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Scientific and clinical letters

Solitary fibrous tumor of the bladder

Tumor fibroso solitario vesical

To the Editor,

We report the case of a 59-year-old male, referred from the outpatient clinic for a sensation of incomplete emptying and increased urinary frequency. Ultrasonography was performed, revealing a nodular image on the right side of the bladder, with a prostate volume of 18 cc.

Physical examination of the abdomen was normal, and digital rectal examination revealed an adenomatous, smooth and nonpainful prostate gland with well-defined boundaries and a prostate volume of II/IV.

Intravenous urography showed a bilateral renal function with patent excretory tubes until the bladder. The bladder cystogram showed smooth, regular contours without filling defects and scant postvoid residual.

Urine cytology was benign and blood tests were normal, with a prostate specific antigen (PSA) of 1.3 ng/mL.

Cystoscopy showed a lesion protruding approximately 2 cm into the bladder mucosa, which was normal in appearance.

Transrectal ultrasound showed a right paravesical neoformation measuring 21 x 16 mm, which was biopsied and reported histopathologically as a low grade mesenchymal formation.

Abdominopelvic computed tomography (CT) revealed a rounded image 15 mm in diameter that seemed to be adjacent to the right bladder wall rather than in bladder wall itself.

Subsequent abdominopelvic CT assessments confirmed an increase in size of the formation to 35 mm, so surgical treatment was proposed (Fig. 1).

Via an infraumbilical incision, a well-encapsulated, vascularized, whitish ovoid mass measuring 4 x 3 cm was enucleated, without disruption of bladder mucosa (Fig. 2).

The pathological study of the lesion revealed a mesenchymal tumor composed of abundant dense collagen fascicles, among which spindle cells were arranged with a minimal degree of nuclear atypia. The immunophenotype of the these cells was positive for vimentin, CD34, CD99, Bcl-2, negative for smooth muscle desmin and actin, and proliferative fraction (MIB1) was low, leading to a diagnosis of solitary fibrous tumor (Fig. 3).

Two years after being operated, the patient was asymptomatic, and no mass adjacent to the bladder wall, visible in previous studies, was identified in a postoperative follow-up CT (Fig. 4).

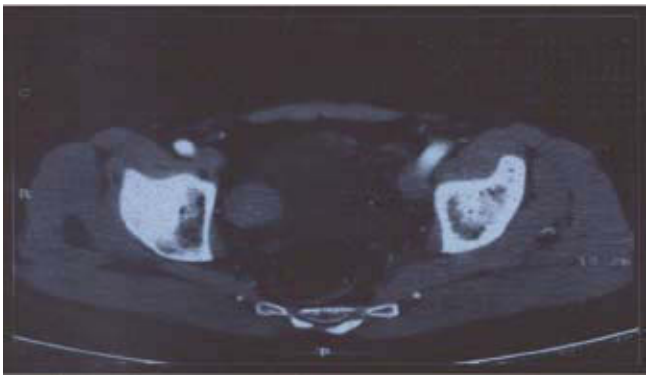

Figure 1 – Computed tomography. A rounded, well demarcated image that seem to be adjacent to the right bladder wall rather than in the bladder wall itself.

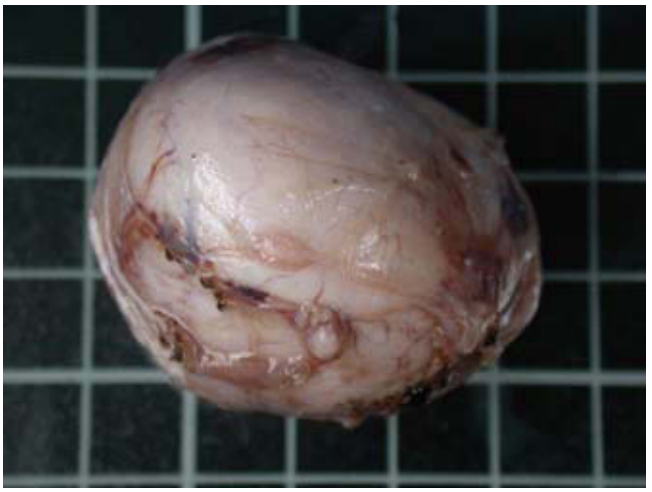

Figure 2 – Macroscopic image of tumor. A whitish, ovoid-shaped, well demarcated and encapsulated mass.

