CLINICAL CASE

Bladder leiomyoma

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Keywords
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Abstract
Bladder leiomyomas are tumors that arise in the mesenchyme. They have a low incidence in the general population, corresponding to less than 1% of all bladder tumors. Depending on their size, location, and type of growth, they can be asymptomatic or cause lower urinary tract symptoms (LUTS) and hematuria. We present herein the case of a 54-year-old woman with LUTS, hematuria, and lumbar pain, who was previously treated for recurrent urinary infections. Imaging studies showed an intravesical tumor and left ureterohydronephrosis secondary to perimeatal compression. Partial cystectomy and ureteral reimplant were carried out and the patient had satisfactory progression.

Leiomioma de vejiga

Resumen Los leiomiomas vesicales son tumores de origen mesenquimal, con una baja incidencia en la población en general, y correspondiendo a menos del 1% de todos los tumores vesicales. Dependiendo de su tamaño, localización y tipo de crecimiento pueden cursar asintomáticos o generar síntomas del tracto urinario inferior (STUI) y hematuria. Presentamos el caso de una paciente de 54 años edad con STUI, hematuria y dolor lumbar, la cual fue tratada previamente por infecciones urinarias de repetición, los estudios de imagen demostraron una tumoralción intravesical y ureterohidronefrsis izquierda secundaria a compresión perimeatal. Se practica cistectomía parcial y reimplante ureteral, teniendo una evolución satisfactoria. Realizamos una revisión de la literatura en relación a dicha patología.
Introduction

Bladder leiomyoma is a benign tumor of mesenchymal origin that is extremely rare. It represents an incidence of less than 1% of all bladder tumors. They are more frequent in women with a 5:2 woman/man ratio. The majority of cases are incidental diagnoses, made during the histopathologic study of transurethral resection (TUR) samples sent with the initial diagnosis of a probable bladder cancer. However, large lesions can orient us toward diagnosis based on their morphologic characteristics. We present herein the case of a large leiomyoma that was treated with partial cystectomy and ureteral reimplant with satisfactory progression.

Case presentation

A 54-year-old woman with a past medical history of controlled high blood pressure, sought medical attention for presenting with lower urinary tract symptoms (LUTS) characterized by burning, urinary urgency, a sensation of incomplete bladder emptying, and urinary frequency, as well as two episodes of gross hematuria and pain with a sensation of heaviness in the left renal fossa; all of this with a one-year progression that was managed by a doctor presumably as a urinary infection.

Upon her arrival at our service, urinary tract ultrasound sonography (USG) was ordered that showed the presence of a solid tumor on the floor and left lateral surface of the bladder, that apparently involved the ureteral meatus causing left ureterohydronephrosis (Figure 1). A urography (Uro CAT) scan identified a well-delineated, 9 x 8 x 7 cm, solid lesion that was dependent on the bladder. There was no apparent extravesical involvement and no evidence of pelvic lymphadenopathy (Figure 2). Cystoscopy showed a lesion that took up 50% of the bladder on the left side that was difficult to delineate, covered by urothelium, and with no apparent alterations. Biopsy of the lesion reported only urothelium with inflammatory reaction. Given the tumor volume, partial cystectomy with ureteral reimplant was performed, with no complications. The histopathologic report confirmed an intramural leiomyoma of the bladder (Figures 3 and 4). Postoperative progression was satisfactory.

Discussion

Leiomyoma is a benign tumor that derives from smooth muscle fiber. It can appear at any level of the urinary tract, but the kidney and the bladder are the most frequent locations. It is the most frequent of the non-epithelial tumors, followed by hemangioma.

Leiomyomas can be asymptomatic and when symptoms are present they are nonspecific, and usually manifest as lower irritative urinary syndrome and hematuria. These symptoms were present in our patient, and given the volume and location of the tumor, there was also ureteral obstruction that caused hydronephrosis and secondary renal pain.

In relation to diagnosis, bladder USG is the imaging study that most often detects leiomyomas and other types of intravesical tumors, and the majority of them are small at the time of diagnosis. Cystoscopy showed the presence of a sessile-based, non-arborescent tumor, protruding toward the bladder lumen.

The most frequent leiomyoma location is the area of the trigone, but they can be found in any segment of the bladder. In regard to their origin and development within the bladder wall, they can be extramural, intramural, and submucosal, the latter of which are the most frequent, representing 50% of the reported cases.
There are diverse theories as to their etiology and pathogeny that attempt to explain their origin due to an inflammatory factor, perivascular metaplasia, a component of hormonal hyperstimulation, or, finally, a possible degeneration of remnants of the Wolf or Müllerian ducts.\(^{10,11}\)

Small lesions are usually treated with TUR,\(^{12}\) and are often mistaken for bladder carcinomas; histopathologic study reveals the true nature of this benign lesion and the presence of smooth muscle fibers. Immunohistochemistry studies with markers for actin, desmin, and CD34 are positive and they generally do not present with mitosis. Large bladder masses can be treated with enucleation, or in the cases of intramural tumors, with partial cystectomy,\(^{1,13,14}\) as in our case. Outcome is favorable and lesions are usually single.

Given the low incidence of reports on this kind of tumor, we described the present case, considering that it is important to have this pathology in mind when making the bladder tumor differential diagnoses.

**Conflict of Interest**

The authors declare that there is no conflict of interest.

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**References**