

Anterior Wall Urethral Leiomyoma of the Distal Urethra – A Case Report

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ABSTRACT

Urethral leiomyomas are uncommon smooth muscle lesions usually affecting the proximal segment and the anterior wall of the urethra. These lesions are cured by simple excision. We present a 35-year-old lady with urethral leiomyoma of the

distal portion of the urethra arising from the anterior wall and presenting as mass per urethra. The patient was treated by surgical excision and there was no recurrence on follow up.

Key Words: Benign, Urethra, Distal, Anterior wall, Tumour

INTRODUCTION

Urethral leiomyomas are rare benign lesions arising from the smooth muscle of the urethra and are more frequent in females [1]. They present with symptoms of repeated lower urinary tract infection and voiding difficulties [2]. These lesions tend to occur more frequently in the posterior wall and in the proximal segment of the urethra [2, 3]. Very few cases of urethral leiomyomas have been reported in literature. We present a 35 year old woman with leiomyoma involving the anterior wall of the distal urethra manifesting as with mass per urethra of 7 years duration.

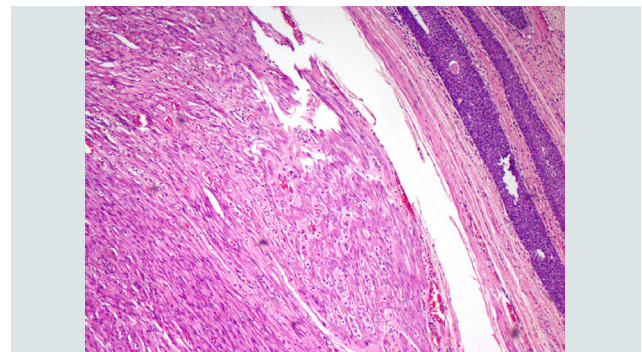
CASE REPORT

A 35 years old female presented with urinary stress incontinence and mass per urethra since 7 years. She gave a history of bleeding during sexual intercourse. There was no history of haematuria or dysuria. Urine examination was normal. Cystoscopy showed normal proximal urethra and vesical interior. There was no clinical or radiographical evidence of leiomyoma elsewhere in the patient. The mass was excised under general anaesthesia. Intra-operatively, a pedunculated growth, measuring 4x3cm was seen arising from the anterior wall of the distal urethra. The proximal urethra was normal. The excised mass was sent for histopathological examination. Gross examination revealed an encapsulated nodular mass measuring 4x3x1cm. Cut section showed grey white whorled areas [Table/Fig-1]. On microscopy, squamous epithelium with submucosal lymphoid follicles was seen overlying an encapsulated well circumscribed tumor composed of interlacing bundles and fascicles of spindle shaped smooth muscle cells

with areas of hyalinization [Table/Fig-2]. There was no mitotic figure or coagulative necrosis. A diagnosis of leiomyoma was rendered.



[Table/Fig-1]: Well circumscribed distal urethral tumour



[Table/Fig-2]: Photomicrograph showing a sub-mucosal encapsulated tumour composed of interlacing fascicles of smooth muscle cells (H&E, 20X)

DISCUSSION

Leiomyoma is a benign neoplasm of the soft tissue, commonly affecting genitourinary and gastrointestinal tract [4]. In the urinary tract, kidney and bladder are the most common sites of this tumour. However, urethral leiomyomas are very rare [2,3]. They usually arise from the posterior wall and proximal segment of the urethra with preponderance for women in the reproductive age group [3, 5]. The present case was different as the lesion involved the anterior wall the distal urethra.

Hormones such as estrogen and progesterone play a role in the development of leiomyoma as they enlarge during pregnancy and regress following delivery. The exact origin of this tumor is unknown and paraurethral leiomyomas have been documented in postmenopausal women as well [3,6,7].

The most common clinical manifestation in urethral leiomyoma is repeated urinary tract infection and irritative symptoms. Rarely, it presents with mass per vagina, dyspareunia, dysuria and hematuria [3, 6]. Perera et al., reported a case presenting as a labial mass with intra-abdominal extension [5]. Our case was a female patient in the reproductive age group presenting with stress incontinence and mass per vagina. There was no history of lower urinary tract infection.