Solitary fibrous tumor is a very uncommon mesenchymal tumor of probable fibroblastic origin. It was first described by Klemperer and Rabin in 1931[1].

For a long time, solitary fibrous tumor was considered to be a tumor exclusive to serous linings such as the pleura, the peritoneum, or pericardium. The description of its location in areas with mesothelial lining goes back at the end of 1980s, whereas its location in the urinary tract dates back to 1997, with the contribution of two cases in the renal peripelvis and 5 in the bladder[2].

Solitary fibrous tumors may occur in any age, but are more common in adults between the fourth and fifth decade of life, with equal frequency in both sexes. Most cases are benign, but from 10 to 20% cases are malignant. Malignization of some of these tumors has been reported in up to 23% of cases.

Most are asymptomatic in the early stages, but may grow and reach a great size, resulting in symptoms from tumor compression[3]. They sometimes result in paraneoplastic syndromes such as hypoglycemia, since they have particularity of secreting insulin-like factors[2].

It is usually a well demarcated and occasionally encapsulated tumor. In the bladder it presents as a polypoid intravesical mass, covered by intact mucosa.

Microscopically it is characterized by a wide variety of growth patterns, among which the most predominant is that of spindle cells arranged randomly in a collagen stroma[4]. Cellularity varies within the tumor, showing alternating hypocellular and hypercellular areas. Vascularization consists of irregular branching capillary tubes simulating the appearance of hemangiopericytomas[5].

This neoplasm can be diagnosed by its immunohistochemical markers, CD34 (90-95% of cases) and CD99 (70% of cases)[6].

It also reacts with vimentin[5]. Suster et al reported that all cases of solitary fibrous tumor found in pleural or extrapleural sites (56) were positive for Bcl-2, while only 38, 68%, were for CD34. Thus, Bcl-2 appears to be a more sensitive marker than CD34 for the diagnosis of solitary fibrous tumor[6] The tumor cells may be variably positive for EMA (epithelial membrane antigen), SMA (smooth muscle actin) and desmin, and are negative for cytokeratins, CD31 and S-100 protein[4].

The main problem with solitary fibrous tumors of the bladder from the pathological viewpoint is differential diagnosis[2] since it includes a wide variety of tumors, including inflammatory myofibroblastic tumor, leiomyomas and leiomyosarcomas, sarcomatoid carcinoma and hemangiopericytoma, the most difficult to distinguish, because it shares the same microscopic and immunohistochemical features.

Treatment is surgical when symptoms occur or when there is no accurate diagnosis or it is considered a malignant neoplasm. Local excision or transurethral resection are used, reserving cystectomy for cases where resection is inadequate or excision impossible[4]. Resectability is the most important predictive factor of the results in patients treated surgically[7]. On the other hand, the use of neoadjuvant or adjuvant chemotherapy or radiation therapy, recorded in specific cases, sheds little light, as they had disparate results and do not allow valid conclusions to be drawn.

Prognosis and aggressiveness are difficult to establish. Recurrence, local extension and distant metastasis can be seen in 10-20% of cases[2].

There is no strict correlation between histological features and clinical behavior of these tumors[6]. Extrapolation from the literature on solitary fibrous tumors located in the thorax suggests that the prognosis is generally good[7]. However, they have the potential to recur or metastasize[4]. Increased cellularity, pleomorphism, cellular atypias, necrosis, and the presence of more than 4 mitoses per 10 high power field are considered indicators of malignancy[5]. Therefore, it is difficult to predict the behavior of these tumors based only on histology, and a long and careful follow-up period is required in all cases[4] .

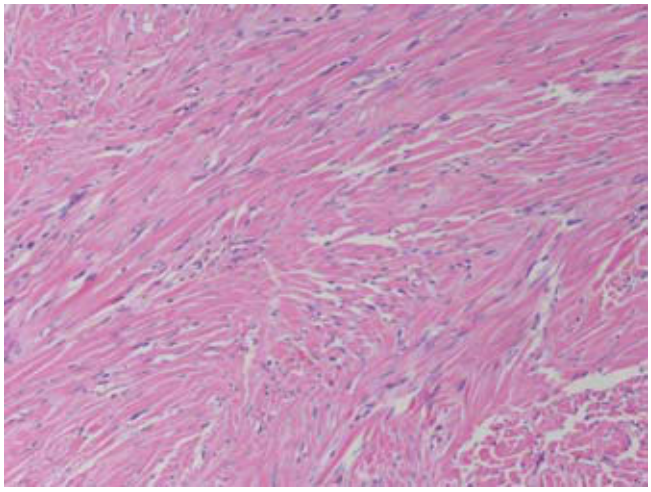

Figure 3 – Optical microscopy. Hematoxylin-eosin stain (100×).

