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*RESEARCH ARTICLE*

# CASE REPORT: VAGINAL LEIOMYOMA

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## *Abstract*

Leiomyoma are benign, monoclonal tumors of the smooth muscle cells of the myometrium and contain large aggregations of extracellular matrix composed of collagen, elastin, fibronectin, and proteoglycan. [1] They are the most common benign tumors in females and are most frequently seen in uterus. Vaginal leiomyomas are very rare and often confused with a variety of vaginal tumors. Since the first detected case back in 1733 by Denys de Leyden approximately 300 cases have been reported in the literature so far. [2] They may present with varied symptoms depending on site, size and vascularity including lower abdominal pain, low back pain, vaginal bleeding, dyspareunia and urinary symptoms like frequency, dysuria or other features of urinary obstruction. Here we discuss a case of a 35 year old female who presented to us with complains consistent with prolapse and was provisionally diagnosed as paraurethral vaginal mass which turned out to be vaginal fibroid.



## Introduction:-

Leiomyoma are benign, monoclonal tumors of the smooth muscle cells of the myometrium and contain large aggregations of extracellular matrix composed of collagen, elastin, fibronectin, and proteoglycan. [1] They are the most common benign tumors in females and are most frequently seen in uterus. Vaginal leiomyomas are very rare and often confused with a variety of vaginal tumors. Since the first detected case back in 1733 by Denys de Leyden approximately 300 cases have been reported in the literature so far. [2]They may present with varied symptoms depending on site, sizeand vascularity including lower abdominal pain, low back pain, vaginal bleeding, dyspareunia and urinary symptoms like frequency, dysuria or other features of urinary obstruction.

Here we discuss a case of a 35 year old female who presented to us with complains consistent with prolapse and was provisionally diagnosed as paraurethral vaginal mass which turned out to be vaginal fibroid.

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**Case Report:**

A 35 year old married female presented to our Gynaecology OPD with the chief complain of something coming out of vagina since last 2 years which was gradually increasing in size causing her difficulty in sitting and dyspareunia. It was not associated with any urinary or bowel complains. Her menstrual cycles were regular with normal flow lasting for 4- 5 days. She had 3 full term vaginal deliveries with last birth being 5 years back which was followed by interval laparoscopic tubal ligation. There was no other significant past and family history.

On local examination a mass of approximately size 7x5x6 cm was seen lying outside the vulva with its base arising from the lower 1/3rd of the anterior vaginal wall in the left para urethral region. The overlying vaginal mucosa was dry and a trophic ulcer of approximately 2x1cm was seen over the dependent part. The urethral opening was stretched and deviated to right side due to the mass. The vaginal mucosa below the swelling was healthy. (Fig-1). The mass had smooth surface and regular margins and rubbery consistency. On per speculum examination cervical erosions were seen along with mucoid discharge. Pap's smear was taken which was NILM. On per vaginal examination cervix was downwards and uterus was normal size mid position, firm, mobile, non tender and bilateral fornices were free.

