

Vaginal Leiomyoma, A Rare Variety in A Subfertile Women

Dr. Nishat Jahan¹, Dr. Shirin Jahan², Dr. Sumaiya Akter³, Dr. Priyanka Chowdhury⁴, Dr. Kazi Fahim Mahmud⁵, Dr. Shakeela Ishrat^{6*}, Prof. Jesmine Banu⁷

¹Resident, Department of Reproductive Endocrinology and Infertility, Bangabandhu Sheikh Mujib Medical University, Dhaka, Bangladesh

²Junior Consultant, Department of Reproductive Endocrinology and Infertility, Bangabandhu Sheikh Mujib Medical University, Dhaka, Bangladesh

³Department of Reproductive Endocrinology and Infertility, Bangabandhu Sheikh Mujib Medical University, Dhaka, Bangladesh

⁴Resident, Department of Reproductive Endocrinology and Infertility, Bangabandhu Sheikh Mujib Medical University, Dhaka, Bangladesh.

⁵Resident, Department of Cardiology, Bangabandhu Sheikh Mujib Medical University, Dhaka, Bangladesh

⁶Associate Professor, Department of Reproductive Endocrinology and Infertility, Bangabandhu Sheikh Mujib Medical University, Dhaka, Bangladesh

⁷Chairman, Department of Reproductive Endocrinology and Infertility, Bangabandhu Sheikh Mujib Medical University, Dhaka, Bangladesh

DOI: [10.36348/sijog.2021.v04i05.003](https://doi.org/10.36348/sijog.2021.v04i05.003)

Received: 26.03.2021 | Accepted: 05.05.2021 | Published: 11.05.2021

*Corresponding author: Dr. Shakeela Ishrat

Abstract

Leiomyoma is the most common benign tumor of uterus but rarely it may be seen in round ligament, uterosacral ligament, inguinal canal and vagina. Vaginal fibroid more commonly arises from anterior vaginal wall and present with varied clinical features. Here we report a case of primary subfertility with vaginal leiomyoma, arising from anterior wall of vagina. **Case Description:** A 31-year-old nulliparous lady attended the Reproductive Endocrinology and Infertility Clinic with the complaints of infertility and something coming down per vagina for 6 years. Vaginal examination revealed a mass originating from anterior and lateral vaginal wall, pulling the cervix up. On bimanual examination, a 3x3 cm mass is felt through the anterior and lateral vaginal wall but upper limit could not be delineated. Transvaginal sonography showed a mixed echogenic, predominantly hypoechoic mass in lower part of cervix and anterior vaginal wall. Myomectomy was done through vaginal route along with laparoscopy with chromopertubation test and hysteroscopy. Histopathology report revealed leiomyoma. She was counseled for IVF due to bilateral tubal block on dye test.

Key words: Leiomyoma, Vaginal wall, Uterus, Infertility.

Copyright © 2021 The Author(s): This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CC BY-NC 4.0) which permits unrestricted use, distribution, and reproduction in any medium for non-commercial use provided the original author and source are credited.

INTRODUCTION

Uterine leiomyoma is a common benign disease in gynecologic clinics, incidence being 20-30% in women of reproductive age. Vaginal leiomyoma is a rare variety with limited number of case reports, around 330 till now. Vaginal leiomyomas are more common in Caucasian women and uterine leiomyomas are more prevalent in African women[1]. Depending on the size, location and vascularity, vaginal fibroids have varied clinical presentation including dyspareunia, pain, dysuria or feeling of something coming down per vagina [2].

CASE PRESENTATION

A 31-year-old school teacher came to the outpatient department of Reproductive Endocrinology and Infertility of Bangabandhu Sheikh Mujib Medical University with the complaints of something coming down per vagina for 6 years. She was a nulliparous woman, wanting to conceive for last 2 years. She did not complain of any dyspareunia, dysuria, frequency or retention of urine.

