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Paratesticular solitary fibrous tumor: A case report

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A B S T R A C T

Paratesticular solitary fibrous tumors are a very rare benign tumor that are usually low-grade neoplasms of pericytes and myofibroblast-like cells. They're slow growing and painless. We report a case of a male patient of 32 years old who came to our medical structure complaining about the appearance of scrotal mass, painful sometimes. Investigations revealed a scrotal mass which was surgically removed. Immunohisochemical study concluded to the presence of a solitary fibrous tumor.

1. Introduction

While most masses in the scrotal sack are neoplasia of the testis, a small proportion are extratesticular, arising from paratesticular tissues (spermatic cord structures, testicular tunica and residual tissue relics). Around 70% of paratesticular tumors are benign, the most common being lipomas, adenomatoid tumors and leiomyomas. Less common benign tumors of the paratesticular region include fibromas, hemangiomas, neurofibromas, papillary mesotheliomas and cystadenomas.[1] A variety of even more rare benign tumors have been reported in the paratesticular region; among the rarest is the benign solitary fibrous tumor (hemangiopericytoma). Our case report describes a case of paratesticular solitary fibrous tumor, of which the literature finds only few cases.

2. Case report

Mr E. A, aged 32, father of two children, has been presenting with scrotal pain for 8 months, with perception of a left scrotal mass, which is progressively increasing in size.

The patient was in good general condition. Examination of the left scrotal compartment revealed a supra-testicular mass of firm consistency with rounded contours, mobile in relation to the cutaneous and deep plans, and a normal right testicle. No inguinal adenopathy, Troisier lymph node, abdominal mass or gynecomastia were found. Pleuro-pulmonary and somatic examinations were without abnormalities.

The tumour markers (αFP; HCG and LDH) were normal. Testicular ultrasound showed a homogeneous left testicle of normal size and echostructure, with a solid oval hypoechogenic mass at the spermatic cord, measuring 3.6cm/2.9cm and vascularized by color Doppler. There was no hydrocele and the right testis and epididymis were normal. Thoracic-abdominopelvic CT: No iliac, retroperitoneal or mediastinal node were found without any secondary hepatic or pulmonary localization.

The patient has been through inguinal orchiectomy, the surgical exploration revealed a cord-dependent mass adherent to the epididymis. Ligation-section of the cord at the level of the deep inguinal orifice was performed, removing the entire organ (Fig. 1). Histological examination reveals a fusocellular tumor proliferation of storiform structure, arranged in intersecting bundles with hemangiopericytic vascularization. Tumor cells are spindle-shaped, with round or elongated cores and dense chromatin (Fig. 2). An immunohistochemical test was performed. It showed widespread CD34 expression, with negativity for the other markers tested: CD31, Desmin, Mygenin, MDM2, PS100, B-catenin. Smooth muscle actin marked a few cells. Additional marker staining showed diffuse, intense expression of STAT, a new marker that is fairly specific for solitary fibrous tumors (Fig. 3).

3. Discussion

A number of very rare benign and malignant tumors have been reported in the paratesticular region. Among the rarest of these are solitary fibrous tumors, usually low-grade neoplasms of pericytes and myofibroblast-like cells that are normally arranged around capillaries and venules. These tumors generally present as slow-growing, painless masses.

There are also fibrous or fibro-inflammatory proliferations which may be secondary to a reparative process following trauma or inflammation, or correspond to spontaneous neoplasia. These lesions are located in the tunica vaginalis, the epididymis and the tunica albuginea.[2] These different tumors are described in the literature under various names embracing different entities: fibrous pseudotumor,

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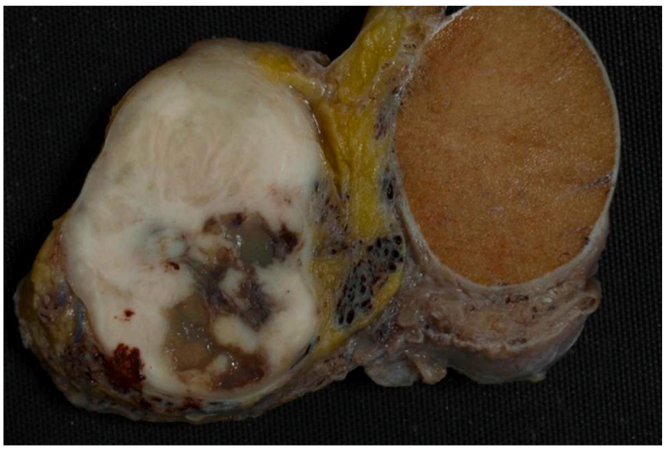

Fig. 1. Macroscopic appearance of the cord tumor.