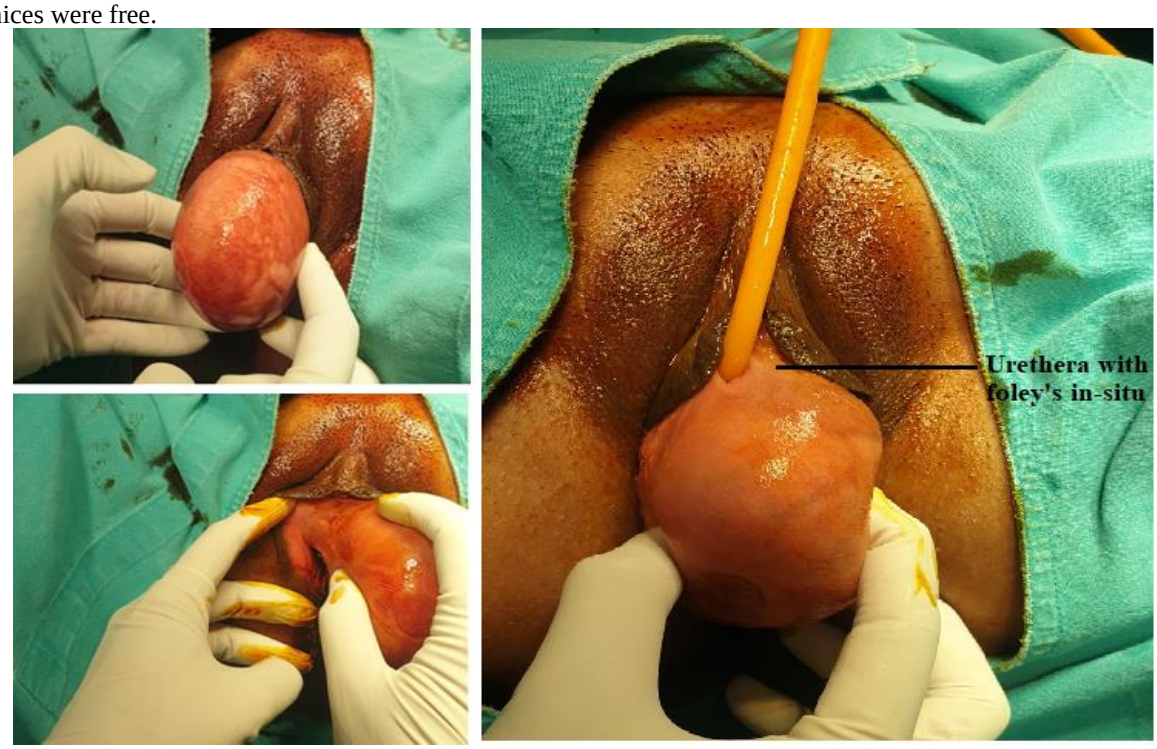


**Fig 1:-** Pre-operative findings.

On further evaluation a USG pelvis and cystogram were done to rule out urethral and bladder involvement (Fig: 2, 3). USG was suggestive of a large hypoechoic well defined lesion of approximately81x50mm size with a vascular pedicle which was running towards the anterior wall of vagina. The lesion also had mild internal vascularity with no cystic or calcific component within it. Uterus was retroverted of 84x50x95mm size with endometrial thickness of 8mm. Bilateral adnexa were normal and there was no significant finding in the whole abdomen USG. Micturition cystourethrogram was performed to rule out urethral and bladder diverticula. It showed external compression of urethra especially mid and distal urethra.

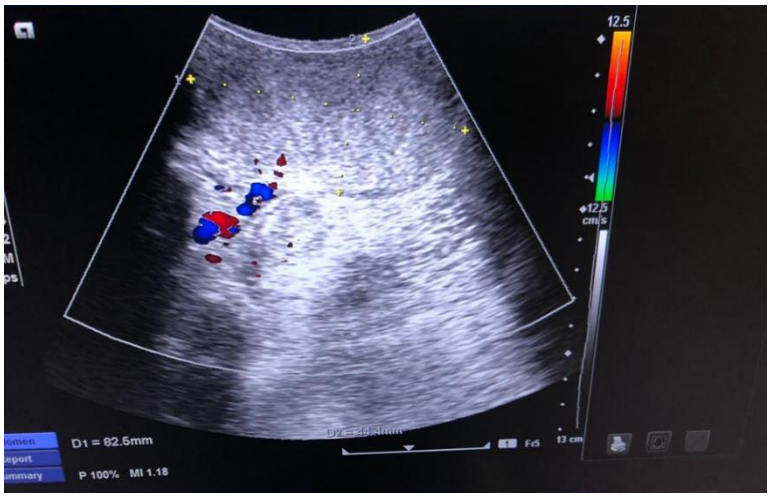


**Fig 2:-** USG pelvis.

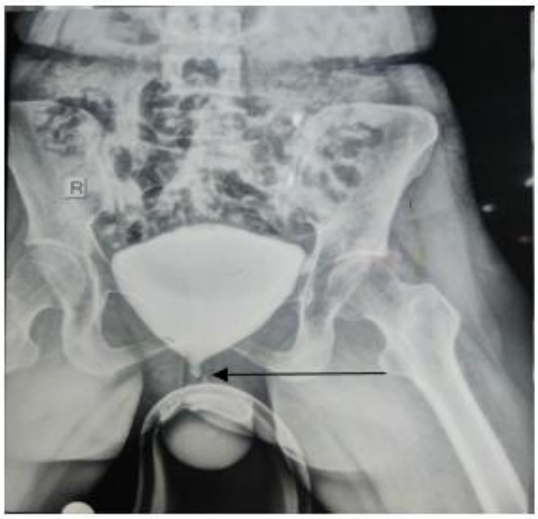


**Fig 3:-** Micturition cystourethrogram- Arrow shows external compression of urethra especially mid and distal urethra.

After treating her conservatively by vaginal packing with estrogen cream for few days she was posted for diagnostic cystoscopy for ruling out urethral and bladder involvement followed by excision of vaginal mass with due consent and proper explaining the risk of urethral and bladder repair if the need arises.

On cystoscopy urethra and bladder were normal. Bilateral ureteric orifices were seen with jets of urine. There was no diverticular opening or any other abnormality seen in bladder or urethra. (Fig: 4) Bladder catheterized with Foley catheter. Vertical incision was given over the most dependent part and the mass was separated from the vaginal mucosa by sharp dissection until the base of the mass was reached. The mass was enucleated. Haemostatic sutures taken at the base with constant checking of urethral position by Foley catheter. Redundant vaginal mucosa was excised and the margins were approximated with vicryl 1-0.