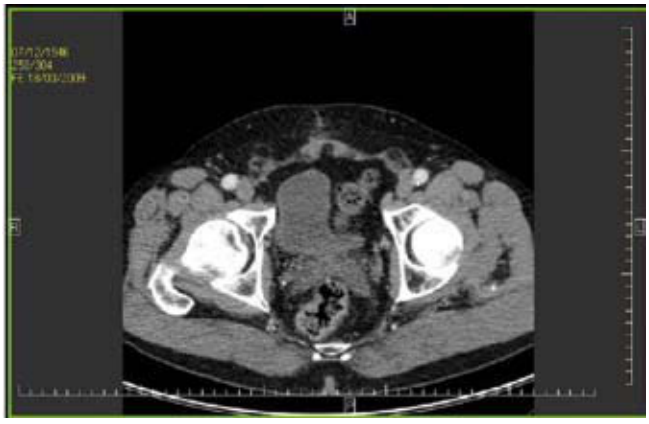

Figure 4 – Computed tomography of postoperative assessment. No image adjacent to the bladder wall is visible.

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Adenomatoid tumor of the tunica albuginea. A case report

Tumor adenomatoide de túnica albugínea. Caso clínico

To the Editor,

Paratesticular tumors account for a low percentage of intrascrotal tumors. Histologically, they are characterized as benign tumors originating from mesenchymal tissue. Of these, the most common form is adenomatoid tumor, followed by papillary cystadenoma and leiomyoma. These tumors can occur in many organs and in both sexes, although they are more common in males and in the genital area. The treatment of choice is local excision of the lesion. If there are doubts about malignancy, extemporaneous biopsy is performed and orchidectomy if this condition is confirmed.

We report the case of a paratesticular tumor. Diagnosis of these neoplasms is uncommon and usually occurs between the third and fifth decades of life[1]. Most of these tumors are benign in nature (80%)[1].They are usually located in the epididymis, although there are more rarely located in the tunica albuginea, in the spermatic cords, or even in the prostate[2].

The case reported is that of a 28-year-old male, with no medical or surgical history of interest, who presented to the emergency department with painful swelling in the left scrotum, starting one week before.

Physical examination of the penis and testes was normal. A nodule of increased consistency and painful on palpation was detected in the left epididymal tail.

The scrotal ultrasound showed normal parenchyma of the left testicle and a rounded image of 1 cm in diameter that appeared to arise from the testicular coverings or the epididymis. The patient was treated with antiinflammatory drugs and referred to the urology outpatient clinic to complete his assessment with magnetic resonance imaging (MRI).

MRI revealed a 7 mm in diameter extratesticular lesion in the caudal and lateral part of the left testis, which was isointense to testicular parenchyma in T1, hypointense in T2 and with intense contrast uptake, that appeared to be related to the tail of the epididymis and was located in more lateral area of the testis[3], the most probable diagnosis being that of a fibrous adenomatoid tumor

Tumor markers were normal.

Based on these findings, fine needle aspiration biopsy (FNAB) of the lesion was performed, where it was observed to have scanty cellularity of an epithelial or mesothelial appearance, with little or no nuclear atypia, cytologically suggesting an adenomatoid tumor.

Excision of the tumor lesion was performed, which was located in the tunica albuginea, following by extemporaneous biopsy of the lesion that was reported as a nonmalignant adenomatoid neoformation. The pathological result was an adenomatoid tumor of the tunica albuginea.

At two years of follow-up, the patient remains disease-free.

These tumors account for up to 5% of intrascrotal masses[4], and this is the most common form of presentation (60%) of paratesticular tumors. It is not a strictly urological tumor, as it may occur in other organs such as the uterus or fallopian tubes. However, a trend towards location in the pelvic organs has been described, as well as a greater frequency of occurrence in men, although it may occur in any organ of the body[5].

The usual location is the epididymis, mainly in the tail. Our patient had the lesion in the tunica albuginea, where an incidence of 14% has been reported. Other less common locations include the spermatic cords or the prostate[4].