



## Rare Vaginal Leiomyoma with Rare Microscopic Findings

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### Case Report

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### Abstract

Leiomyoma is the most common benign tumor of uterus and rarely may be seen in other parts female reproductive system like the round ligament, utero-sacral ligament, inguinal canal and vagina. Only a few examples of fibroid with vaginal origin have been documented in the literature. With only roughly 300 recorded occurrences, vaginal leiomyomas are still a rare condition. These vaginal fibroids arise most commonly from the anterior vaginal wall causing varied clinical presentations. We report a case of vaginal lateral wall fibroid of 8 cm size and extending into paraurethral space. The vaginal mass was surgically excised and histopathology confirmed the diagnosis of leiomyoma with cartilaginous degeneration.

**Keywords:** Vaginal Fibroid; Hyalinization; Cartilaginous Metaplasia and Neoplasm

### Introduction

Mucus polyps, papillomas, hemangiomas, and leiomyomas are uncommon vaginal tumors. Since Denys de Leyden first identified a case in 1733, there have only been roughly 300 known cases of vaginal leiomyomas, making them a rare entity. The anterior vaginal wall is where these tumors most frequently develop, and they cause a variety of clinical manifestations. They might or might not be connected to leiomyomas in other parts of the body. We present the case of a 29-year-old multipara who was asymptomatic but brought an ultrasonographic report showing several uterine fibroids to the outpatient clinic.

### Case Report

A 29 year-old para 2 live 2 woman with the history of previous two cesarean section history was referred to our outpatient department. She had a complaint of heavy

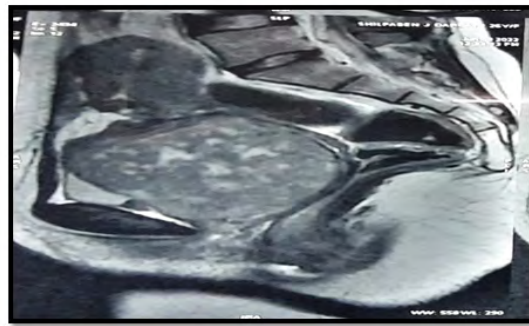
irregular periods and dysmenorrhea for 36 months. She had a history of a mass which is separate from uterus and cervix in which lower border was inaccessible during her 2<sup>nd</sup> cesarean section .no other significant history otherwise. On examination, she was a medically fit and healthy woman. Abdominal examination was unremarkable and on speculum examination, a solitary mass of 6\*6cms noted in the anterior right lateral vaginal wall, vaginal mucosa is stretched over the mass and no other changes noted. Cervix was not visualized on per speculum examination. Pelvic examination revealed normal sized uterus and solitary hard fixed mass of 8x 8 cms with regular margin and smooth surface arising from right lateral vaginal wall anteriorly. Diagnosis of vaginal fibroid made. Cervix was stretched behind the mass. An ultrasound scan showed a heterogenous mass of 8x 8 cms with poor vascularity and speckled calcification with normal looking uterus ovaries and endometrium. We proceeded further with MRI of pelvis, which showed to be a cervical fibroid. In suspicion with malignancy, punch biopsy of the mass was

taken which resulted to be a benign mass. Her hemoglobin was 9.2 gram%. Cervical smears had always been normal. After discussion, the only option was surgery through combined vaginal and abdominal approach. At vaginal approach, catheterization done and incision was made on most dependent part away from urethra, fibrous capsule was opened and blunt dissection done and fibroid enucleated. A vaginal fibroid was confirmed. This had the macroscopic appearance and consistency of a degenerated fibroid and was later confirmed by histopathology to be a benign leiomyoma with cartilaginous changes with metaplasia and no signs of atypia. The patient made an uneventful recovery.

## Discussion

Neoplasms of the vagina are infrequent and most are benign [1,2]. A vaginal leiomyoma typically develops in the smooth muscle layer of the vaginal wall. It can arise from the smooth muscle of the rectum, bladder or urethra [3,4]. Other reported sites of origin include smooth muscle of the vessel walls, mesothelial and embryonic rests. Clinical presentation of these tumors is varied depending upon the site. A posterior

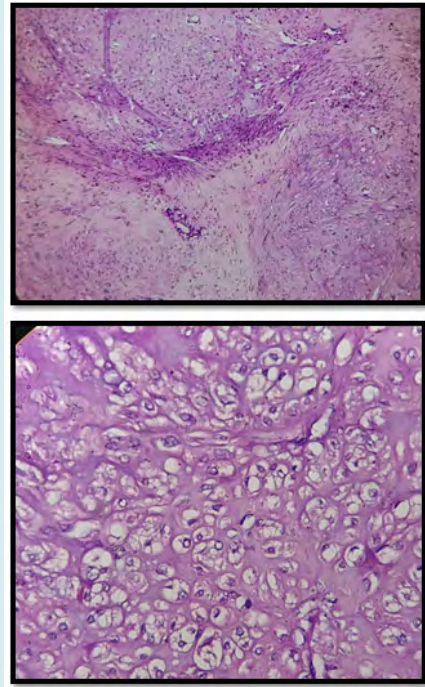
vaginal wall fibroid may cause difficulty with bowel or sexual function [5]. These tumors typically develop in the anterior vaginal wall's midline and are tiny in size. There may be severe urine symptoms such frequent urination, urgency, dysuria, and urinary retention in such circumstances. However, in our case, the presence of the vaginal fibroid was obscured by her menstrual symptoms and the findings of cervical fibroid [6]. Our example demonstrates that vaginal fibroids exhibit typical pathogenic characteristics. The tumors are usually grey white in appearance, firm in consistency and well circumscribed. Microscopically, the tumor consists of a mixture of smooth muscle and a fibrous stroma and the finding were consistent with leiomyoma with cartilaginous metaplasia and secondary changes of hyalinization and calcification. Although, leiomyomas of the vagina are rare, sarcomatous changes can develop [6]. Leiomyosarcomas are seldom seen. Therefore, these should be removed if symptomatic or at the patient's request to reduce the risk of cancer. It is important to perform a thorough bimanual and per speculum examination. The most effective way to get rid of these lesions is by enucleating the tumor through a vaginal incision, as was done in this instance (Figure 1-3).