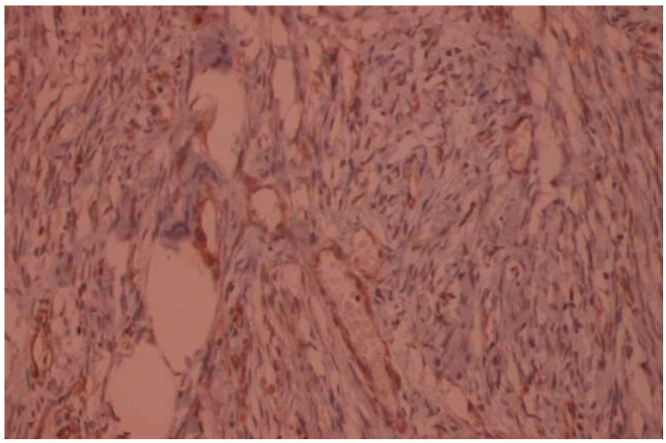

Fig. 3. Immunohistochemical study: Smooth muscle actin positive, desmin negative.

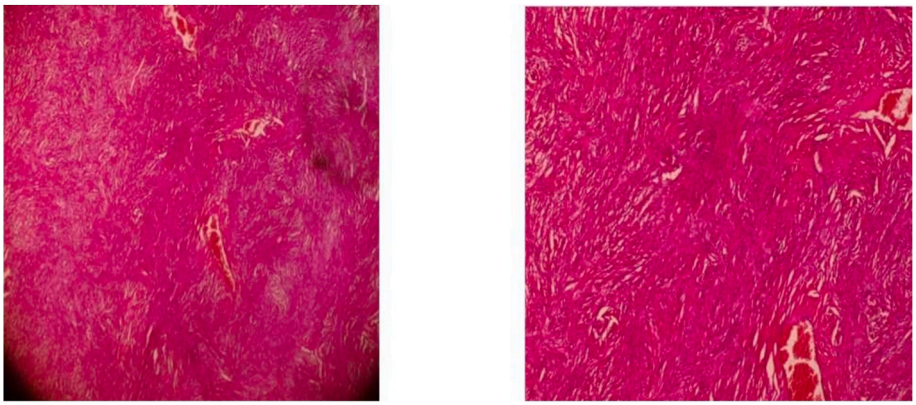

Fig. 2. Microscopic appearance: mesenchymal spindle cell proliferation, made up of intersecting bundles of spindle cells with rare atypia and patterns of mitosis.

testicular tunica fibroma, inflammatory pseudotumors.[3]

The presentation of these tumors often takes the form of multiple, painless intrascrotal nodules evolving over several years, in young patients (peak age in the third decade), but they can be encountered at any age.[4]

Ultrasound examination is non-specific. It shows one or multiple solid masses typically attached to, or associated with, the testicular tunics, of variable echogenicity. A hydrocele may be found.

Solitary fibrous tumors are characterized by numerous ramifying capillary ducts and open sinusoidal spaces enclosed in nests of spindle to round cells. Histologically, these tumors have morphological characteristics similar to those found elsewhere in the body.[5]

Treatment is based on testicular exploration with an intraoperative histological study. When the benign nature of the lesion is confirmed, excision of the tumour and the tunica vaginalis is the treatment of choice. If the benign nature of the lesion cannot be determined extemporaneously, as in our patient's case, orchiectomy is often performed.[3]

Surgical resection is curative in most cases. However, 10%–15% of solitary fibrous tumors show aggressive behaviour, and recurrences have been documented several years after resection. Given the low risk of local recurrence and metastasis, long-term follow-up is sufficient in the absence of other adjuvant treatment.[3]

4. Conclusion

Solitary fibrous tumors of para-testicular localization are extremely rare. The few cases described in the literature do not address the long-term follow-up of these tumors and, consequently, there is little evidence on which to base treatment. However, given their behavior at other anatomical sites, para-testicular solitary fibrous tumors with low proliferative activity have little potential for local recurrence or metastatic spread. Thus, our current approach will be to monitor the patient with serial physical examinations and scrotal ultrasound to exclude disease recurrence.

CRediT authorship contribution statement

A. Doumer: Data curation. **R. Safwate:** Writing – original draft. **A. Seffar:** Investigation. **A. Moataz:** Supervision. **M. Dakir:** Supervision. **A. Debbagh:** Supervision. **R. Aboutaieb:** Validation.

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