

# Bladder Leiomyoma Presenting as Urinary Incontinence: A Case Report

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Bladder leiomyoma is a rare benign mesenchymal tumor. This tumor is usually asymptomatic unless urinary tract function is affected. The symptoms include obstructive or irritative voiding symptoms, flank pain, and hematuria. Incontinence is an infrequent presentation. The treatment of bladder leiomyoma depends on the size and location of the tumor and often with favorable outcome. No malignant transformation has been reported. We describe a middle-aged woman of urinary incontinence resulting from a pelvic mass. Initially, the tumor was misinterpreted as an adnexal cyst. But the cystoscopy and computed tomography revealed an intramural tumor of the urinary bladder. We successfully treated the patient by enucleation of the tumor and restored her voiding function. (JTUA 20:178-80, 2009)

*Key words:* Leiomyoma, Urinary bladder, Urinary incontinence.

## INTRODUCTION

Leiomyoma, a benign mesenchymal tumor, can be found at any site in the genitourinary tract. Leiomyoma of the bladder is rare and only accounts for less than 0.43% of all bladder tumors.<sup>1</sup> It is described as occurring in endovesical, extravesical, and intramural locations.<sup>2</sup> We report the case of a patient with a large bladder leiomyoma presenting as urinary urge incontinence.

## CASE REPORT

A 52-year-old postmenopausal women (gravida 3, para 3) presented with urinary urge incontinence of several months' duration. She reported a long history of urinary frequency and urgency. Recently, she reported urinary leakage when she had the desire to urinate about every 1 to 2 hours. She had difficulty emptying her bladder and always dribbled urine after voiding. She denied fever, documented urinary tract infection, or hematuria. External compression of the bladder by an ovarian cyst was suspected 2 years previously. Due to progression of the pelvic mass and aggravated voiding problems, surgery was performed at a local hospital to remove the pelvic mass. Surprisingly, the surgeon found a bladder

tumor during surgery, thus, open excisional biopsy was done. Pathology revealed leiomyoma.

A huge submucosal tumor occupying 3/4 of bladder capacity was noted via cystoscopy after the patient transferred to our institute. The tumor was protruding from the base of the bladder facing the outlet and had a normal mucosal surface (Fig. 1). Computed tomography (CT) also suggested a tumor arising from the blad-

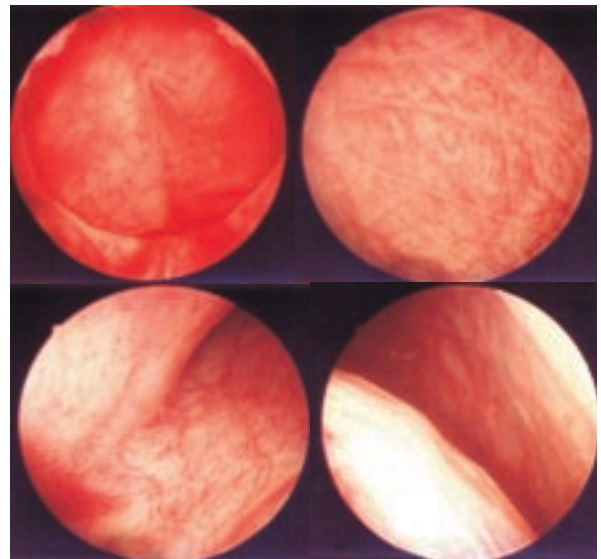


Fig. 1. Cystoscopy showing a large, broad-based submucosal tumor. Mucosa was intact but with marked trabeculation.

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der wall instead of the uterus or adnexa.(Fig. 2) The patient also had right obstructive uropathy. Her complete blood count and blood chemistry were within normal limits, but pyuria and bacteriuria were noted.

Therefore, we performed enucleation of the intramural bladder tumor along with minimal resection of the bladder wall with the consideration of preserving the patient's bladder capacity. The tumor measured  $10 \times 7 \times 5$  cm in size was attached mainly at the base of bladder without ureter orifice involvement (Fig. 3). A double-J catheter was placed in to her bladder due to mild hydronephrosis noted intraoperatively. The tumor proved to be bladder leiomyoma with minimal mitotic features. The patient restored a normal voiding function and denied any urinary incontinence, frequency and urgency during the 6-month followup.

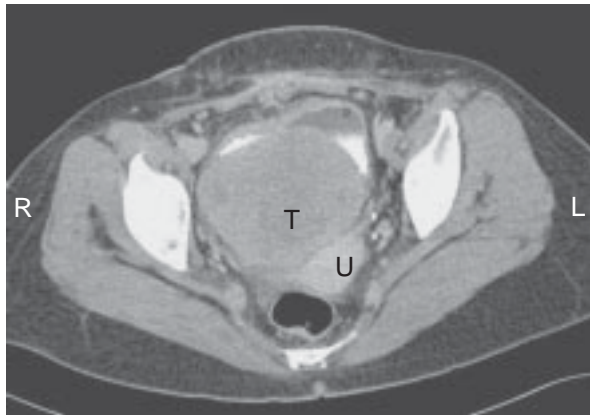


Fig. 2. Pelvic CT showing an intramural tumor (T) compromised the bladder capacity. There is fat plane between the tumor and uterus (U)



Fig. 3. A tin-white intramural tumor of urinary bladder.

## DISCUSSION

Most bladder tumors are urothelial in origin, while leiomyomas are classified as mesenchymal tumors. Leiomyoma of the bladder is reported to occur in a wide range of ages and has a predilection in females.<sup>3</sup> The presenting symptoms include obstructive or irritative voiding symptoms, flank pain, and hematuria. Approximately 20%~50% of patients were asymptomatic.<sup>3,4</sup> The lesion produces symptoms according to its location and size. The endovesical form of leiomyoma tends to cause urinary symptoms of irritation or obstruction and sometimes results in outlet obstruction. On the other hand, intramural or extravescical tumors can present with no symptoms and are detected incidentally on physical examination or cystoscopy.

In the view of diagnostic image modality, excretory urography may show irregular filling defects of the bladder, with or without ureter obstruction. Hydronephrosis may exist due to increased intravesical pressure caused by bladder outlet obstruction or direct compression of a ureter orifice.<sup>5</sup> Ultrasonography may be one of the best imaging approaches for the diagnosis of bladder leiomyoma.<sup>6</sup> It offers the most information about tumor consistency, site of origin, and relationship to adjacent organs. Partially cystic-appearing leiomyomas have been also been reported by ultrasonography.<sup>7</sup> Compared to CT, magnetic resonance imaging (MRI) better demonstrates contrast among urine, tumor, bladder muscle, and extravescical fat.<sup>8,9</sup>

Treatment of bladder leiomyomas depends on the size and location in the bladder wall and whether the patient has associated symptom or not.<sup>10</sup> The patient who does not have symptoms can be conservatively treated with periodic monitoring. Small endovesical tumors can be resected with transurethral resectoscope if symptomatic. Larger endovesical, intramural or extravescical tumors are managed with enucleation or partial cystectomy. The prognosis of this tumor is excellent and no malignant transformation is reported.<sup>3</sup>

In summery, we reported a case with a large bladder leiomyoma. Reduced reservoir and severe irritative bladder resulted in urge urinary incontinence. We successfully removed the tumor without compromising the bladder capacity. The patient had normal voiding function after treatment.

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