

Oncology

A large bladder leiomyoma

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ABSTRACT

Introduction: Bladder leiomyoma is a rare, benign tumor of the bladder. We present the first large endovesical leiomyoma case report in Indonesia and the largest bladder leiomyoma without any post-operation symptoms. **Case presentation:** A 42-year-old female came with painless hematuria and irritative symptoms in the past year. Cystoscopy and open excision of the tumor showed well-encapsulated papillary solid mass at trigone (7 x 6.5 x 4 cm with a weight of 800 g). Postoperative histopathology confirmed the diagnosis of endovesical leiomyoma of the urinary bladder. **Conclusion:** Open excision of bladder leiomyoma had good outcomes on large endovesical mass patients.

Introduction

Most bladder tumors are originating from the urothelium and are malignant. Benign mesenchymal tumors deriving from the bladder are relatively rare, constituting 1–5% of all bladder neoplasms,¹ with leiomyoma (0,43%) being the most prevalent among these.² They may also accompany obstructive symptoms (49%), irritative symptoms (38%) or hematuria (11%). Cystoscopy, ultrasound, tomography or magnetic resonance imaging (MRI) can use in the diagnosis, but the definitive diagnosis made by histopathology. Treatment is determined primarily according to the size and anatomical location of the tumors. Small endovesical leiomyomas can remove by transurethral resection of the bladder tumor (TURBT), but open resection is more effective for large-sized intramural or extravescical leiomyomas.³ We report a case large endovesical leiomyoma of the bladder in a 42-year-old woman.

Case Presentation

A woman, 42 years old, came to the urology surgery department of Hasan Sadikin General Hospital with complaints of occasional painless hematuria and irritative symptoms in the past 1-year. Clinical examination and laboratory findings were within normal limit. Urinalysis showed 20–29 white blood cells per high power field, and >50 blood cells per high power field.

Kidney, ureters and bladder ultrasonography revealed isoechoic

inhomogenous lesion in the posteroinferior wall of the bladder, sized 6.38 cm x 4.47 cm x 5.39 cm with intralesion vascularization on doppler examination. Both kidneys within the normal limit. Abdominal computed tomography scan with contrast confirmed a soft tissue mass at the inferior aspect of the bladder's wall, with regular border, sized 6.6 cm x 4.6 cm x 4.9 cm which given enhancement on post contrast scanning (HU pre-contrast = 35, HU post-contrast = 62). (Fig. 1).

Due to difficulties to identify base and margin of the large mass and the benign nature of the tumor from cystoscopy, we decided to perform open transvesical excision of the bladder mass. Intraoperatively we found grayish-white well-encapsulated papillary solid mass at bladder trigone sized 7 x 6.5 x 4 cm and weighed 800 g (Fig. 2).

Histopathological examination using a light microscope with 100x and 200x magnification with hematoxylin staining revealed fibrocyte cells and myocytes that grow hyperplastic to solidify the structure such as the range of cell nucleus within normal limits (Fig. 3). Fibrocollagen connective tissue stroma merges with inflammatory lymphocyte cells accompanied by dilatation and blood vessel dams. According to the macroscopic and microscopic examination of the tumor, the mass diagnosed as leiomyoma of the bladder.

Patient was discharged at 3rd day post-operative without any complain.

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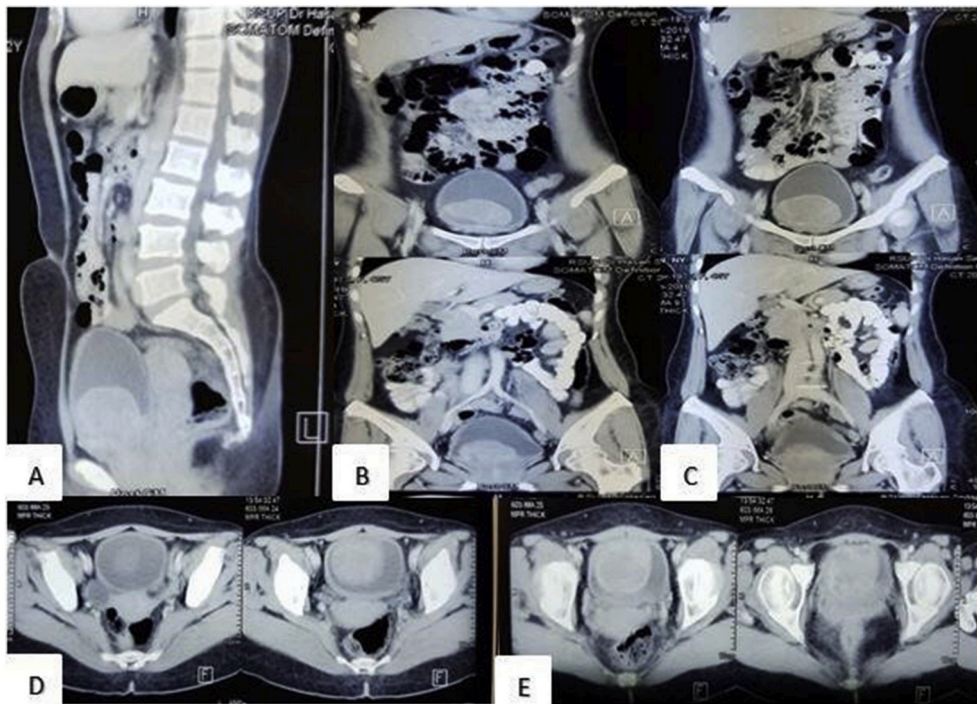


Fig. 1. Contrast – enhanced computed tomography (CT). (A) a soft tissue mass at bladder. (B), (C) regularly border, size 6.6 cm × 4.6 cm x 4.9 cm. (D), (E) mass at the inferior aspect of the bladder’s wall.

