

Vaginal leiomyoma misdiagnosed as a Bartholin abscess: A case report from Damascus, Syria

SAGE Open Medical Case Reports
Volume 10: 1–3
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DOI: 10.1177/2050313X221124072
journals.sagepub.com/home/sco



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Abstract

Fibroids are benign neoplasms that are primarily found in the uterus. Fibroids can rarely be found in the vagina—most commonly arising from the anterior wall. Generally, the vagina is an unusual location for tumors. In this article, we present the case of a 30-year-old multigravid Syrian woman presenting to the emergency department with painful swelling of the left labia, mistakenly diagnosed as a Bartholin abscess. A surgical excision was recommended for the solid mass and the mass was sent for histopathological examination which confirmed the diagnosis of a vaginal leiomyoma.

Keywords

Fibroid, leiomyoma, misdiagnosis, vaginal leiomyoma

Date received: 24 February 2022; accepted: 17 August 2022

Introduction

Tumors arising from vagina, malignant or benign, are rare and include papillomas, hemangiomas, mucosal polyps, and rarely leiomyomas.^{1,2} There have only been approximately 300 cases reported since 1733.^{1,2} Vaginal leiomyomas typically occur in women 35 to 50 years of age and are more common among Caucasian women.³ They commonly present in the anterior vaginal wall.⁴ Their size ranges from 0.5 to 15 cm in diameter.⁵ Symptoms vary depending on size and site of occurrence.⁴

In this case, we report a primary leiomyoma arising from the left lateral vaginal wall, which was initially misdiagnosed as a Bartholin abscess.

What makes this case rather interesting is that unlike Bartholin abscesses, leiomyomas do not usually tend to be erythematous,^{6,7} which, furthermore, contributed to the misdiagnoses.

Case presentation

A 30-year-old gravida 2, para 1, sexually active married female presented to the emergency department complaining of redness and swelling of the left labia, along with painful sexual intercourse and vaginal discharge for 1 month. She reported a regular menstrual period. Physical examination revealed a solid, erythematous mass arising from the left

lateral vaginal wall. The uterus and adnexa appeared within normal limits on bimanual examination and transvaginal ultrasonography. There were no urinary or bowel symptoms. The patient had no relevant family history. Routine lab values like complete blood count (CBC), coagulation, electrolytes, C-reactive protein (CRP), and renal function were all within the normal range. With the mass initially highly suspicious of Bartholin abscess, antibiotics including ceftriaxone and metronidazole were started and the patient was scheduled for a Bartholin abscess drainage surgery. Intraoperatively, a solid mass was noted confluent with the left lateral vaginal wall. This lesion was surgically excised and was sent for histopathological examination. The findings were consistent with a benign leiomyoma, as the microscopy revealed smooth muscle bundles that vary in size and run in multiple directions without necrosis, and each cell is spindle-shaped with an eosinophilic cytoplasm and an elongated nucleus with no mitotic activity (Figures 1 and 2).

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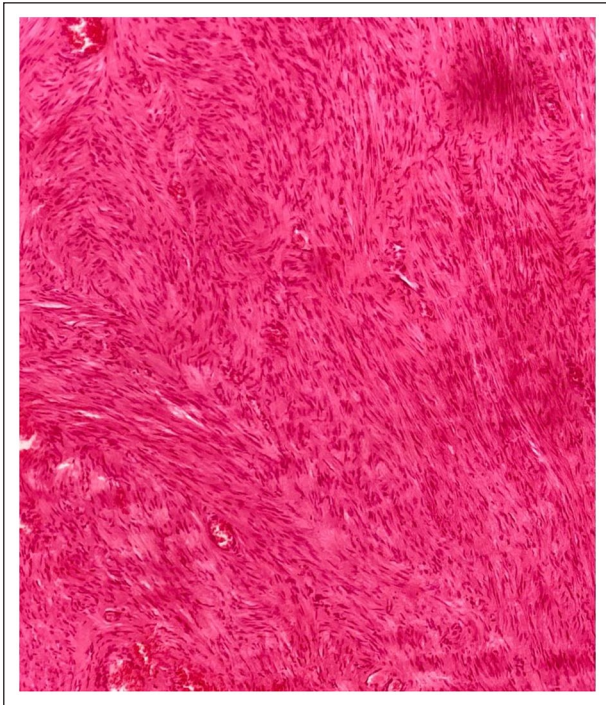


Figure 1. Histopathological appearance confirming leiomyoma (HE $\times 40$). Hematoxylin and eosin stain showing smooth muscle bundles that vary in size and run in multiple directions without necrosis.

