

Open Surgery Following Endourological Treatment in Leiomyoma of the Bladder: Case Report

Mesane Leiomyomunda Endürolojik Tedavi Sonrası Açık Cerrahi Tedavi

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ABSTRACT Leiomyomas of the bladder are rarely observed and usually coincidentally diagnosed benign mesenchymal tumors. Although they are asymptomatic in majority, symptoms may be observed depending on the localization and size. Endoscopic resection and partial cystectomy are the surgical treatment alternatives. In our clinic, a 26-year old male patient coincidentally diagnosed with bladder tumor underwent endoscopic resection. Histopathological diagnosis was reported as leiomyoma. When the cross sectional imaging in the second postoperative month revealed a residual mass in the bladder, partial cystectomy was performed. Since, endoscopic treatments can sometimes fall short, patients should be followed up and, when suitable, partial cystectomy should be considered as an alternative treatment method.

Key Words: Leiomyoma; urinary bladder

ÖZET Mesane leiomyomları, çok nadir görülen ve genellikle rastlantısal tanı konulan mezenkimal kaynaklı benign tümörlerdir. Sıklıkla asemptomatik olsa da lokalizasyonuna ve büyüklüğüne göre semptomlar verebilir. Cerrahi tedavi olarak endoskopik rezeksiyon veya parsiyel sistektomi uygulanabilir. Kliniğimizde, rastlantısal olarak mesane tümörü tanısı alan 26 yaşında erkek olgumuza endoskopik rezeksiyon yapıldı. Histopatolojik tanısı leiomyom olarak raporlandı. Hastanın postoperatif 2. ayında yapılan kesitsel görüntülemesinde, mesanede rezidüel kitle görülmesi üzerine parsiyel sistektomi yapıldı. Hastalara endoskopik tedavi yapılsa da bu yetersiz kalabilmektedir. Bu nedenle tekrar kontrol yapılmalı ve uygun hastalarda parsiyel sistektomi alternatif tedavi yöntemi olarak akla gelmelidir.

Anahtar Kelimeler: Leiomyom; mesane

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Urogenital leiomyomas are extremely rare. They are most frequently observed in the renal capsule of the urogenital system. They are usually small, and autopsies reveal a frequency ranging between 4,2% and 5,2%. Leiomyomas can develop solitarily in a single organ, in multiple organs or can be multiply present in a single organ.¹⁻³

Leiomyomas of the bladder are usually asymptomatic, and coincidentally detected via radiography. They may, however, display different symptoms depending on their location and size. Benign mesenchymal tumors of the bladder make up 1-5% of all bladder tumors. The most common benign mesenchymal tumor is leiomyomas with a frequency rate of 35%. They may stem from tissues of the urogenital organs containing smooth muscles.^{4,5}

Although they may be observed at every age, a diagnosis prior to age 20 is rare. It is 3 times more common in females, and is especially observed in premenopausal period, during the 3rd and 5th decades.⁶ Monitoring, specifically magnetic resonance imaging (MRI) can provide diagnosis and avoid unnecessary invasive operations. If the leiomyoma is large and painful, it has to be surgically resected.⁷ In this case report, in the light of the available literature, we aim to discuss our treatment approach to a 26-year old male patient diagnosed with leiomyoma of the bladder.

CASE REPORT

26-year old male patient applied our clinic with the presenting complaint of only premature ejaculation and there is no any urinary symptom. Due to the invasive bladder tumor in his family medical history, urinary system ultrasonography was requested, which revealed 54x50 mm moderately vascular solid lesion on the intersection of the right wall and dome of the bladder. Contrasted computed tomography (CT) of the abdominal region revealed a lobular contoured, mass lesion with a mild contrast on the posterior wall of the bladder, at the right side of the midline, having a size of 66x56mm, after which diagnostical cystoscopy and transurethral resection (TUR) was planned (Figure 1).

During cystoscopy, a mass lesion located on the intersection of the posterior wall and dome, pressuring the bladder from outside, was observed (Figure 2). A large intravesical part of the mass was transurethral resected.



FIGURE 1: CT image of the mass (axial section).

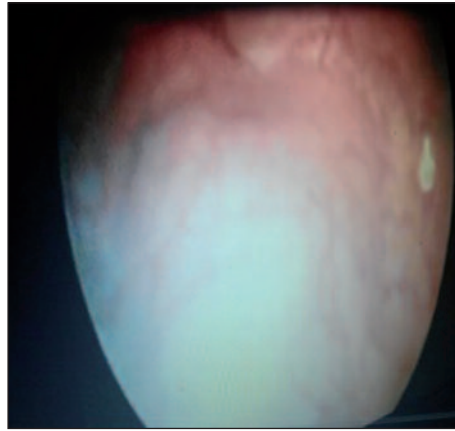


FIGURE 2: Cystoscopic image of the mass.

