CASE REPORT

Urethral Leiomyoma in Pregnancy: A Rare Case Report

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Abstract

Leiomyoma is a benign tumor of smooth muscle cells. It appears to occur mainly in genitourinary and gastrointestinal site but urethra is a rare site. Thorough imaging and cystourethroscopy were done to identify the correct anatomical location of the tumor. We present the case of urethral leiomyoma during pregnancy presented with tender vaginal mass causing obstructive urinary symptoms. Surgical excision through vaginal route was done without breaching the urethral mucosa and muscle. Histopathology and immunohistochemistry were performed to confirm the diagnosis. No postoperative complications were noted.

Keywords: Case report, Pregnancy, Singleton pregnancy, Suburethral leiomyoma.

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Introduction

Leiomyoma is a histologically benign tumor of smooth muscle which usually arises from the genitourinary tract and uterus being the most common location but they have been reported to arise from any anatomical site. Leiomyoma can be classified under three categories:

1. Cutaneous leiomyoma (leiomyoma cutis).
2. Angiomyoma (vascular leiomyoma).
3. Leiomyoma of deep soft tissues.

Leiomyoma in the urethra is a rare occurrence and they are classified under the leiomyoma of the deep tissue and arise from the smooth muscle cells of the urethra. The most common incidence is seen in the female of the reproductive age group. It has been reported that it is estrogen hormone-dependent by the fact that it enlarges during pregnancy and regresses after delivery. Presenting complaints may be recurrent urinary tract infection, acute urinary retention,[1] heaviness, voiding dysfunction, and dysuria. The most common site of urethral leiomyoma is the proximal segment of the urethra and its occurrence in the distal urethra which is present in our case. Mass protruding from the external urethral meatus is seen when it is located in the distal part of the urethra.

Case Description

A 29-year-old primigravida belonging to a very low socioeconomic class came to our antenatal clinic at 18 weeks of gestation with complaints of voiding difficulty since 2–3 months and pain lower abdomen. She did not seek medical advice presuming this to be due to pregnancy and then noticed something coming out of introitus and was unable to pass urine for 2 days for which she was catheterized and referred to our center. She gave a history that it occurred while she was straining for defecation 7 days back. The patient was diagnosed with tuberculosis 1 year back but was noncompliant in taking treatment then she lost her bilateral vision 4 months back for which she consulted at a hospital and was diagnosed to be a case of tuberculous meningitis with hydrocephalus and ventriculoperitoneal shunt insertion was done 3 months back. Thereafter, the patient was continuously taking antitubercular treatment and antiepileptics (Fig. 1).

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Patient consent statement: The author(s) have obtained written informed consent from the patient for publication of the case report details and related images.

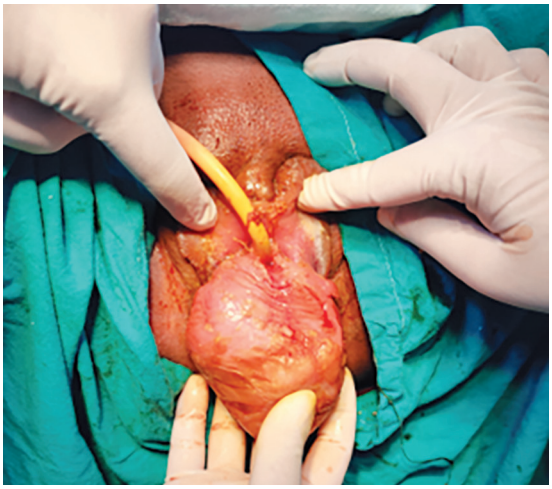

Fig. 1: The urethral mass during initial examination under anesthesia

On per abdomen examination, the uterus was 20 weeks in size and external ballottement was present. On perineal examination, there was a large mass of size 12 × 10 cm arising from the posterior wall of the urethra, it was congested and tender to touch. On per vaginal examination, cervical os was closed and at its original