The patient was discharged the next day with an uneventful postoperative course, and her follow-up visit showed a healthy operation site with no complications.

Discussion

Fibroids, also known as leiomyomas or myomas, are regarded as benign lesions of the female genital tract. They vary in size and number, and the majority of them arise in the uterus with lower rates in the cervix, round ligament, uterosacral ligament, ovaries, and inguinal canal.^{1,8}

Leiomyomas are believed to develop from a stem cell in the smooth muscle tissue that begins dividing, eventually creating a firm, rubbery mass that is distinct from nearby tissue.⁸ The direct cause of leiomyomas remains unknown, although links to genomic alterations, hormone, and growth factor levels have been made in the past. Risk factors linked to fibroids include early onset of menstruation, obesity, vitamin D deficiency, and hereditary factors.⁸ Preventing fibroids may not be possible, but making healthy lifestyle choices may decrease the risk of developing a fibroid.⁸

The prevalence of vaginal leiomyomas is very low, with only around 300 cases reported since 1733.^{1,2} Indeed, in a recent study on 79 patients with periurethral masses, only 4 (5%) were diagnosed as vaginal leiomyomas.⁹ In the literature, the majority appear to present in the anterior vaginal wall.⁹ Due to their anatomical location, vaginal leiomyomas

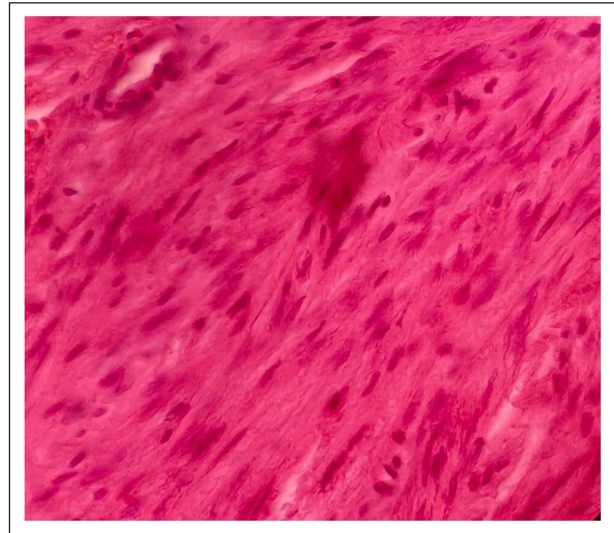


Figure 2. Higher magnification demonstrating spindle-shaped cells with eosinophilic cytoplasm and elongated nuclei with no mitotic activity (HE $\times 60$).

may be mistaken for vaginal cysts such as vaginal inclusion cyst or epidermal inclusion cyst, endometriosis, Gartner's duct cyst, Bartholin's gland cyst, and Müllerian cysts.¹⁰ They can be also mistaken for other solid benign tumors like fibroepithelial polyps and condyloma acuminatum or vaginal malignancies.¹⁰ In most cases, all these vaginal lesions cause no symptoms and are usually accidentally marked during a routine pelvic examination. The type of lesion can be determined with a pelvic examination and a biopsy.¹⁰ Vaginal leiomyomas are usually asymptomatic; symptoms vary depending on the site of occurrence and may include mass effect, obstruction, pain, dyspareunia, vaginal bleeding, frequent urination, and dysuria.^{4,11}

Transvaginal ultrasonography and magnetic resonance imaging (MRI) are recommended imaging to better characterize the consistency and size of the tumor.¹² On MRI, leiomyomas are usually seen as well-demarcated round homogeneous lesions with low signal intensity in T1- and T2-images.^{13,14} However, histological analysis is considered the gold standard to confirm the diagnosis and to rule out malignancy.¹⁵

The treatment of choice for vaginal tumors is transvaginal surgical excision. However, a transabdominal perineal approach may be required in the case of large tumors.^{16,17} Upon confirmation of the diagnosis after surgery, regular follow-ups are needed to rule out tumor recurrence.

Conclusion

In summary, vaginal leiomyomas represent a rare entity and are prone to misdiagnosis due to their location in the anterior wall of the vagina. Therefore, when evaluating a vaginal mass, a vaginal leiomyoma should be kept in mind.

Acknowledgements

The authors would like to thank Dr Obada AlHalabi and Dr Maryalice Wolfe for their help in reviewing this paper, and the patient for consenting to publishing this case report.

Author contributions

RT and AAS drafted the manuscript. DA supervised the project. All authors have read and approved the final manuscript.

Declaration of conflicting interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Ethics approval

Our institution does not require ethical approval for reporting individual cases or case series.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

Informed consent

Written informed consent was obtained from patient for publication of this case report and accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal upon request.

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