Regarding menstrual history, she had menarche at 12 years. Since then she had regular menstrual cycle of 28-30 days with average flow and

duration of 3-4 days. There was no dysmenorrhea. The couple had normal coital frequency without any dyspareunia or post coital bleeding.

She was diagnosed to have diabetes mellitus for last two years and is now on tab metformin. Her husband, who is a businessman by profession, and a habitual smoker, is also diabetic.

On examination, the woman's BMI was 26.2kg/m², with normal thyroid glands and breasts. The

lymph nodes were not palpable. She was not anaemic and her vitals were normal. Abdomen was soft, nontender and no mass was palpable. On vaginal examination, vulva, perineum and introitus appeared normal. Per speculum examination revealed a mass arising from anterior and lateral vaginal wall, cervix was pulled up with the mass. On bimanual examination, uterus was normal in size, anteverted, fornices free, a firm mass about 3x3 cm felt in the anterior vaginal wall the upper limit of which could not be delineated.

Table-1: Lab investigations

Parameters	Value
Hb%	13.5gm/dl
ESR	11mm Hg
Fasting blood sugar	7 mmol/L
Blood sugar 2 hours after 75 gm glucose	6.3 m mol/L
FSH	5.7 mIU/ml
LH	4.3 mIU/ml
TSH	2.3 μ IU/ml
Prolactin	13 ng/ml
Semen Analysis	Normozoospermia

Imaging:

Ultrasonography, transabdominal and transvaginal, reported an organized, mixed echogenic, predominantly hypoechoic mass in the lower part of

cervix and anterior vaginal wall (Fig 1). Hysterosalpingogram revealed normal uterine cavity with bilateral tubal block.

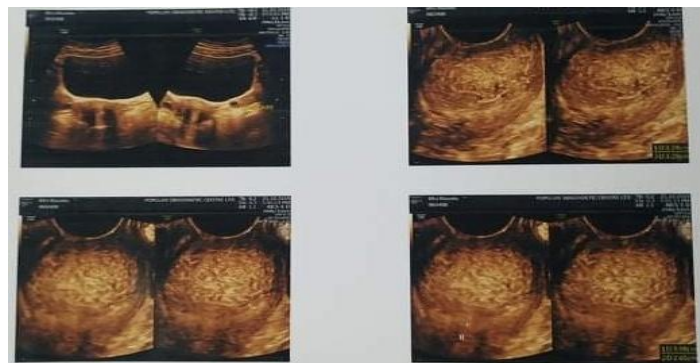


Fig-1: TVS showing vaginal mixed echogenic mass

Surgery:

The patient was examined under anesthesia after evacuation of bladder. There was a firm mass about 3cmx3cm in size in the upper part of anterior vaginal wall near the cervix. Hysteroscopy was done that revealed a normal uterine cavity and both ostia were visible. Endometrial biopsy was taken.

The mass was accessible through vagina. A linear incision was given over the mass. The mass was separated from capsule and bladder by sharp dissection. Then the mass was removed. Redundant portion of the

vaginal wall was excised and then approximated with haemostatic sutures. Vaginal pack was kept for 24 hours. (Fig 2a, 2b, 2c).Gross examination of the mass showed a solid 3cm x 3cm fibroid, whorled appearance on cut section. (Fig 3).Histopathological examination revealed leiomyoma.

Diagnostic laparoscopy with chromopertubation was done. Uterus, ovaries and fallopian tubes appear normal. Dye test was negative on both sides even after several syringing.

