

Urethral Leiomyoma: Rare Case Report

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Abstract: *Extrauterine leiomyomas are benign mesenchymal tumors that develop from smooth muscle cells, typically occurring in the uterus and only rarely found in the urethra. These tumors usually emerge during a woman's reproductive years. This report discusses the diagnosis and management of a leiomyoma located in an uncommon site. We present the clinical case of a female patient aged 37 years diagnosed with urethral leiomyoma with complaints of swelling in the genital region and irregular cycles. The patient underwent excision with further histologic examination revealing urethral leiomyoma. Diagnosis and management of this common growth situated at a rare location were reviewed and discussed.*

Keywords: leiomyoma, Benign urethral tumor, Smooth muscle tumor, Genital swelling, Female urethral neoplasm

1. Introduction

Leiomyoma is a benign neoplasm that originates from the smooth muscle cells, which are mostly located in the genitals, especially the uterus.^[1] Extrauterine leiomyomas are uncommon, particularly when they occur in soft tissues such as the female urethra. These tumors are benign mesenchymal growths. They are arising from the smooth muscles of the urethra.^[2] The presence of a urethral mass indeed presents a diagnostic challenge due to the wide range of possible causes, both benign and malignant, associated with gynaecological or urological origins. Differentiating between these various possibilities is crucial for determining the appropriate course of treatment.^[3] The diagnostic process typically involves a thorough medical history, physical examination, imaging studies, and sometimes biopsy or other laboratory tests.

2. Case Report

A 37-year-old multipara hypothyroid woman with complaints of swelling in the genital region and irregular cycles presented to the gynaecology and obstetrics clinic. The Patient reported that she noticed a swelling in the genital region and irregular menstrual cycles with frequency of once in 2 months for 4-5 days.

On examination, the vitals were stable and pelvic examination, 3 x 3 cm sized, cystic non tender soft to firm swelling anterior to urethral meatus more towards right side than to left, meatus not clearly seen but palpable (Figure 1) and grade 2 cystocele was noted. There were no evidences of any other findings. A transabdominal ultrasound was performed and revealed 3.4 x 1.9 cm well capsulated isoechoic lesion with vascularity appears to be arising from the posterior wall of urethra noted at perineal region probably fibroma. MRI pelvis was also done revealed to have a well-defined oval heterogeneously enhancing lesions with smooth margins noted below the pubic symphysis likely arising from posterior wall of distal urethra, likely to be urethral leiomyoma.



Figure 1: Photo of urethral mass

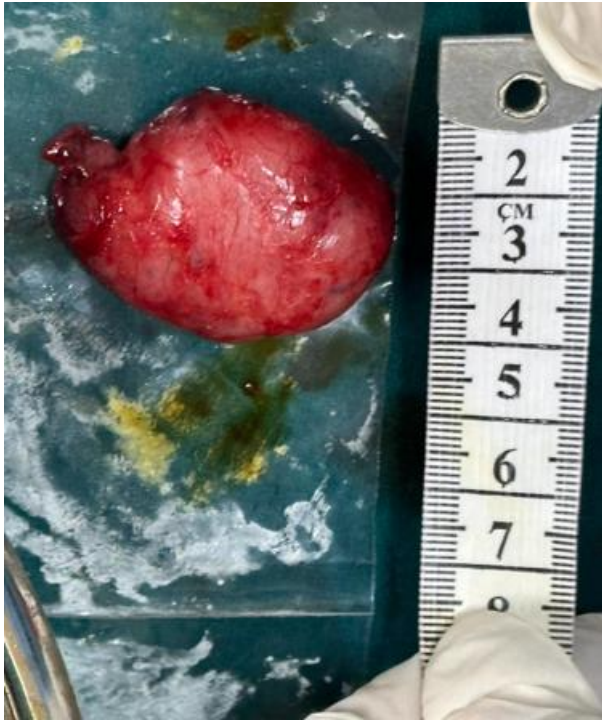


Figure 2: Macroscopic appearance after surgical removal.

Under Spinal anaesthesia, we performed a basic excision of the urethral mass with cystocele repair. No surgical complications occurred. Patient was discharged with pain killers, antacids, oral antibiotics.

Gross examination revealed grey white to grey brown globular tissue bit measuring 3.5 x 3 x 2cm. (Figure 2)

Histopathological examination suggestive of Benign spindle cell lesion – favours Leiomyoma. (Figure 3)

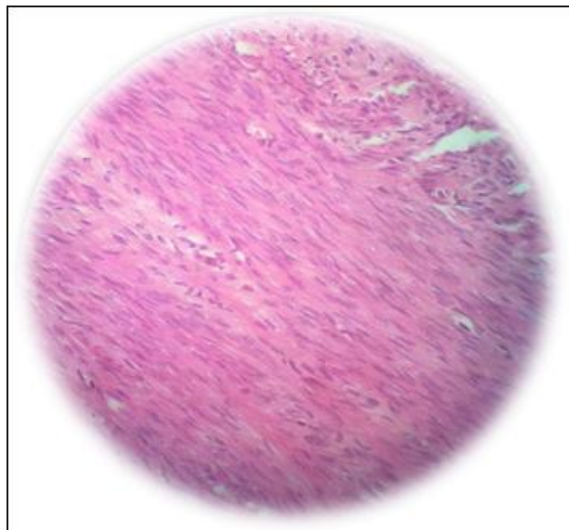


Figure 3: Microscopic examination of urethral leiomyoma- Benign spindle cells

3. Discussion

Urethral masses are uncommon. The benign of which include urethral caruncle, Gartner's duct cyst, papilloma, skene's duct cyst, haemangioma and leiomyoma.^[4]

