

Giant Urethral Leiomyoma in A Young Female With Bladder Outflow Obstruction



Medical Science

KEYWORDS : Female Urethra, Leiomyoma, Transurethral resection.

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ABSTRACT

Leiomyoma is a rare benign tumor of mesenchymal origin with a very rare occurrence in urethra. Only a few of cases have been reported in the literature. We hereby report a case of urethral leiomyoma in a twenty years old female who presented with complains of straining while micturition and a periurethral mass. Mass was completely excised. Histopathological studies confirmed the urethral leiomyoma, and the surgery completely resolved the original symptoms. On follow up Patient remained asymptomatic with no evidence of recurrence. Although the average age of occurrence of such tumors in females is about 41 years, the present case involves a young girl of 20 years and most importantly, the mass was bigger than the mean size of 3.9 cm and it was located in the anterior wall of distal urethra, an uncommon site of presentation of leiomyoma in females.

Introduction

A leiomyoma is a smooth-muscle tumor of benign nature, which is very rarely premalignant. This tumor can take place in any organ. Most commonly affected organs are small intestine and uterus. In decreasing order the most common sites of involvement in urogenital system are the uterus, kidney, urinary bladder and urethra. (1)

Urethral leiomyomas are very rare and occur almost exclusively in females. On reviewing all the available literature on internet it is found that only around 100 cases have been reported till date. (1-14) The etiology and pathogenesis of these tumors are unclear although, hormonal influence has been suggested.(3,4)

Case Report

A twenty years old girl presented with straining while micturition and a periurethral mass. On Examination, she was found to have a large fleshy, pedunculated mass protruding from the anterior lip of urethral (Figure 1). She did not have any history of haematuria, fever or perineal pain. On urethroscopy, the mass was occupying the mid and distal urethra from 11 o'clock to 5 o'clock position, overlying mucosa was congested. Cystoscopy was normal. The urethra could be calibrated up to 12 Fr. The mass of 6.2 x 3.2 x 2.1 cm. size was completely excised. After excision of the tumor the urethra could be calibrated up to 22 Fr. Patient was catheterized for 72 hours and voided well on removal of catheter. Histopathological examination revealed an encapsulated tumor composed of spindle-shaped smooth muscle fibres arranged in bundles and fascicles. The cells had scanty amount of eosinophilic cytoplasm and blunt end nuclei. There was no evidence of granuloma or malignancy in resected specimen. A diagnosis of leiomyoma was made (Figure 2).

Discussion

In 1894, Buttner described the first urethral leiomyoma (5). But in May 1944 Ratner and Strasberg published a case report of leiomyoma of the female urethra and claimed as a first case report of this type. (6) This rare tumor most commonly occurs in third and fourth decades of life. Though the mean age of the appearance is around 41 years (7, 8) the present case involves a young girl of 20 years. A possible hormonal dependence has been suggested based on the observation that such tumors enlarge during pregnancy and shrink after delivery. (9) Though the main site of predilection in urethra is the posterior wall, in present case

it was located in the anterior wall the urethra. Additionally, the proximal segment is the most commonly affected site but the distal urethra was involved in present case which is an uncommon site of presentation of leiomyoma in females. (11) According to the data collected by Bartolozzi et al the mean diameter of such tumor is 3.9 cm. (14)

Urethral leiomyomas are usually asymptomatic when they are small. As they grow in size, patients may complain of urinary tract infection, dyspareunia, urinary retention or irritative lower urinary tract symptoms. Obstructive symptoms are rare because urethral leiomyomas are usually paraurethral rather than periurethral in position. (1)

Physical examination may reveal a mass that protrudes from the urethral meatus or a mass in the anterior vaginal wall (11). A differential diagnosis of urethral caruncle, urethrocele, a urethral diverticulum and malignancy should be considered. Clinical examination, urethroscopy, and radiological examination of the lower urinary tract help in distinguishing it from urethrocele, urethral diverticulum, and caruncle.

Ultrasonography and magnetic resonance imaging have been shown to provide useful preoperative information regarding the morphology and structure of the mass. However, a pathological examination is vital to exclude the possibility of a malignancy. Leiomyomas are dense, well-circumscribed nodules consisting of smooth muscle cells and extracellular matrix (e.g. collagen, fibronectin, proteoglycan). The cut surfaces are white to tan in colour. Microscopically, they consist of whorled, anastomosing fascicles of uniform, spindle-shaped, smooth muscle cells. On immunohistochemical examination tumor stains positive for vimentin and smooth muscle actin.

In all previously published cases, the urethral leiomyomas have been treated surgically. Surgical excision is the first choice of treatment. Urethral leiomyomas must also be differentiated from paraurethral leiomyomas, which may be removed without disrupting the urethral muscle or mucosa. Till date no malignant transformation has been reported. (2)

On reviewing the available literature it was found that till date only two cases of recurrence has been reported and both of them were treated by a repeat excision. (12,13)



Figure 1: Local examination - revealed a growth arising from urethral meatus.

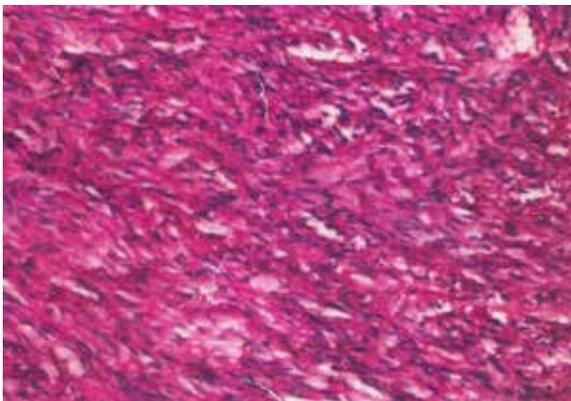


Figure 2: Histopathology of leiomyoma.

Conflict of Interests

Written consent was taken from the patient for publication of the paper. The authors also disclose that there is no conflict of interests.

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