

# ENDOUROLOGICAL TREATMENT OF BLADDER LEIOMYOMA

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## ABSTRACT

Leiomyoma is a benign, mesenchymal tissue originated, rare tumor of the bladder. Mostly, bladder leiomyomas are asymptomatic and found incidentally. A female predominance is found. We describe a female patient with leiomyoma of the bladder who presented with pelvic pain and in whom bladder preserving surgery was performed. The literature is reviewed and the management is discussed.

**Key Words:** Leiomyoma, Bladder, Endoscopic Treatment.

## MESANE LEİYOMİYOMUNUN ENDOÜROLOJİK TEDAVİSİ ÖZ

Leiyomiyomlar mesanenin nadir görülen, mezenkimal doku kaynaklı benign tümörleridir. Genellikle mesane leiyomları asemptomatikler ve rastlantısal fark edilirler, görülme sıklığı kadınlarda daha fazladır. Pelvik ağrıyla başvuran ve mesane koruyucu cerrahi ile tedavi edilen mesane leiyomiyomlu kadın olguyu sunuyoruz. Mesane leiyomiyomunu ve tedavisini literatür eşliğinde tartıştık

**Anahtar Kelimeler:** Leiyomyom, Mesane, Endoskopik Tedavi.

## INTRODUCTION

Benign mesenchymal tumors of the bladder are rare and they comprise less than 1% of all bladder neoplasms (1). Leiomyoma is the most common benign mesenchymal tumor, accounting for approximately 35% of the reported cases (2). In most cases, bladder leiomyomas are asymptomatic and usually found incidentally during routine pelvic examinations or radiography but they may present with a variety of symptoms depending on their location and size (3).

We present a case of an intramural bladder leiomyoma, presenting with symptoms of a dysuria, and difficulty in passing urine, intermittent dribbling, and dysuria treated with an endoscopic approach.

## CASE REPORT

A 55-year-old female patient (gravida 3, para 3) presented with a history of dysuria, and difficulty in micturation, intermittent dribbling and dysuria for 30 days. There was no history of fever or weight loss. She has been treated for diabetes mellitus for 3 years with oral antidiabetic drugs. She denied gross hematuria but urine analysis revealed microscopic hematuria. The urine culture was sterile. On examination, there was suprapubic tenderness but there was no palpable mass. There was neither abdominal fluid nor organomegaly. Pelvic sonography showed a bladder tumor, 2 cm in diameter, in the left wall of the bladder. Computer tomography imaging showed no extravesical invasion of the tumor (Figure 1).

Cystoscopy revealed a protrusion of the vesical wall of the same size and there was no mucosal abnormality (Figure 2a). The tumour was completely resected transurethrally (Fig 2b). The histological examination revealed leiomyoma composed of smooth muscle cells and connective tissue (Figure 3). The patient was free of symptoms at the postoperative 3rd month check up.

## DISCUSSION

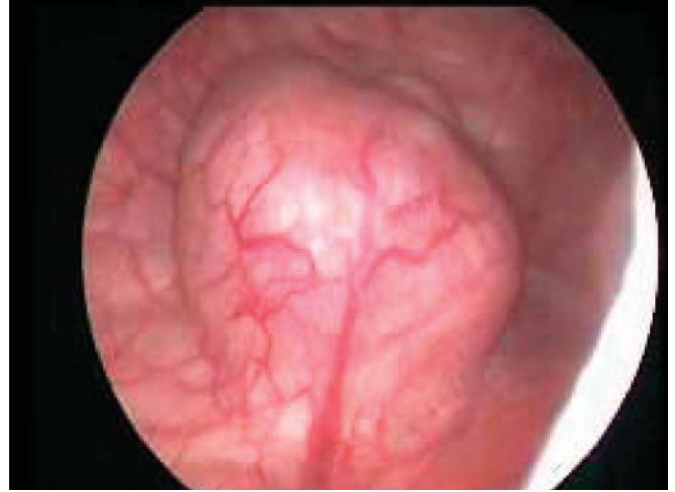
Approximately 95% of primary urinary bladder tumors arise from the lining epithelium. Benign mesenchymal tumors of the bladder are rare and account for less than 1% of all bladder neoplasms (1). Leiomyoma of the bladder accounts for <0.43% of all bladder tumors; the endovesical form has been reported in 63% of cases, which is the most common form, while the intramural form is the least common form, encountered in only 7% of cases (3). Leiomyoma of the bladder is 3 times more common in females. Goluboff et al. observed a higher incidence of leiomyoma in women in their third to fifth decade of life, especially premenopausal women (4). Hormones might play a role in growth, as in the case of uterine leiomyomas.

