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CASE REPORT

Vaginal Leiomyoma: Case Report and Literature Review

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ABSTRACT

Introduction: Leiomyoma arising from the vagina is a rare entity with varied presentations.

Case Report: A woman 44 years of age presented with complaints of something coming out vaginally, polymenorrhea, and pain in abdomen. A mass arising from the right posterolateral wall of vagina was seen. Ultrasound reported it to be cervical fibroid. The mass was enucleated through vaginal route. Histopathology confirmed it to be a leiomyoma. Review of literature revealed that it has a varied presentation. Diagnosis is often missed.

Conclusion: The condition should always be kept in mind whenever coming across any mass in vagina.

Keywords: Cervical fibroid, Mass in vagina, Vaginal fibroid, Vaginal leiomyoma.

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INTRODUCTION

Vaginal leiomyomas are uncommon. They arise from vaginal mesenchymal tissue. About 330 cases have been reported since the first detected case back in 1733 by Denys de Leyden.[1] We hereby, present a case of vaginal leiomyoma presenting as polymenorrhea and something coming out of vagina since 5 months.

CASE REPORT

A 44-year-old lady presented in the gynecology outpatient department with polymenorrhea and something coming out per vaginum since 5 months. She was para II, with both deliveries by cesarean section.

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On examination, her general condition was good and abdomen was soft. On local examination, vulva was normal. Per speculum examination, cervix was not visualized; a mass in vagina was seen. On per vaginum examination, mass was felt 1 cm from the introitus, firm in consistency, smooth surfaced, nontender, nonreducible, nonfriable, and size approximately 6 × 5 cm (Fig. 1). Cervix was felt separately on left side, uterus was normal size and fornices were free. On ultrasound (USG), she was diagnosed as leiomyoma of cervix.

After investigations, patient was taken up for surgical removal of the mass. The mass was found to be attached to the posterolateral vaginal wall and not cervix. A vertical incision of about 3 cm was made on the capsule of the leiomyoma. The flaps were dissected and myoma enucleated (Fig. 2). The excess flaps were excised, hemostasis was achieved and vaginal walls were repaired. Endometrial curettage was done to rule out intrauterine pathology.

She was discharged on day 3 in good condition. Histopathology confirmed the diagnosis of a leiomyoma (Fig. 3).

Cut section showed smooth, whorled pattern with no necrosis and hemorrhage. Microscopic examination revealed the tumor to be composed of interlacing bundles of smooth muscle cells separated by vascularized connective tissue. No atypia, mitosis or necrosis was seen.

DISCUSSION

Vaginal leiomyomas are rare. Only about 330 cases have been reported since the first detected case back in 1733 by Denys de Leyden.[1] Among 50,000 surgical specimens,

Fig.1: Vaginal leiomyoma

Fig. 2: After removal

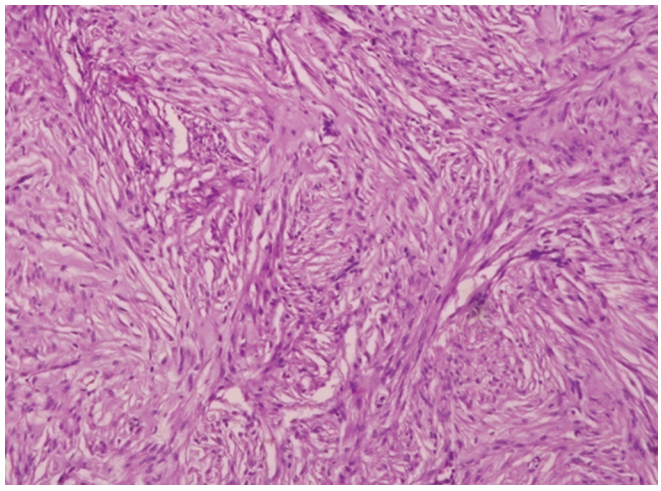

Fig. 3: Histopathology (high power × 10)

Bennett and Erlich[2] found only 9 cases and only 1 case in 15,000 autopsies. It is more common among Caucasians.[2] It may or may not be associated with leiomyomas elsewhere in the body. It is found to be hormone dependent. It arises from vaginal smooth muscle or local arterial musculature or smooth muscle of the bladder or urethra. It is the commonest mesenchymal tumor of vagina. Usually, it is a single, well-circumscribed mass arising from the midline anteriorly,[3-14] less commonly from the posterior walls.[15,16] In our case, the origin was from right posterolateral wall, an unusual site for vaginal myoma.