**Fig 4:-** Cystoscopy.

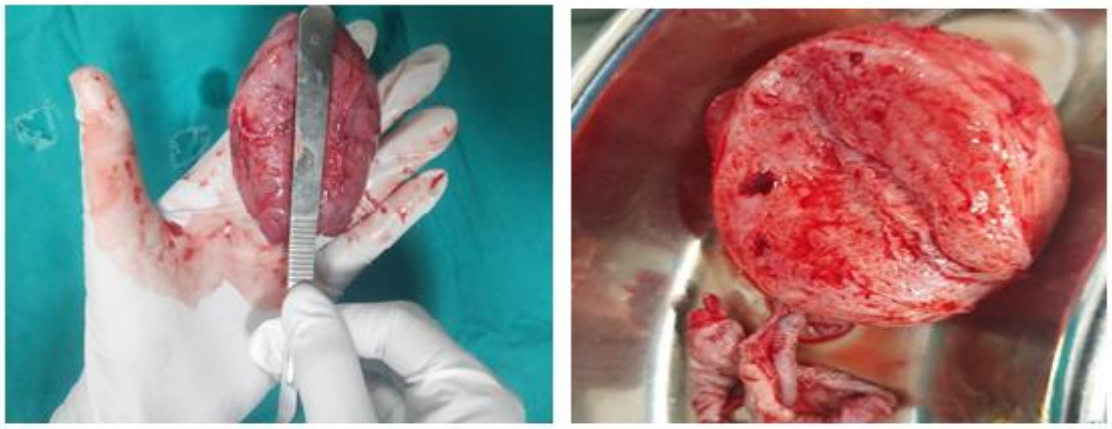

**Fig 5:-** Gross and Cut- section of the mass showing whorled appearance along with redundant vaginal mucosa.

The mass was rubbery in consistency. Cut section of the mass showed whorled appearance and histopathology confirmed it as leiomyoma (Fig-5, 6). Patient had an uneventful post-operative period. Her catheter was removed on day 3 and discharged on day 5.

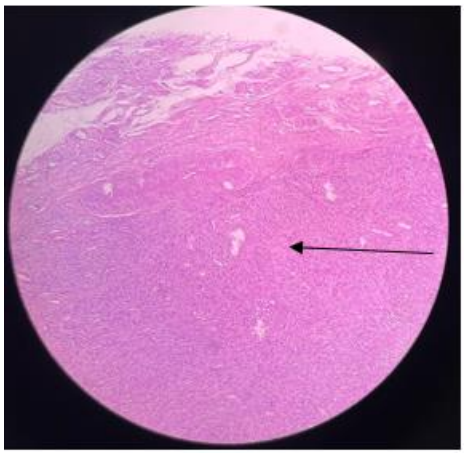

**Fig 6:-** Histopathology (40x)- Arrow showing well encapsulated spindle shaped cells arranged in fascicular pattern. No areas of necrosis and atypical mitosis seen. All features consistent with leiomyoma.

## Discussion:-

Leiomyomas are the most common tumour of the uterus and the female pelvis but occurrence in the vagina is extremely rare. The rectum, vaginal canal, uterine, and the Denonvillier fascia (as it contains smooth muscle cells and blood vessels[3]) can all be possible origins of a pelvic smooth muscle tumor. Smooth muscle tumors of the

vagina are usually located in the anterior wall [4] and rarely in the lateral wall [5] and fornix [6]. Usually, smooth muscle tumors of the vagina form well-delineated submucosal anterior vaginal wall masses or are vaginally pedunculated (Figure 1). Tavassoli and Norris reported the possibility that smooth muscle tumors of the vagina can also be multiple. [7]

Vaginal fibroids are seen in age group ranging from 35-50 years and are reported to be more common in Caucasian females. [8]They usually occur as a single well circumscribed masses. [8, 9, 10]It can present with urinary symptoms like hesitancy and increase frequency of urination due to urethral compression, dyspareunia, vaginal discharge, vaginal bleeding etc.It is a rare entity and various differentials of this areprolapse, cystocele, para-urethral gland (skene's gland) cyst, urethral diverticulum, Gartner's duct cyst, bartholin's cyst, vaginal cyst, cervical fibroid, epidermal inclusion cyst or even para-rectal mass.These tumors can be intramural or pedunculated and solid as well as cystic. Usually it is single, benign, and slow growing, but sarcomatous transformation has been reported. [11] Diagnosis can be made by history, examination and ultrasonography both trans-abdominal and trans-vaginal but is better delineated with magnetic resonance imaging. In MRI they appear as homogenous lesions with signal similar to myometrium.[12] MRI are not commonly done due to its cost and availability. In our case as it was located on the anterior vaginal wall, cystogram and diagnostic cystoscopy played an important role in ruling out urethral and bladder involvement.

Complete surgical removal of the mass along with its capsule is the preferred treatment via vaginal route but larger masses may require abdominal route. GnRH analogues prior to surgery may be helpful. Centres with availability of embolization can help reduce blood loss during the procedure. During surgical excision there is increased chances of injury to urethra and even bladder especially for the ones located on the anterior wall. These complications can be reduced by pre-operative investigations, Foley's catheterization prior to procedure and timely urologist opinion. Confirmation is made by histopathological evaluation as no other investigation provides sufficient sensitivity or specificity. During surgical removal of anterior vaginal wall fibroid, there is increased risk of trauma to the urethra and urinary bladder base. So, adequate precautions like Foley's catheterization and assistance from Urologist should be taken to prevent damage to the urethra and base of urinary bladder.

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