

## Leiomyoma of the urinary bladder - a case report and review of literature

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### ABSTRACT

Most bladder tumors are derived from the urothelium. Benign mesenchymal tumors are rare. Leiomyoma of the bladder is the most common benign neoplasm. A case of leiomyoma of the bladder presented here with confusing finding on imaging, ultra sound and I.V. urography.

**Keywords:** Leiomyoma, urinary bladder.

### ورم عضلي أملس من المثانة البولية - تسجيل حالة ومراجعة للبحوث

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#### الخلاصة

تستمد معظم أورام المثانة من الظهارة البولية. الأورام حميدة الوسيطة نادرة. الورم العضلي الأملس من المثانة هو الورم الحميد الأكثر شيوعاً. نقدم حالة ورم عضلي أملس من المثانة مع تقديم لنتيجة مربكة في التصوير بالموجات فوق الصوتية وتصوير الجهاز البولي عن طريق الوريد. **الكلمات المفتاحية:** الورم العضلي الأملس، المثانة البولية.

### INTRODUCTION

Leiomyoma of the bladder is an uncommon benign tumor<sup>1</sup> approximately 200 cases were described in the literature,<sup>2</sup> however, it is the most frequent benign neoplasm accounting for 0.43 % of bladder tumors, the etiology of this tumor remains unknown. It is proposed that leiomyomas may arise from chromosomal abnormalities.<sup>1,2</sup> Approximately 75% of the patients are young or middle aged.<sup>3</sup> It is described as occurring at endovesical, extravesical, and intramural locations.<sup>4</sup> The tumor is usually asymptomatic unless urinary tract function is affected in symptomatic cases common presenting features are usually obstructive in nature.<sup>5</sup> Behavior of leiomyoma of the bladder is by definition, completely benign.<sup>6</sup>

Treatment is delivered according to their size and anatomical location.<sup>7</sup>

**Objective:** A case of leiomyoma is presented because of confusing findings on imaging study (U/S and IVU).

### CASE REPORT

A 24 years old married lady presented with recurrent attacks of irritative lower urinary tract symptoms and painless total hematuria twice over one month period.

The physical examination was unremarkable. Urinalysis revealed 3-5 RBCs/HPF and pus cells 3-5/HPF, uric acid crystals+ epith. cells+. Hemoglobin was 11.7 gm/dL and serum creatinine was 0.9 mg/dL. Ultrasound study of the urinary tract revealed a 1.5x2.5 cm solid SOL arising from the left posterior wall of the urinary bladder and upper tracts were normal. **Figure 1.**

IVU showed normal kidneys and ureter. Cystogram revealed filling defect in the bladder just close to the left ureteric orifice (confusing with a ureterocele before taking classical Cobra head feature when dye reaches lower ureter). **Figure 2.**

Cystoscopy.. revealed 1.5 X 2.5 cm sessile mass in the posterior bladder wall just near the left

ureteric orifice and was covered by normal bladder mucosa. **Figure 3.**

Trans Urethral Resection of Bladder Tumour (TURBT) was done with complete resection of the mass **Figure 4.**

Histopathological examination revealed leiomyoma of urinary bladder.



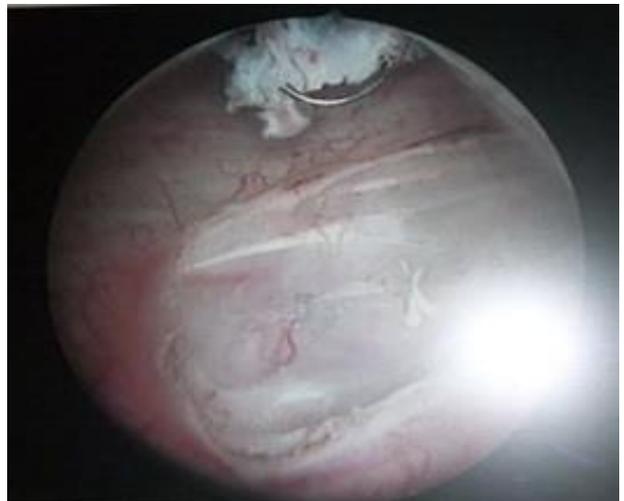
**Figure 1.** Ultra Sound..bladder mass.



**Figure 2.** IVU..filling defect in the bladder.



**Figure 3.** Cystoscopy..bladder mass.



**Figure 4.** TUR-BT.

## DISCUSSION

Most often, leiomyoma of the bladder remains asymptomatic unless its location obstructs the vesical outlet, causing urinary retention or urinary tract infection<sup>9</sup>. In this case irritative lower urinary tract symptoms were the presenting features without laboratory evidence of urinary tract infections. Clinical presentation differs from that of Chang and Chuang reported a 52-year-old postmenopausal woman presented with urinary urge incontinence of several months' duration<sup>5</sup>.

In Wong *et al* review, 62% of these patients were treated with open resection while 38% were treated with TURBT.<sup>8</sup> TURBT was the method of treatment in this case

Ching-Yi *et al* reported a 53-year-old female presented with fever and right-side flank pain for a period of 1 month. (IVU) revealed right side

hydronephrosis with a high-positioned bladder<sup>10</sup> fever and hydronephrosis were not present in the current case, this is because of absence of obstructive effect of the tumour on the ureteric orifice.

A 68-year-old female of Caucasian origin presented with dysuria, urinary frequency and moderate abdominal discomfort. Cervical smears had been normal. An X-ray of the abdomen showed multiple calcifications within an ill defined mass extending out of the pelvis and she experienced menopause at the age of 52 reported by G. Hudelist *et al*<sup>11</sup> this differs from our reported case in the presence of calcification while tumour reported her devoid calcification probably due to early presentation.

Fistula between degenerated uterine leiomyoma and the bladder in a 57-year-old postmenopausal woman presented complaining of urinary incontinence, reported by Dmitry Fridman *et al*<sup>12</sup> No such an association was found in the present case.

Sakellariou *et al* reported intramural leiomyoma in 28 years old female which was treated by partial cystectomy.<sup>13</sup>

A 45-year-old woman presented with nearly 3-year history of difficulty in passing urine in addition to frequency, urgency and intermittent incontinence of urine for the past 4 months, the left uretero-vesical junction was involved resulting in hydronephrosis reported by Sudhakar *et al*<sup>14</sup> it was treated by partial cystectomy, hysterectomy, and augmentation cystoplasty was performed with reimplantation of the left ureter due to large intraluminal mass (Leiomyoma) 10X8X7 cm. compared to the present case which was much smaller in size not associated with hydronephrosis and was treated with TUR-BT only.

## CONCLUSION

Leiomyoma should be kept in mind during differential diagnosis of filling defect in urinary bladder.

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