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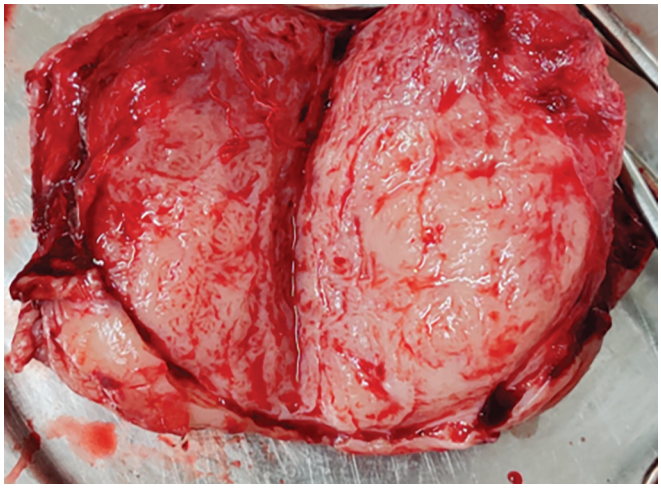

Fig. 2: Cut section of mass after excision

level with no evidence of cervical descent. Her ultrasonography findings were gravid uterus, single, cephalic, gestational age of 19 weeks, placenta posterior low lying, large vulval mass with heterogeneous echotexture, and significant vascularity on Doppler, however, origin could not be confirmed. So MRI was performed and it showed well defined mildly lobulated pedunculated mass lesion protruding between the urethra anteriorly and vagina posteriorly lying posterolateral to the urethra on the left side with an indistinct urethral wall near the interface of the lesion with the urethra, possibility of fibrous tumor arising from the left posterolateral wall of the urethra. To confirm the finding, diagnostic cystourethroscopy was done. Pedunculated mass was arising from the distal part of the urethra from 3 o'clock to 9 o'clock position. After taking neurosurgical clearance and confirming the position excision of the mass was done with ligation of the pedicle under general anesthesia. The tumor was removed en bloc after careful dissection, without disrupting the urethral muscle or mucosa and assuring both the maternal and fetal well-being. Self-retaining catheter was kept in situ for the next 10 days and removed on day 11 after which the patient has passed urine without any difficulty. Cut section showed a typical encapsulated mass with a whorl-like appearance. On histopathology, features were suggestive of benign mesenchymal lesions. Further immunohistochemistry was done which was diffusely positive for Desmin, SMA,[2] h-caldesmin, and was negative for S100 and CD34 suggestive of leiomyoma (Fig. 2).

Discussion

Leiomyoma is a common benign tumor, but if it arises from the urethra makes the diagnosis a little more challenging due to its anatomical position and resemblance of its presenting symptoms with other peri-urethral masses. Differential diagnosis includes urethral diverticulum, urethral caruncle, vaginal wall inclusion cyst, skene's gland abscess, ectopic ureterocele, carcinoma, sarcoma, etc. Due to its anatomical proximity to vital structures, such as the bladder and urethra, a thorough workup was necessary before excising the tumor. Imaging techniques, such as transvaginal ultrasonography and magnetic resonance imaging helped to evaluate tumor extent and relationship with the urethra. Diagnostic Cystourethroscopy was done to differentiate between urethral and paraurethral lesion.[3] As the mass was very large in size, so excision of mass via the vaginal route (recommended management)[4] was done in the second trimester after taking all necessary precautions, and adequate bladder care was done. Correct identification of the anatomical aspect of the mass helped in the excision of the mass thus alleviating the symptoms.

Summary

Distal urethral leiomyoma in pregnancy is a rare entity and presents with symptoms ranging from an asymptomatic lump to difficulty in passing urine. If the size of the mass is large it may cause obstructed labor and difficult vaginal delivery. Diagnostic cystourethroscopy is a must before excising the mass to assess its exact location and differentiate it from other pathologies. As malignant transformation is very rare in such cases histopathology and if indicated immunohistochemistry should always be performed to confirm the diagnosis.

Authors' Contributions

Dr Sapna was responsible for executing the treatment regime and writing the original manuscript. Dr Pushpa Nagar contributed by executing the surgery and further treatment regime. Dr Aditi Bansal was responsible for planning and executing the treatment regime and editing the original manuscript. All authors contributed to and approved the final version of the manuscript.

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