Original Research Paper

Volume : 5 | Issue : 7 | July 2016 • ISSN No 2277 - 8179 | IF : 3.508 | IC Value : 69.48

Urinary Bladder Leiomyoma : A Rare Case Report and Brief Review of Literature.

Medical Science

KEYWORDS : Urinary bladder, Leiomyoma, Mesenchymal tumour, Myofibroblastic tumour

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ABSTRACT

Benign mesenchymal tumours of the urinary bladder are rare which arises from the mesenchymal tissues and constituting one to five percent of all bladder neoplasm.

A 44 years old female presented with the complain of straining during voiding for two years. There was no history of heamaturia, burning micturition, pain abdomen, fever and weight loss. Her physical examination findings were normal. There was one to two pus cell /hpf(high power field) in urine analysis. On ultrasonography there was 33 x30 mm well defined low echoic nodular urinary bladder lesion. Contrast enhanced CT shows 32 X26 X29 mm well defined homogeneously enhancing polypoidal lesion arising from the base of the urinary bladder. On Cystocsopy approximately 30 x40 mm solitary polypoidal smooth wall mass was seen arising from the right anterior wall of bladder. We performed transurethral resection of the lesion. Post operative period was uneventful . Histopathological examination shows features suggestive of leiomyoma or myofibroblastic tumour and positivity with smooth muscle actin on immunohistochemistry.

Introduction:

Benign nonurothelial tumours of the urinary bladder are of mesenchymal origin and it constitutes approximately one to five percent of all bladder neoplasm1. Till now approximately about 250 cases of leiomyoma of the bladder have been reported 2. It occurs mainly in young and middle aged females with equal incidence in both male and females 3. Although some authors have reported to have female preponderance which is attributed to increased use of pelvic ultrasonography in female4. It occurs as intravesical, extravesical, and intramural mass . The etiology of leiomyoma is still unknown. It has been speculated that bladder leiomyomas might result of chromosomal alterations, hormonal disturbances, repeated cystitis and perivascular inflammation . Patients with bladder leiomyomas can be asymptomatic but the majority present with obstructive symptoms (49%), irritative symptoms (38%) or heamaturia 5.

We present here a case of benign bladder leiomyoma who presented with chronic obstructive voiding symptoms.

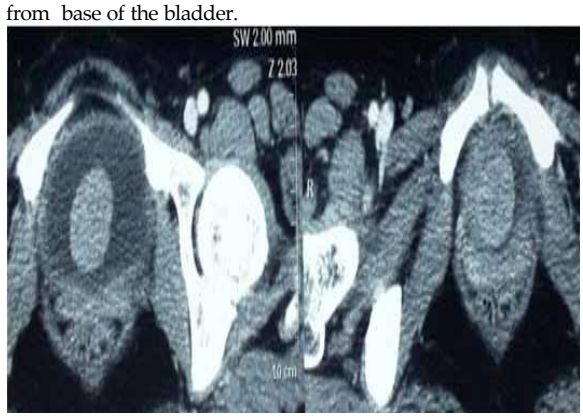
Case History:

A 27 years old female presented to the Department of Urology with the complaint of straining during voiding for two years. There was no history of heamaturia, burning micturition, pain abdomen, fever or weight loss. She had no past history of any other significant medical conditions like diabetes, malaria, tuberculosis or any surgical intervention in the past. Her physical examination findings were unremarkable with BMI 23.5. Urine analysis revealed pus cells one to two cell /hpf with no red blood cell and urine culture was sterile. Routine blood examination shows Hb% 11 gm/dl, total count 5700/cumm. Blood urea and serum creatinine were 23 gm/l and 0.82 mg/l.

Ultrasonography shows 33 x30 mm solitary well defined low echoic nodular urinary bladder lesion.

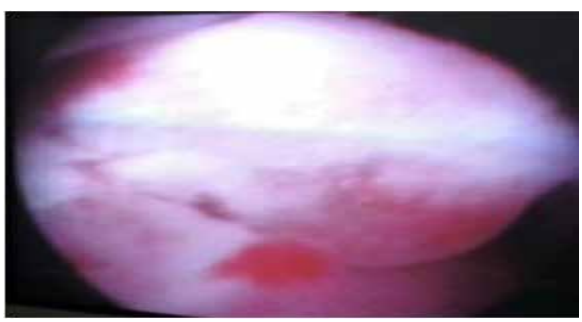


CECT abdomen and pelvis showing a 32 X26 X29 mm size well defined homogeneously enhancing mass lesion arising from base of the bladder.



On cystoscopy approximately 30 x40 mm solitary, polypoidal, smooth surface mass arising from the right - anterior side of bladder wall just proximal to neck was visualized.





We performed transurethral resection of the lesion. Post operative period was uneventful and patient was discharged on third post-operative day. Histopathological examination revealed features suggestive of leiomyoma or myofibroblastic tumour and positivity with smooth muscle actin on immunohistochemistry. Patient was followed at one month and at six month and was absolutely free of her voiding symptoms.

Discussion:

Leiomyoma although rare, is the most common benign tumour of the urinary bladder of mesenchymal origin 6. It can be classified according to location as intravesical, intramural and extravesical. Intravesical is the most common location with 63–86% of cases, while intramural leiomyomas are present in three to seven percent and extravesical in 11–30% 6,5. Ultrasonography should be the first investigation and will typically detect a smooth walled solid lesion with internal echoes and homogenous texture . Therefore, ultrasonography has been reported as the most sensitive and diagnostic test. Fernandez et al. 7 compared several diagnostic methods, including intravenous urography, a voiding cysto-urethrogram, transabdominal ultrasonography , computed tomography and transvaginal ultrasonography for the diagnosis of leiomyoma of bladder and transvaginal ultrasonography provided the most accurate information about the location of the mass and its characteristics . Ultrasonography is a better investigative tool than computed tomography 8. However, ultrasonography currently seems to have been replaced by three-dimensional CT and MRI for a better assessment of the characteristics of leiomyoma. CT generally shows a smooth-walled bladder filling defect with an attenuation coefficient of 25–50 Hounsfield units. MRI in T1-weighted images shows intermediate signal intensity against low-intensity signal of urine. On T2-weighted images it gives both high and low intensity at the same time as opposed to the intermediate-low intensity of the bladder muscle 8 ,9 which is considered to be the best initial diagnostic tool, as reported by Goluboff et al . Usually on cystoscopy the mass appears smooth with regular mucosa which may be pedunculated or sessile. In some reports the tumour was very large, sometimes up to 25 cm and was difficult to detect cystoscopically where as in another case report the tumour could be seen cystoscopically and cystoscopic resection was possible 10 ,11. Leiomyomas of the urinary bladder histopathologicaly shows round nodules, grey-white, with a spiral appearance of smooth muscle fibers gathered in small fascicles and separated by varying amounts of fibrous connective tissue and fewer than two mitotic figures per high-power field 6. As the intravesical tumors are more commonly symptomatic seeking medical attention transurethral resection of bladder tumour represents the main treatment in almost 90% of cases, unless a large intramural leiomyoma is encountered or an extravesical one 6,5, requiring partial cystectomy.

Conclusion: Leiomyoma of the urinary bladder is a rare tumour. Surgical resection is the treatment of choice. Benign nature and excellent prognosis of bladder leiomyoma leaves the patients asymptomatic after complete surgical excision, but regular follow up is mandatory.



Figure 5: During TURBT (Transurethral resection of bladder tomour) showing tumour and TUR (Transurethral resection) loop.

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