Differential diagnosis of urethral leiomyoma includes benign lesions like urethral caruncle, diverticulum, urethrocele and malignancies such as leiomyosarcoma, lymphoma and plasmacytoma. Urethral leiomyomas should also be distinguished from paraurethral myomas as they can also present with similar complaints, however, these lesions can be excised without damaging urethral mucosa or muscle [5,8,9]. A thorough clinical examination, urethroscopy, radiological along with microscopic examination aids in the diagnosis of this lesion [1, 3]. Microscopically, these tumours are characterized by intersecting fascicles of well differentiated smooth muscle cells. Secondary changes like hyalinization, myxoid change, calcification and fatty change may be present in the stroma [4]. Absence of cellular pleomorphism, nuclear atypia, mitosis and necrosis rules out malignancy in the present case.

The treatment of choice for urethral leiomyoma is surgical excision per vagina. However, large tumours require trans-abdominal approach. Intraoperative damage to the urethral mucosa during tumour excision may lead to complications such as stress incontinence or urethral stenosis. Therefore, any mucosal damage should be repaired [3, 5].

Urethral leiomyomas have an excellent prognosis. These tumors usually do not recur following excision, nor do they undergo malignant transformation. However, a case with recurrence was reported in a patient with tumor size of more than 8 cm [3]. After five months of follow up, our patient is asymptomatic.

CONCLUSION

Urethral leiomyomas are rare benign neoplasm of deep soft tissue with very good prognosis. These tumors may cause long standing symptoms and can be cured completely by simple local excision. Hence, the surgeons should entertain leiomyoma as a differential diagnosis in a patient with urinary disturbance.

REFERENCES

- [1] Pahwa M, Saifee Y, Pahwa AR, Gupta M. Leiomyoma of the Female Urethra-A Rare Tumour: Case Report and Review of the Literature. *Case Rep Urol*. 2012; 280816. Epub 2012 Jul 15.
- [2] Bai SW, Jung HJ, Jeon MJ, Jung da J, Kim SK et al. Kim JW. Leiomyomas of the female urethra and bladder: a report of five cases and review of the literature. *Int Urogynecol J Pelvic Floor Dysfunct*. 2007 Aug;18(8):913-7. Epub 2007 Mar 1.
- [3] Gallego Vilari D, José Povo Martin I, Miralles Aguado J, Gimeno Argente V, Bosquet Sanz M et al. Gallego Gomez J. Leiomyoma of the female urethra, a case and review of the literature. *Actas Urol Esp*. 2010 Apr;34(4):396-7.
- [4] Enzinger FM, Weiss SW, Goldblum JR. *Soft Tissue Tumours*. 5th ed. USA: Mosby. 2008. Chapter 17, Benign tumours of smooth muscle; pp.517-43.
- [5] Perera ND, Senanayake L, Vithana VH, Fernando R. An unusual presentation of female urethral leiomyoma. *Ceylon Med J*. 2005 Mar;50(1):31-3.
- [6] Fry M, Wheeler JS Jr, Mata JA, Culkun DJ, St Martin E et al. Venable DD. Leiomyoma of the female urethra. *J Urol*. 1988 Sep;140(3):613-4.
- [7] Pavlica P, Bartolone A, Gaudio C, Barozzi L. Female paraurethral leiomyoma: ultrasonographic and magnetic resonance imaging findings. *Acta Radiol*. 2004 Nov;45(7):796-8.
- [8] Chong KM, Chuang J, Tsai YL, Hwang JL. A rapidly growing paraurethral myoma with profuse bleeding from a mucosal vessel: report of a case. *Gynecol Obstet Invest*. 2006;61(2):87-9. Epub 2005 Oct 18.
- [9] Deka PM, Rajeev TP. Leiomyoma of the female urethra. A case report. *Urol Int*. 2003;71(2):224-5.

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