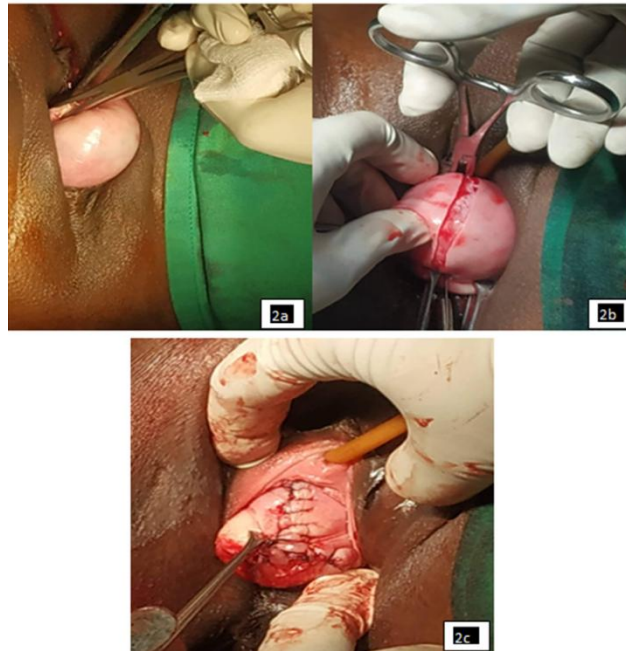


Fig-2: Surgical excision of vaginal leiomyoma



Fig- 3: Cut section of vaginal leiomyoma

DISCUSSION

Vaginal leiomyomas are rare benign neoplasms that arise from smooth muscle elements mainly but contain varying amount of fibrous tissue [3]. Most of the fibroids are found in uterus but it may develop in other sites of female genital tract e.g. cervix, round ligament, uterosacral ligament, ovary & inguinal canal [4].

Vaginal leiomyoma is an uncommon variety first described in 1733 by Denys de Leyden [5]. They are commonly seen in women age group between 35 to 50 years and are more prevalent in Caucasian women [6]. They present as a single, well- circumscribed mass arising from the midline anterior wall, less commonly from posterior and lateral wall [7, 8]. These tumors can be intramural or pedunculated, solid as well as cystic

[9]. Most vaginal leiomyomas are small and slow growing. These lesions are usually estrogen dependent and can grow rapidly during pregnancy or regress after menopause [10].

Vaginal leiomyoma is usually benign but may have sarcomatous transformation. They may be asymptomatic but depending on the site and size, they can produce varying symptoms like lower abdominal pain, low back pain, vaginal bleeding, dyspareunia, frequency of micturition, dysuria, something coming down from vagina or other features of urinary obstruction [4,9]. A posterior vaginal wall fibroid may be associated with difficulty in bowel evacuation or sexual function [3]. Vaginal leiomyoma is often misdiagnosed as cystocele, para-urethral cyst, urethral diverticulum, Gartner's duct cyst, Bartholin's cyst, cervical fibroid and epidermal inclusion cyst [4,11].

Ultrasound and MRI may aid to delineate the extent, characteristics & involvement of the mass before surgery. Surgical excision or enucleation through vaginal route is preferable [4]. But if the vaginal leiomyoma is large and extending to pelvis, abdomino-perineal approach may be required [12]. During surgical removal of anterior vaginal wall fibroid, there is a risk of injury to urethra and bladder base. So, proper precautions like urinary catheterization with the Foley's catheter and when needed, surgical assistance from urologist should be taken. After surgery of myoma, histopathological examination should be done for confirmation of diagnosis and exclusion of malignancy.

Bukhari *et al.* reported one case of vaginal fibroid which was detected incidentally during total abdominal hysterectomy with bilateral salpingo-oophorectomy [3]. Another case report was made by

Wu, Y. et al. in which a vaginal leiomyoma was diagnosed in a 44 years old hysterectomized woman misdiagnosed pre-operatively as paraurethral cyst [13]. Yogesh, K et al. reported the case of vaginal leiomyoma in a 42-year-old hysterctomized women who presented with large vaginal and suprapubic mass with symptoms of difficulty in micturition and dyspareunia [14]. Hashimoto, S. et al. reported a very rare interesting case where leiomyoma occurred concomitantly in three different female genital sites; uterus, ovary and vagina [15].

Our patient was found to have vaginal leiomyoma during infertility investigations. After enucleation of myoma, she was counseled to do in vitro fertilization (IVF) and regular follow-up as there is chance of recurrence. She was followed up for one year and remained asymptomatic.