Urethral leiomyoma found in the age group of 30-40 years of age group.^[5] According to some reports, tumor size may decrease with the onset of menopause or after childbirth, thus suggesting hormone-dependant nature of disease.^[6]

Leiomyomas are benign mesenchymal tumours, the origin of which occur from smooth muscles. The most common site of origin is uterus and the rarest being urethra which is most common in proximal urethra.^[7] Patients mostly presents with palpable mass^[8], haematuria^[9], acute urinary retention^[10], urinary tract infection^[11], or vaginal bleeding^[12]. This patient presented with a palpable mass at distal urethra , which is relatively unusual.

A thorough assessment includes detailed history and physical examination is most important in the evaluation of urethral mass.^[13] In selected cases, ultrasound, pelvic magnetic resonance imaging (MRI) scan might be helpful. Transabdominal ultrasound showed well capsulated isoechoic lesion with vascularity appears to be arising from the posterior wall of urethra noted at perineal region whereas MRI revealed a well-defined oval heterogeneously enhancing lesions with smooth margins noted below the pubic symphysis likely arising from posterior wall of distal urethra. Imaging modalities may help to determine the exact location of tumour, depth of tissue infiltration, tissue plane, presence of features suggestive of malignancy, and finally the planning of surgical excision.

The treatment of urethral leiomyoma is always surgical. The surgical approach depends on the tumour size and location. Local excision is usually recommended. Complete surgical excision is usually achieved.

4. Conclusion

Urethral leiomyoma is a rare benign tumor with a diagnostic difficulty. Complete surgical excision was recommended for HPE confirmation.

Consent:

Written informed consent was obtained from the patient for publication of this case report and any accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal.

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References

- [1] Popov SV, Orlov IN, Chernysheva DY, Grin' EA. Urethral leiomyoma: A rare neoplasm. *Urol Ann* 2021; 13: 194-7
- [2] M. Jim' enez Navarro, B. Ballesta Martínez, J. Rodríguez Talavera, Robayna A. Amador, Recurrence of urethral leiomyoma: a case report, *Urol. Case Rep.* 26 (2019), 100968.
- [3] Beng Kwang, N. *et al.* (2016) 'Urethral Leiomyoma: A rare clinical entity', *Case Reports in Surgery*, 2016, pp. 1-4. doi:10.1155/2016/6037104.
- [4] Barut, A. and Mohamud, D.O. (2022) 'Urethral leiomyoma: A rare cause of acute urinary retention',

- International Journal of Surgery Case Reports*, 98, p. 107546. doi:10.1016/j.ijscr.2022.107546.
- [5] Bai SW, Jung HJ, Jeon MJ, Jung DJ, Kim SK, 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; 18:913-7.
- [6] Strang A, Lisson SW, Petrou SP. Ureteral endometriosis and coexistent urethral leiomyoma in a postmenopausal woman. *Int Braz J Urol* 2004; 30: 496-8.
- [7] P. Fedelini, F. Chiancone, M. Fedelini, M. Fabiano, F. Persico, D. Di Lorenzo, et al., A very large leiomyoma of the urethra: a case report, *Urol. J.* 85 (2) (2017) 79–82.
- [8] R. Migliari, A. Buffardi, and L. Mosso, “Female paraurethral leiomyoma: treatment and long-term follow-up,” *International Urogynecology Journal*, vol.26, no.12, pp.1821–1825,2015.
- [9] E. Adams-Piper, S. Jacobs, and G. M. Ghoniem, “Paraurethral leiomyoma in a 20-year-old woman: a case report,” *Urology Case Reports*, vol.4, pp.14–16,2016.
- [10] M. Pahwa, Y. Saifee, A. R. Pahwa and M. Gupta, “Leiomyoma of the female urethra—a rare tumor: case report and review of the literature,” *Case Reports in Urology*, vol.2012, Article ID 280816, 2pages,2012.
- [11] A. Slaoui, A. Lasri, T. Karmouni, K. Elkhader, A. Koutani, and A. I. Attaya, “Leiomyoma: a case report of a rare benign tumor of the female urethra,” *Pan African Medical Journal*, vol.22, article 111, 2015.
- [12] M. C. Kian, J. Chuang, Y.-L. Tsai, and J.-L. Hwang, “A rapidly growing paraurethral myoma with profuse bleeding from a mucosal vessel: report of a case,” *Gynecologic and Obstetric Investigation*, vol.61, no.2, pp.87–89,2006.
- [13] M.M. de Lima Junior, C.B. Sampaio, J.G. Ticianeli, M.M. de Lima, F. Granja, Leiomyoma – a rare benign tumor of the female urethra: a case report, *J. Med. Case Rep.* 8 (1) (2014) 366.

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