**Figure 1:** MRI findings.



**Figure 2:** Gross appearance of the mass.



**Figure 3:** Microscopic appearance of fibroid (with smooth muscle fibers in criss- cross pattern with changes of hyalinization and cartilaginous metaplasia).

A literature review has been done regarding the subject of the case report "Vaginal Leiomyoma". The literature review has been limited to a few case reports which have been published within 10 years (Table 1). We found that the most common age group is between 30 to 50 years, it has been also reported in women as 24 years old, and even in the 50 years old postmenopausal age group too. Also noted the clinical presentation was inconstant reliant on the location and size. The most common clinical presentation was found that mass coming out of vagina [7-9] and pain in the abdomen [8,10]. In some of the cases also found urinary retention [11], vaginal bleeding [10], foul-smelling blood stained discharge from

vagina [6]. Diagnosis is generally tough preoperatively by way of it can be a cervical fibroid but then again scientific and clinical USG and MRI can be used for the diagnosis, where the MRI reflects demarcated solid mass in the images, yet in one case the biopsy was done. Looking at the surgery part most of the management involves surgical vaginal enucleation. Vaginal leiomyoma is histologically consisting of spindle-shaped cells by means of slight or no mitotic activity but none of the literature reported a case of vaginal leiomyoma with histological findings with cartilaginous metaplasia with hyalinization [12-20].

Author	Year	Age	Size	Location	Presentation	Diagnosis	Treatment	Reference
Gupta Mamta, et al.	2017	44	6x5cm	Posterolateral vaginal wall	Pain in abdomen, Vaginal bleeding	MRI	Diagnosed as leiomyoma of cervix	[1]
He Liang, et al.	2018	47	4cm	Bladder	Mass coming out	MRI	Bladder leiomyoma	[2]
Richa S, et al.	2014	40	6cm	Anterior fornix	Mass coming out, Pain in abdomen	MRI, USG	Vaginal Leiomyoma	[3]
Nishat J, et al.	2021	31	3x3cm	Anterior vaginal wall	Pain in abdomen	MRI, CLINICAL USG,	Laparoscopy with chromopertubation	[4]

Goyal LD, et al.	2013	50	10x8cm	Posterolateral vaginal wall	Polymenorrhea, Pain in the abdomen	USG, MRI	Vaginal Myoma	[5]
Koranne PS, et al.	2015	35	6x5cm	Bladder wall	Pain in abdomen	MRI	Bladder Vaginal Leiomyoma	[6]
Hsayauoi N, et al.	2017	24	5x5cm	Under urethra	Foul-smelling blood stained discharge from vagina	CLINICAL USG, MRI	Vaginal fibroma	[7]
Behura J, et al.	2020	40	6x5cm	Between the bladder base and the rectum	Mass coming out, Pain in abdomen	CT, MRI, USG	Vaginal Leiomyoma	[8]
Wu Y, et al.	2015	44	3x4cm	Between the urinary meatus and the vaginal orifice	Mass coming out	MRI, USG	Vaginal Leiomyoma	[9]
Shah M, et al.	2021	48	4x2x2cm	Right vaginal wall	Prolapsed vaginal mass	MRI, USG	Vaginal Leiomyoma	[10]
Egbe TO, et al.	2020	36	13.14x14cm	Anterior vaginal wall	Mass coming out, pain in right iliac fossa	CLINICAL USG, MRI	Vaginal Leiomyoma	[11]
Kaba M, et al.	2016	45	37x30mm	Away from the urethra and the bladder	Pain in abdomen, Vaginal bleeding	MRI, USG	Vaginal Leiomyoma	[12]
Liu Y, et al.	2021	24	4cm	Anterior vaginal wall	Mass coming out, urinary retention	MRI, CLINICAL USG	Vaginal Leiomyoma	[13]

**Table 1:** Literature review of Vaginal Leiomyoma (Literature published between the years 2013 to 2021).

## Conclusion

A rare benign vaginal tumour called a vaginal paraurethral leiomyoma has a wide range of symptoms and a good prognosis. Recurrence and development into a malignant disease are uncommon. The gold standard for diagnosis is histopathological analysis, but MRI and USG can be used to pinpoint the tumor's size and location. The majority of times, management calls for surgical vaginal excision; however, when it is large and situated high in the vagina, an abdominal approach may be explored.

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