Leiomyoma of the bladder. Case report and literature review

Leiomioma vesical. Relato de caso e revisão de literatura

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**ABSTRACT**

We present a case of leiomyoma of the bladder considering diagnosis, treatment and literature review. A leiomyoma of the bladder was diagnosed in a 60-year-old woman based on physical examination, urinary tract imaging (ultrasonography, computed tomography and magnetic resonance imaging) and cystourethroscopy with biopsy of the lesion. Cystourethroscopy showed a bladder tumor covered by normal epithelium. Management included complete transurethral resection with no relapse after a seven-month follow-up.

**Keywords**: Leiomyoma/diagnosis; Leiomyoma/therapy; Bladder neoplasms; Case report [Publication type]

**RESUMO**

É apresentado um caso de leiomioma vesical considerando o diagnóstico, tratamento e revisão da literatura. Trata-se de paciente do sexo feminino com 60 anos de idade, cujo diagnóstico foi estabelecido pelo exame físico, exames de imagem (ultra-sonografia, tomografia computadorizada e ressonância magnética) e cistoscopia com biópsia da lesão. Durante a cistoscopia, detectou-se tumor vesical com epitélio de revestimento normal. O tratamento consistiu em ressecção transuretral completa da lesão, com período de seguimento de 7 meses, não havendo recidiva.

**Descritores**: Leiomioma/diagnóstico; Leiomioma/terapia; Neoplasias da bexiga; Relatos de caso [Tipo de publicação]

**INTRODUCTION**

Leiomyoma of the bladder (LV) is a benign mesenchymal tumor that derives from the smooth muscle and has been rarely described. Approximately 250 cases were reported in the literature, accounting for less than 1% (0.04-0.5%) of all bladder tumors(1-2). It is the benign mesenchymal tumor most frequent in this organ(3). It is more frequent in women, and symptoms related to storage function are more predominant (50%), followed by voiding function. Occasionally they are found in routine assessments in asymptomatic patients(4). Its pathophysiology is still unknown and the tumors are classified according to their location as endovesical, intramural and extravesical. The pertinent literature reports more isolated cases; hence, it is not possible to establish diagnostic and therapeutic strategies(1-2,4).

Treatment of these tumors is based primarily in transurethral resection (TUR) or in partial cystectomies, with good results in a long follow-up(1). We present a case of leiomyoma of the bladder and discuss the literature on it.

**CASE REPORT**

Case 1:

A 60-year-old female patient, with a history of feeling weight in her vagina and pollakiuria for six months. On physical examination, there was a bulging in the anterior vaginal wall corresponding to a grade 1 cystocele, which had a hardened consistency at touch. The past history included hysterectomy due to a fibroid, exeresis of a cyst on the left ovary and Burch surgery due to urinary incontinence.

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confirmed a solid, homogeneous and well defined mass with homogeneous enhancement after injection of contrast medium. The mass measured approximately 4.0-cm diameter and it was 1-cm apart from the urethral meatus, with evident contact with the anterior wall of the vaginal dome. This finding was confirmed in the magnetic resonance imaging (MRI) (figure 2). No other vesical lesions were observed. Cystoscopy confirmed the presence of an elevated area with normal mucosa that was submitted to biopsy (figure 3).

The pathological examination of the fragments showed a smooth muscular tissue composed of elongated cells, with an acidophilic cytoplasm, elongated nuclei, rounded borders, no atypia or signs of malignance. Moreover, it showed connective stroma, dilated vessels and the final diagnosis established was leiomyoma (figure 4).

The patient was submitted to transurethral resection of the vesical lesion. There was little bleeding in the tissue, which had a firm consistence and a spongy and whitened aspect. She was discharged from hospital on the third postoperative, in good clinical conditions and no events. The pathological examination confirmed the diagnosis of leiomyoma. There were no events or relapses during a seven-month follow-up.

DISCUSSION

The vesical leiomyomas are more prevalent in women (76%), observed in all age groups, but are more frequent in the fourth decade of life, being 85% of patients aged 20-60 years\(^{(1-3)}\). Some authors relate the higher prevalence among women with the expression of estrogen and progesterone\(^{(3-5)}\). The most frequent symptoms are related to storage function (38-50%), that is, pollakiuria, urgency and suprapubic pain. Asymptomatic patients correspond to 19-27%, whereas 24-49% of patients present voiding symptoms (dysuria, reduced urination flow and tenesmus)\(^{(1-2)}\). A palpable mass may be found by bimanual examination in 30-57% of cases, macroscopic hematuria in 11-20% and
The diagnosis of leiomyoma of the bladder is based on the clinical history and findings of physical, imaging, cystoscopy and histopathological findings. Radiologically, the echographic image of these tumors is of a homogeneously echogenic mass, which has well-defined borders and a round shape. The US provides much information and must be the first examination for being a non-invasive and low cost procedure. If the lesion is endovesical, the mucosa is a hyperechogenic halo covering the mass. In posterior extravesical tumors, the endovaginal US (EUS) has better definition. According to the authors, CT and EUS are less sensitive and less specific examinations. On the other hand, MRI better demonstrates the characteristic aspects of leiomyomas, which are low-density nodules, with regular surface and well-defined limits; thus, it is easy to distinguish them from other structures, as well as extravesical involvement. In cystoscopy, the tumor is characteristically a round mass covered by normal mucosa. However, none of these methods enables differentiating benign from malignant lesions with certainty; therefore, biopsy is necessary to establish the histological pattern and to decide about management.

As to treatment, tumors should be managed according to their size and site. Small and easily accessed tumors could be treated by TUR, whereas an unfavorable or difficult site may require open or laparoscopic segmental resection. Radical cystectomy is rarely indicated. Conservative management is also described for small, asymptomatic lesions that are incidentally found.

As to prognosis, out of 90 cases described in a meta-analysis with a mean follow-up of 46 months (2-244 months) none reported malignant degeneration of the tumor. Three patients (3.3%) recurred, and two were treated after vaginal encleation and one after TUR. They needed a complementary treatment – one patient was submitted to urethrectomy and partial resection of the vesical neck – one by vaginal encleation and another by partial cystectomy. All patients had a satisfactory progression.

In the case reported, the patient was submitted to TUR, with a mean follow-up of seven months, and did not present any signs of relapse in this period.

REFERENCES