Literature is scarce regarding vaginal leiomyomas and is limited to few case reports only. A review of literature of the last 15 years has been attempted (Table 1). Though the common age group involved is 35 to 50 years, it has been reported in women as young as 22 years[5] and even in postmenopausal age group.[17,18] Clinical presentations were variable depending on the size and location. The commonest clinical presentation was some mass coming out of vagina.[3,6,7,9,10,13-15,19,20] However, in some, it was pain in abdomen,[3,16] vaginal discharge,[4,12] dyspareunia,[5,21-23] infertility,[5] urinary frequency,[10] retention urine,[9] recurrent urinary tract infection (UTI),[11] dysuria,[20] incomplete voiding,[20] dysmenorrhea,[21] dysfunctional uterine bleeding,[24,25] menometrorrhagia,[26] gluteal swelling,[27] pain in right iliac fossa,[17] etc. Asymptomatic vaginal fibroid[28] was reported at the time of diagnosis and it has been detected at the time of routine cancer screening.[29] Size of the vaginal tumor has varied from as small as 2 cm[18] to reaching upto umbilicus.[16] It can get infected and necrosed to mimic a vaginal malignancy.[30] Rapid enlargement mimicking a vaginal malignancy has also been reported by Sim et al.[30]

Diagnosis is usually difficult preoperatively as it can mimic cystocele or cervical fibroid but USG and magnetic resonance imaging (MRI) usually clinch the diagnosis.[31] Translabial sonography should be considered as an adjunct to transabdominal and transvaginal sonography for patients with suspected vaginal fibroids.[32]

The MRI shows well-demarcated solid masses of intermediate signal intensity in T1- and T2-weighted images with homogeneous contrast enhancement, while leiomyosarcomas and other vaginal malignancies show high T2 signal intensity with irregular and heterogeneous areas of necrosis or hemorrhage.[33,34] Degenerated leiomyomas can also show foci of high signal intensity that correspond to a combination of edematous swelling of myoma cells from ischemia, cystic change and/or myxoid degeneration.[35] In our case, MRI was not done. Though USG and MRI are helpful in diagnosing, yet in few cases fine-needle aspiration cytology (FNAC)/biopsy was done for diagnosis.[12,15]

Management requires surgical vaginal enucleation in most of the cases; however, abdominopelvic approach was used because of its size[27] and abdominal route was used by some, as it was high up in vagina and upper margin was not approachable by vaginal route.[4,24,26] In these cases, the diagnosis was made intraoperatively during abdominal hysterectomy. In some, the diagnosis was made after the histopathology report.[6] Pre-op embolization can be done to reduce vascularity in hypervascular tumor before surgical removal.[36] Injury to bladder has been reported while enucleation.[11,37]

Histopathological confirmation is the gold standard of diagnosis. Vaginal leiomyomas are composed of spindle-shaped cells with elongated and oval nuclei and little or no mitotic activity. The diagnosis of vaginal leiomyomas is to be reserved for those with <5 mitoses/high-power field. Increased mitotic activity in absence of aggressive behavior may be present in vaginal leiomyoma with pregnancy.[38] Sarcomatous transformation can occur and a histopathologic study confirms the correct diagnosis. So, atypism, hypercelullarity and mitotic figures need to be evaluated in histopathology to rule out malignancy.

Patients should be followed up for recurrence.

