiated type carries a more favourable prognosis, with a 5-year survival of around 90 percent. This type has no potential to metastasize, unless it undergoes dedifferentiation [2,3,5].

The dedifferentiated liposarcomas carry a far worse prognosis, with a metastatic rate of up to 20% and tend to behave like the adult high grade pleomorphic sarcomas [3].

Paratesticular liposarcoma commonly presents as a painless scrotal mass which gradually increases in size over months to years [1,3]. It is often misdiagnosed as an inguinal hernia or hydrocele, since it may transilluminate. [1-3].

Initial imaging should include inguino-scrotal ultrasonography [2,3,6]. On account of its variable consistency, paratesticular liposarcoma is commonly misdiagnosed as a cystic or fatty lesion[2,3,6].

MRI and computed tomography (CT) are useful to assess the extent of local disease and metastases [2,3].

The recommended treatment of paratesticular sarcoma is radical orchidectomy with high spermatic cord ligation, since positive surgical margins are a predictor of early local recurrence [1,7].

Because it generally resembles a lipoma, both macro- and microscopically, and is mostly indolent, most authorities suggest that the type of tumor described here may be better designated as “atypical lipomatous tumor” except if it arises in the retroperitoneum, when it should be called “well-differentiated liposarcoma” [8].

Since liposarcomas are the most radiosensitive of all sarcomas, radiation therapy alone has achieved remission in some cases [1,3].

The risk of recurrence of paratesticular liposarcoma post resection warrants long-term follow-up [1-4,6].

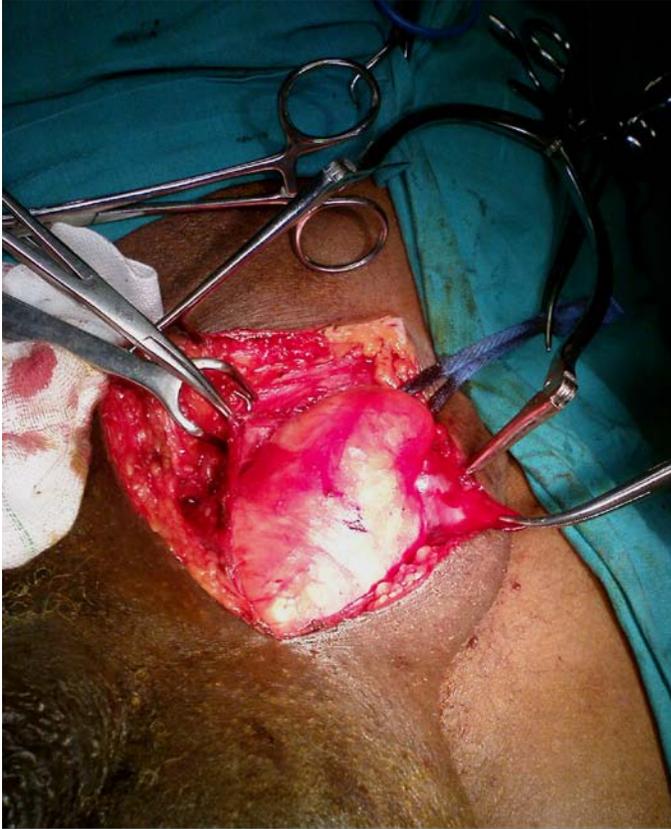
The incidence of multiple primary malignancies in an individual with cancer is estimated at four percent, with at least 14 percent of these cancers originating from the genitourinary system [9].

A case of a spermatic cord liposarcoma has been described in a patient four years after radical retropubic prostatectomy for prostate cancer [10]. However, our case is the first report in the English literature of synchronous occurrence of these tumours.

With a common age group of presentation, synchronous association of these tumours could be merely co-incidental.

