Intramural leiomyoma of the bladder

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Leiomyoma of the bladder is a rare benign mesenchymal tumor. This tumor can be detected on intravenous urography, ultrasonography and computed tomography. However, cystoscopy and biopsy are essential for the definitive diagnosis. The patient presented here was found to have a bladder mass which was explored without putting distinction of benign or malignant nature despite diagnostic techniques. [Turk J Cancer 2000;30(1):44-47]

Key words: Bladder, leiomyoma, diagnosis

Leiomyoma is the most common benign mesenchymal tumor of the bladder accounting for 35% of benign bladder tumors which comprise 1% - 5% of all bladder neoplasms. They may be asymptomatic and discovered incidentally by radiographic imaging or may cause irritative or obstructive symptoms, other than hematuria (1).

Case Report

A 62-year-old man presented with a one month history of urgency, urge incontinence and intermittent hematuria associated with dull, intermittent lower abdominal pain. Physical examination was normal despite a freely-movable solid mass over seminal vesicles that was more prominent on bimanual palpation under anaesthesia. Intravenous urography (IVU) showed a filling defect on superior and middle aspect of vesical contour. Abdominopelvic and transrectal ultrasound (US) demonstrated a solid mass of 7x6x5 cm abutting and pushing posterior bladder wall and anterior rectal wall. Computerized tomography (CT) and magnetic resonance imaging (MRI) confirmed the solid mass protruding into posterior bladder wall, abutting the rectum and prostate gland with nodular contour (Figure 1). The lesion showed mixed echopattern with prominent hypointense regions. Doppler US demonstrated increased vascularity especially in the anterior segment of the lesion. Upper urinary tracts were normal in diagnostic tests. On cystoscopy, a posteriorly located, intraluminally protruding solid mass, covered by normal bladder mucosa was...
seen. Transurethral and transrectal biopsies (twice) of the lesion demonstrated fibromuscular hyperplasia. With suspicion of malignancy, the patient has undergone pelvic exploration which revealed an intramural capsulated solid mass in the posterior wall of the bladder with no extension into prostate or rectum. The mass was easily dissected off the bladder wall by both extravesical and intravesical approach. It was well-capsulated; its margins were distinct and it was protruding more extravesically than intravesically.

Pathological examination revealed 8x6x4.5 cm of leiomyoma of the bladder (Figure 2). Due to its trigonal location to the left side, the left ureter was needed to be reimplanted after the removal of the mass. The patient had an uneventful recovery following the procedure.

Fig 1. Magnetic resonance imaging (T2-weighted) demonstrates a large mass arising from posterior bladder and appearing to be in relation with prostate and rectum
Fig 2. Photomicrograph of the leiomyoma characterised by spindle cells with occasional hyperchromatic nuclei and absence of mitotic figures

Discussion

Bladder leiomyomas show no predilection for gender or age. They can be extravesical, intramural or endovesical in location (2). The endovesical type is present in 63%, the intramural type in 7% and the extravesical type in 30% of the reported cases (1). Endovesical form is the most common and is apt to cause more symptoms. However, intramural form is rare and causes symptoms depending on its size and location. This form increases gradually in size and cause symptoms only when it reaches huge size, reported as maximum of 25 cm (3,4). In our case, the patient was asymptomatic until the mass reached 8 cm.

From a diagnostic standpoint, leiomyomas can be suspected on IVU, US and CT. However, MRI can differentiate mesenchymal tumors from the more common transitional cell tumors and even their malignant counterpart leiomyosarcoma (4). Thus, cystoscopy and biopsy of the lesion are necessary prior to exploration. However, in the presented case, both cystoscopic and transrectal biopsies were failed to put the exact diagnosis. Furthermore, MR images presented a malignant impression.

The cause of leiomyomas of urinary bladder is still unclear. However, it is certainly known that no recurrences or malignant degeneration of leiomyoma were reported. The treatment is determined primarily on its size and anatomic location, ranging from conservative follow-up, transurethral resection to open surgery which includes simple enucleation, partial cystectomy or cystoprostatectomy (5).

Although, leiomyoma of the bladder is an uncommon lesion, it should be considered for its successfully diagnosable and treatable nature in the differential diagnosis of any pelvic mass involving bladder wall.
References