CONCLUSION

Vaginal leiomyoma is a rare entity. It is commonly confused with cystocele, para-urethral cyst or Gartner's duct cyst. Histopathology is the gold standard test for confirmation of diagnosis. Excision or enucleation of myoma through vaginal approach is the treatment of choice. Though rare, the diagnosis should be kept in mind while examining a vaginal swelling.

CONFLICT OF INTEREST

The authors declare they have no conflict of interest.

ACKNOWLEDGEMENT

The authors acknowledge the patient for consenting to reveal the case details and photographs for publication.

REFERENCES

1. Young, S. B., Rose, P. G., &Reuter, K. L. (1991) Vaginal fibromyomata: Two cases with preoperative assessment, resection and reconstruction. *Obstet Gynecol*, 78, 972-4.
2. Costantini, E., Cochetti, G.,&Porena, M. (2008) Vaginal para-urethral myxoid leiomyoma: case report and review of the literature. *Int Urogynecol J Pelvic Floor Dysfunct*, 19(8), 1183-1185.
3. Bukhari, A. S. &Bukhari, S.(2005) Vaginal fibroid- a case report. *J Obstet Gynaecol*, 25(1), 84-85. DOI: 10.1080/01443610400025580
4. Kant, R. H., Mir, N., Sharma, P., & Najeeb, R.(2015) Vaginal Wall Leiomyoma: A Rare Entity – Case Report, *IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)*, 14, (5), 60-61
5. Young, S. B., Rose, P. G., &Reuter, K. L. (1991) Vaginal fibromyomata: Two cases with preoperative assessment, resection and reconstruction. *Obstet Gynecol*, 78, 972-4.
6. Bennett, H. G. Jr., &Erlich, M. M. (1941) Myoma of the vagina. *Am J Obstet Gynecol*, 42: 314-20.
7. Shimada, K., Ohashi, I., Shibuya, H., Tanabe, F., &Akashi,T. (2002) MR imaging of an atypical vaginal leiomyoma. *Am J Roentg*, 178, 752-4.
8. Elsayes, K. M., Narra, V. R., Dillman, J. R., Velcheti, V., Hameed, O.,&Tongdee, R.(2007) Vaginal Masses: Magnetic Resonance Imaging Features with Pathologic Correlation. *Acta Radiol*, 8, 921-33.
9. Cobanoğlu, O., Gürkan, Z. C., Ergun, Y., &Kutluay, L. (1996) Leiomyosarcoma of the vagina. *Eur J Obstet Gynecol Reprod Biol*, 70, 205-7.
10. Costantini, E., Cochetti, G., &Porena, M. (2008) Vaginal para-urethral myxoid leiomyoma: case report and review of the literature. *Int Urogynecol J Pelvic Floor Dysfunct*, 19(8), 1183-1185.
11. Blaivas., J. G., Flisser, A. J., Bleustein, C. B., &Panagopoulos, G. (2004) Periurethral masses: etiologyand diagnosis in a large series of women. *Obstet Gynecol*, 103(5 Pt 1), 842-847.
12. Chakrabarti, I., De, A.,& Pati, S. (2011) Vaginal leiomyoma. *J Midlife Health*, 2(1), 42-43.
13. Wu, Y., Wang, W., Sheng, X., Kong, L.,& Qi, J. (2015) A Misdiagnosed Vaginal Leiomyoma: Case Report, *Urology Case Reports*, 3, 82-83.
14. Yogesh, K., Amita, M., &Rajendra, K. (2005) Vaginal leiomyoma developing after hysterectomy: A case report and literature review. *Aust N Z J Obstet Gynaecol*, 45(1), 96-97.
15. Hashimoto, S., Taga, M., Endoh, M., Ikeda, M., Shirasu, K., Uemura, T., Hara, M.,&Minaguchi, H. (1997) Leiomyoma of the uterus, ovary and vaginal wall. *Gynecol Obstet*, 44, 275-277.