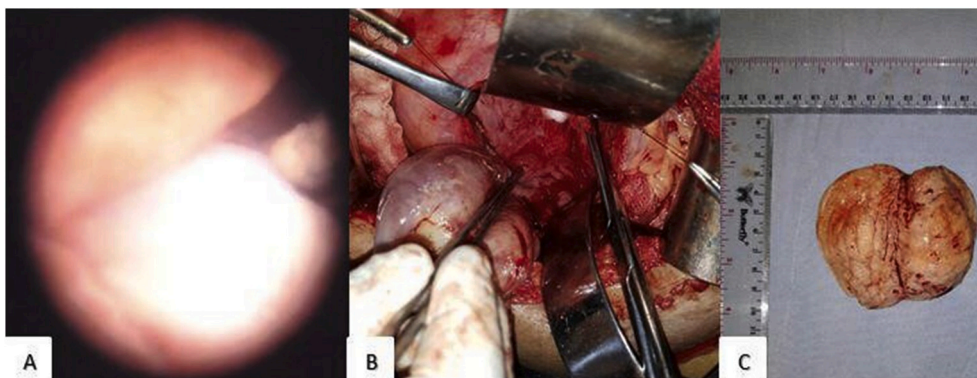


Fig. 2. Cystoscopy, Intraoperative, Macroscopic. (A) Large mass that filled the bladder. (B) Solid mass at trigonum. (C) Mass with volume and weight 7 x 6.5 × 4 cm and 800 g.

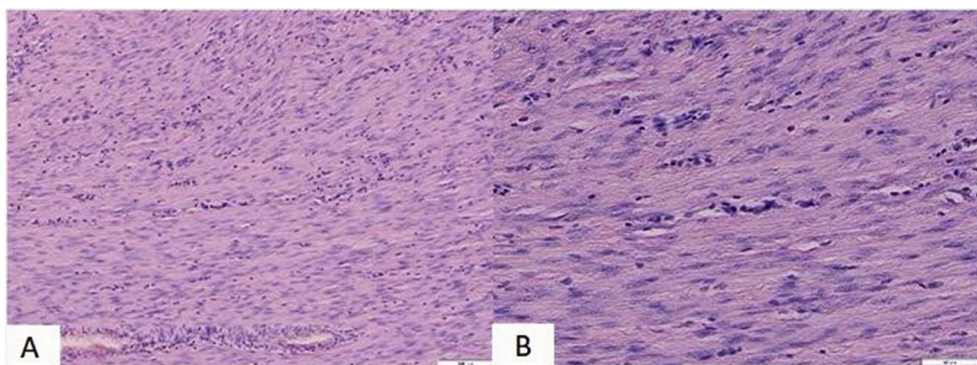


Fig. 3. Microscopic appearance of the tumor with (A) 100x magnification and (B) 200x magnification.

Discussion

The benign bladder tumors consist of leiomyomas, fibromyomas, rhabdomyomas, fibromas, osteoma, and myxoma. Leiomyoma of the urinary bladder is a very rare entity but represents the most common histological type of benign bladder tumor.⁴ Leiomyoma may occur at any site in the genitourinary tract. In the urinary bladder, it arises from submucosa, but can develop and grow in any layer. Female hormones might be involved in the development of leiomyoma.

Symptoms caused by leiomyoma of the urinary bladder depend on its size and location. If the patient is symptomatic, the most common symptoms include obstructive urinary symptoms (49%), followed by irritative symptoms (38%), flank pain (13%), and hematuria (11%). Larger tumors are more likely to cause irritative symptoms, while those arising near the bladder neck or ureteral openings tend to cause obstructive symptoms.

Imaging techniques including ultrasound, CT and MRI might help provide more positive evidence for diagnosis. Pelvic ultrasound can detect a hypoechoic or mildly hyperechoic homogeneous mass in the bladder and provide information on its relationship with the uterus and vagina. Pathologic assessment is the golden standard for diagnosis, based on the fact that bladder leiomyoma is composed of fascicles of muscle fibers separated by connective tissue.

Treatment and prognosis is determined primarily according to the size and anatomical location of the tumors. Surgical excision has an excellent prognosis and should always be offered. Moreover, transurethral resection is a safe and effective initial choice for patients with

relatively smaller tumors. Larger tumors and those with extravesical growth usually require open surgery with segmental resection or partial cystectomy.⁵

Conclusion

Bladder leiomyoma is a rare and benign disease. Surgical excision is necessary for both diagnostic confirmation and treatment. As most tumors are well encapsulated, complete enucleation by excision is an excellent fit for treatment large leiomyoma. However, larger studies and longer follow-up are needed to adequately evaluate these techniques.

Source of support

None.

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