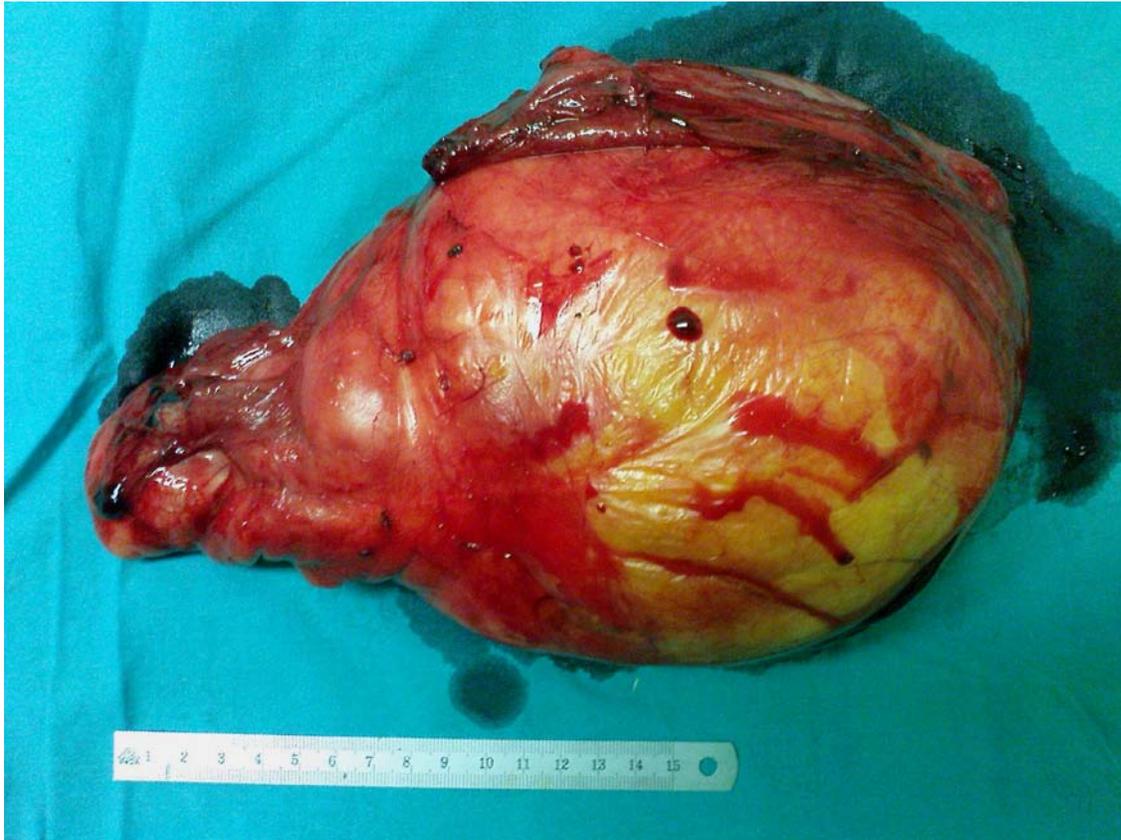
## **Figure Captions**

Figure 1.



Intra-operative photograph of the mass in the left inguinal canal.

Figure 2



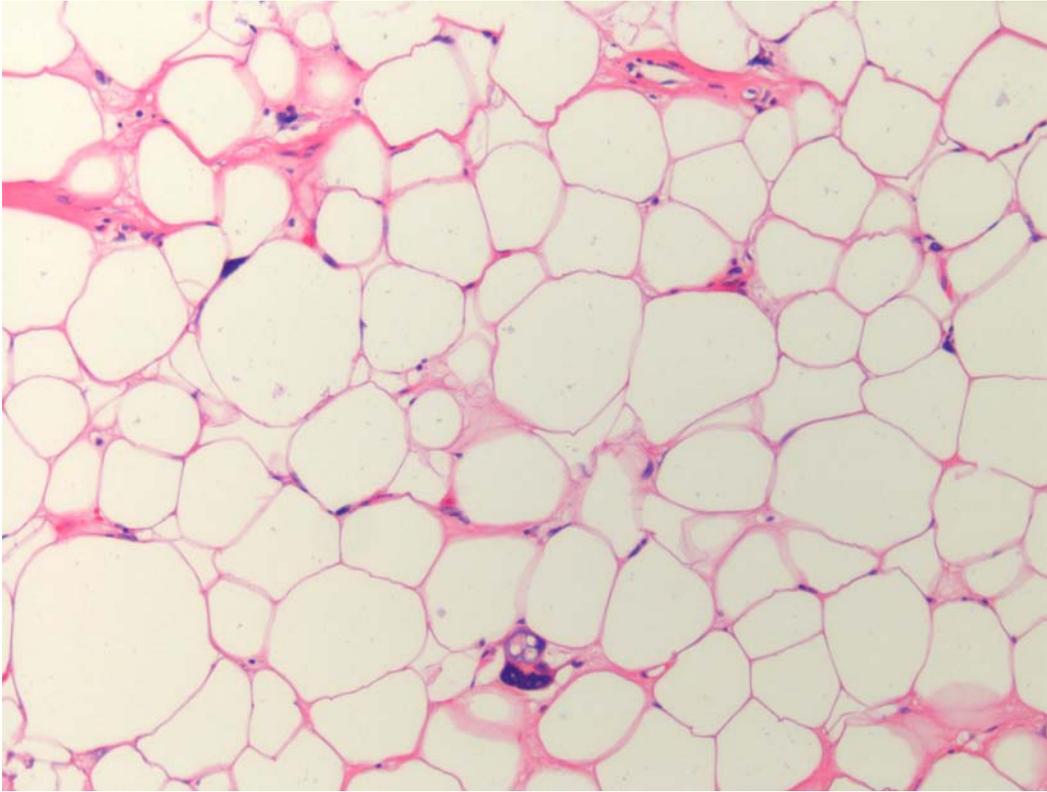
Photograph of the paratesticular mass (weight 1,47 kg).