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**Figure 1:** CT image of the mass located in the bladder.

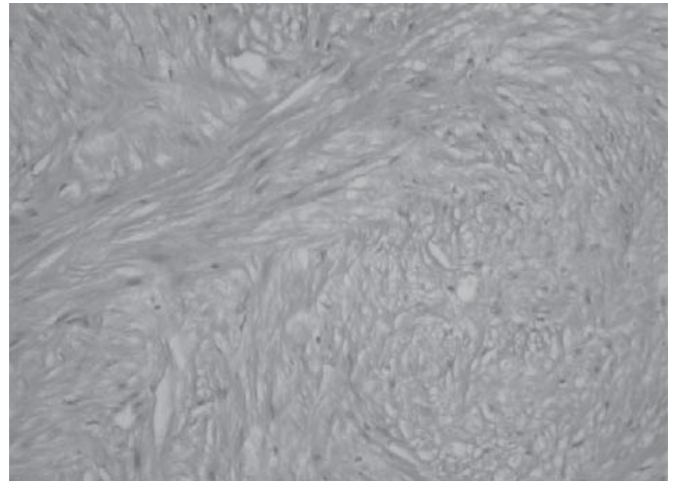


**Figure 2:** Cystoscopic view presenting mass on the lateral wall of the bladder,

Bladder leiomyomas might be asymptomatic or may present in a varied manner depending on their location (intravesical, intramural, or extramural). Hematuria is mostly seen in intravesical leiomyomas and therefore we need to differentiate them from other causes of hematuria, especially malignant tumors. Irritative symptoms are more common in intramural leiomyomas depending on their size, such as dysuria, urgency, frequency, or nocturia. Extramural leiomyomas may present as abdominal or pelvic masses. Depending on location, the leiomyomas might cause hydronephrosis or bladder outlet obstruction (5,6).

Various imaging techniques can be used in the diagnosis of bladder leiomyoma. On IVP or cystography, depending on the position and size of the leiomyoma, a filling defect, bladder contour irregularity, or completely normal bladder might be seen. Pelvic ultrasonography and CT of the bladder are particularly helpful in determining the nature, size, location, and adjacent organ involvement as any of the urinary bladder tumors. Transvaginal ultrasonography is another diagnostic tool. Magnetic resonance imaging is also useful but it is expensive and cannot be used to differentiate from leiomyosarcomas (5,7,8). The cystoscopic appearance of bladder leiomyomas depends on their location within the bladder wall and size, and determines the feasibility of transurethral resection. Any pelvic tumor should be included in the differential diagnosis.

Simple excision of the tumor is usually sufficient for the treatment of these lesions. Classical treatment options are transurethral resection and open resection. The choice of technique depends on the size and the location. Small lesions can be removed by transurethral resection or by transvaginal excision. For small tumors, endoscopic enucleation and laparoscopic approaches are also used (9, 10). Larger tumors can be locally excised by the abdominal route. However, large intramural tumors are managed by partial cystectomy (2). In addition, for some giant leiomyomas, cystoprostatectomy and ileal conduit urinary diversion might be required (11).



**Figure 3:** Section showing mature smooth muscle tumor cells in benign nature (H&E X10).

As there is no report of malignant transformation of bladder leiomyoma to leiomyosarcoma, in biopsy proved cases watchful waiting might be an option in non-symptomatic cases. These patients should be routinely followed up using ultrasound, cystoscopy, and biopsy. Nevertheless, this treatment option must be discussed with the patient. Surgery should be considered when tumor growth is observed, as there is a 0.27% potential risk of leiomyosarcoma in growing uterine leiomyomas and this behavior might be mimicked in bladder leiomyomas (12). Watchful waiting might be the best choice of treatment in premenopausal patients as leiomyomas might regress during menopause.

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