Table 1: Vaginal leiomyoma: Case reports and literature review

Author	*Year*	*Age*	*Presentation*	*Size (cm)*	*Position*	*Diagnosis*	*Surgery*
Kaba et al[25]	2016	45	DUB	4	Anterior	Pre-op as cystocele	Vaginal enucleation
Asnani et al[4]	2016	30	Oligomenorrhea, purulent discharge	18 wks Preg.	Anterior	Pre-op as cervical fibroid.	Vaginal attempt followed by TAH and removal
Agarwal et al[10]	2016	43	Mass coming out per vagina, frequent urine	4 × 5	Anterior	TVS, MRI, Pre-op urethrocele	Enucleation vaginal
Kaba et al[25]	2016	45	DUB	4	Anterior	USG	Enucleation vaginal
Yu et al[13]	2015	44	Mass protruding at urethral opening	3–4	Anterior	Clinical, MRI	Vaginal removal
Koranne et al[37]	2015	35	Mass coming out per vagina, dyspareunia	3	Anterior		Enuleation vaginal. Bladder injury
Bansal et al[20]	2015	40	Mass per vagina, discharge, dysuria, incomplete voiding, pressure feeling	10 × 8	Right antero-lateral	Clinical, USG,MRI suspected cx fibroid	Enucleation vaginal
Halder et al[15]	2015	45	Something coming out, vaginal discharge	9 × 4 × 2	Posterior	Clinical USG FNAC	Enucleation vaginal
Kant et al[3]	2015	40	Something coming out, pain abdomen	5 × 5	Anterior	Clinical USG MRI	Vaginal enucleation
Gupta et al[19]	2015	45	Prolapsed vaginal mass	6 × 5	Right lateral	USG, MRI	Vaginal enucleation
Manjula and Jyothi[5]	2015	22	Dyspareunia Infertility	6 × 6	Anterior	Clinical, MRI	Vaginal enucleation
Sanyal et al[17]	2015	60	Pain right iliac fossa	4 × 3	Posterior	USG, FNAC	Vaginal enucleation
Kavyashree et al[6]	2014	45	Mass coming out		Anterior	Post-op by HPE	Vaginal enucleation
Singh et al[12]	2014	40	Foul-smelling blood-stained discharge	6	Anterior fornix	USG, biopsy	Enucleation by abdominal route
Sim et al[30]	2014	43	Protruding mass from vagina, rapid growth 7 days, pain discharge, dyspareunia	7	Anterior distal vagina	CT, MRI, HPE Pre-op vaginal malignancy	Vaginal excision
Yilmaz et al[18]	2014	39	Pain left groin	2	Left lateral	Clinical	Enucleation vaginal
		75	Mass hanging per vagina	2	Anterior		
Chakrabarti et al[22]	2011	38	Pain abdomen vaginal bleeding Dyspareunia	6 × 4	Upper vagina	Pre-op as cervical fibroid	Vaginal enucleation
Shrivastava et al[9]	2011	48	Urinary retention, mass protruding per vagina	8 × 4 × 3	Anterior	Intra-op	Enucleation and total vaginal hysterectomy
Malik et al[24]	2010	35	DUB	5 × 5	Right fornix	Pre-op broad ligament fibroid	TAH with enucleation of mass
Scialpi et al[23]	2009	27	Dyspareunia, pressure symptom discharge	7.5	Anterior	Clinical TVS, MRI	Enucleation
Nidhanee et al[11]	2009	55	Recurrent UTI, pressure symptoms	3–4	Anterior	Clinical USG	Enucleation vaginal Bladder injury – repaired
Bae et al[7]	2008	48	Mass protruding at urethral opening	5 × 5	Anterior	Clinical USG, MRI	Vaginal enucleation
Agarwal et al[26]	2007	26	Menometrorrhagia	8 × 6		Pre-op as cervical fibroid	Enucleation by abdominal route
Sherer et al[28]	2007	47	Asymptomatic	3	Anterior	USG, MRI	Transvaginal resection
Vineeta et al[16]	2006	55	Pain abdomen	Up to umbilicus	Posterior	Pre-op as ovarian tumor	TAH with BSO Removal of vaginal cuff and mass
Gowri et al[27]	2003		Gluteal swelling with pus discharge through vagina				Abdominoperineal route, hysterectomy
Shimada et al[29]	2002	37	Detected at cancer screening program	2.2 + 5.2 uterus	Posterior + anterior uterus	MRI	Vaginal enucleation, laparotomy, myomectomy

DUB: Dysfunctional uterine bleeding; TAH: Total abdominal hysterectomy; BSO: Bilateral salpingo-oophorectomy; TVS: Transvaginal sonogram; HPE: Histopathological examination

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