Figure 3.



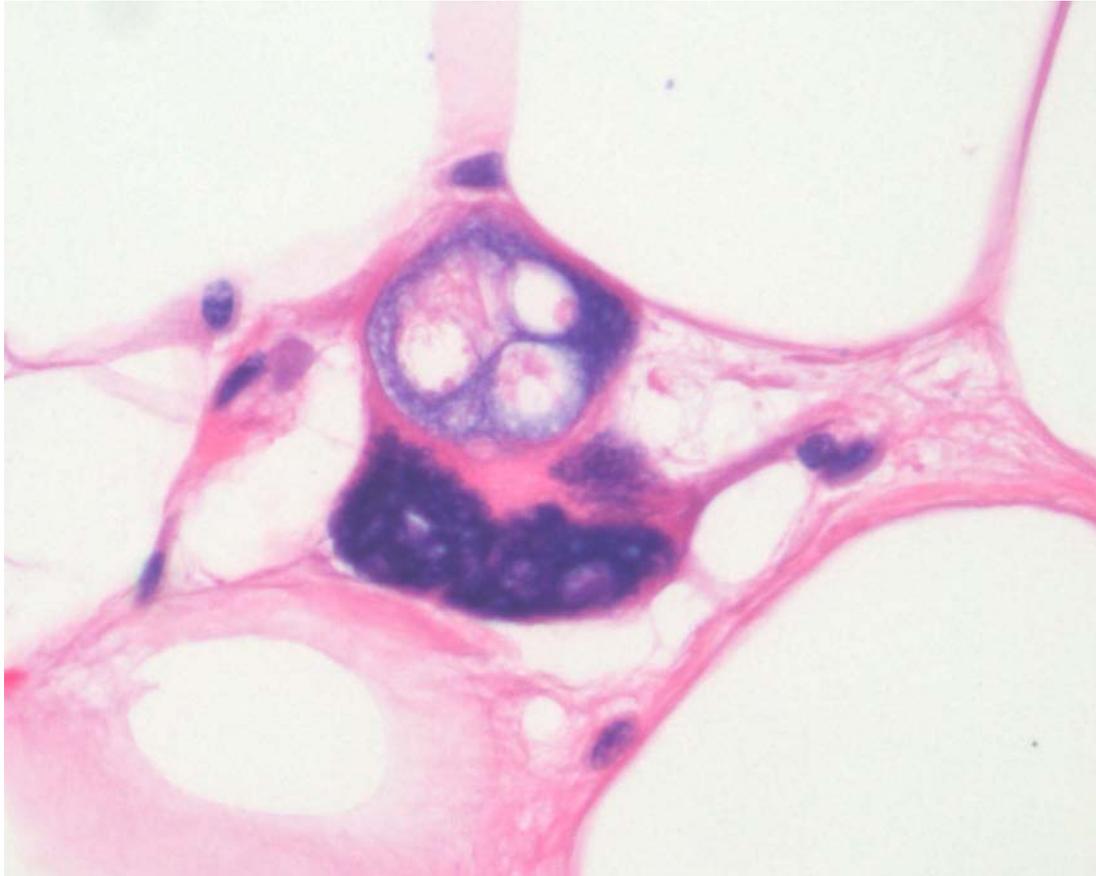
Transected specimen showing a gelatinous surface, with the testis and epididymis separate from the mass.

Figure 4a.



Histological section showing well-differentiated liposarcoma, (adipocytic type) with hyperchromatic stromal cells (H&E stain, 10X).

Figure 4b.



High magnification showing a large multi-nucleated atypical stromal cell (H&E stain, Zoom)

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