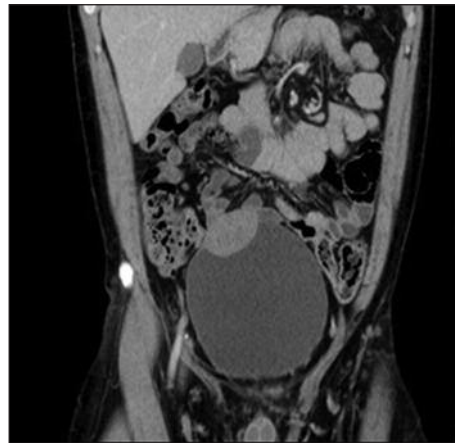


FIGURE 3: CT image of the mass (coronary section).

Histopathological examination reported benign leiomyoma. Non-atypic, non-mitotic and non-necrotic aktin (+) stain composed of fusiform cells was the microscopic indicator.

Two months later, abdominal CT results of the patient revealed a residual tumor, 32x25mm in size (Figure 3). Partial cystectomy was performed for complete resection. Drainage tube was removed on the first postoperative day, and the catheter was removed on the fifth postoperative day, after which the patient was discharged. Pathology results reported negative surgical margins for leiomyoma (Figure 4). Patient's six-month and the first year follow-up scans were performed via ultrasonography, which did not reveal any recurrence of the tumor.

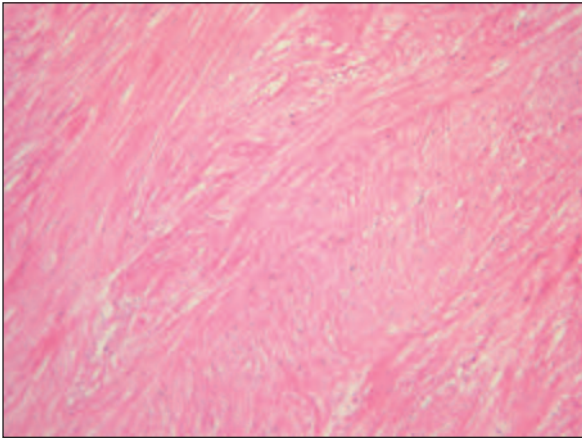


FIGURE 4: Pathological image of leiomyoma (H.E., x40).

DISCUSSION

95% of the primary bladder tumors are transitional epithelial cells. Benign bladder leiomyomas make up 0.43% of all bladder tumors. Location of the benign bladder leiomyomas are extravescical, intramural, and intravesical in 30%, 7%, and 63% of the time respectively.⁸ Bladder leiomyoma is three times more common in females, and is especially observed in premenopausal period, during the 3rd and 5th decades.⁹ Similar to growth of uterine myomas, hormones may be effective in the growth of these tumors as well. Bladder leiomyomas are rarely seen before the age of 20. Youngest case reported was 4-years old.⁶

Bladder leiomyomas are usually asymptomatic. However, based on their location, they may be symptomatic. 11% of the intravesical (intramural and extramural) leiomyomas may display hematuria and should be differentiated from malign tumors. Irritative symptoms are frequent for the intramural type, while complaints related to hydronephrosis or bladder outlet obstructions may be observed 49% of the time for extramural ones.¹⁰⁻¹⁴

Cystoscopy findings are important for the diagnosis of bladder leiomyomas. Mucosa looks completely normal, and submucosal mass indents towards bladder lumen. Its size and location on the bladder wall determines the feasibility of transurethral resection. USG, CT and MRI may be used for diagnosis. Final diagnosis is made histopathologically.^{10,15,16}

Bladder leiomyomas were not reported to transform into malign leiomyosarcomas. However, 0.27% of the growing uterine leiomyomas were shown to carry the risk of transforming into leiomyosarcomas. Thus, even though routine controls remain an option for asymptomatic patients with biopsy-proven leiomyomas, they should be followed up with cystoscopy and biopsy.¹⁷

Simple excision is usually sufficient for the surgical treatment of leiomyomas. Classical treatment options of these lesions are transurethral resection and open excision. Choice between the two options depends on the size and location of the mass. Small tumors can be resected transurethrally or transvaginally. Furthermore, there are reports of laparoscopic and robotic surgery in the literature.¹⁸ For large tumors, on the other hand, partial cystectomy should be evaluated as a surgical treatment option.⁵ In addition, some giant leiomyomas may require cystoprostatectomy and ileal conduit urinary diversion.¹⁹

Even though bladder leiomyoma does not carry malignancy potential, due to the possibility of sarcoma transformation in the uterine leiomyomas, these patients require close attention. Since endoscopic treatments may lead to insufficient resections for extramurally located masses, follow-up examination should be scheduled within a short time period and should be supported with complementary treatments.

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