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Rapidly growing vaginal mass: Benign or malignant?

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CASE STUDY

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ABSTRACT

Vaginal leiomyoma is a rare condition. Approximately 300 cases have been reported in the literature so far. We present a case of 47 years old patient with a rapidly growing vaginal myoma which was diagnosed three months after a supravaginal hysterectomy due to uterine myoma and was suspicious for malignancy.

Key Words
Vaginal leiomyoma, uterine myoma, malignancy

Implications for Practice:

1. What is known about this subject?
Vaginal leiomyoma is very rare and only a little above 300 cases were reported in the literature.

2. What new information is offered in this case study?
The differentiation between leiomyoma and leiomyosarcoma prior to surgical removal of the vaginal tumour is very difficult.

3. What are the implications for research, policy, or practice?
The rapidly growing tumours in the vagina do not have to be malignant but they have to be treated as malignant.

Background

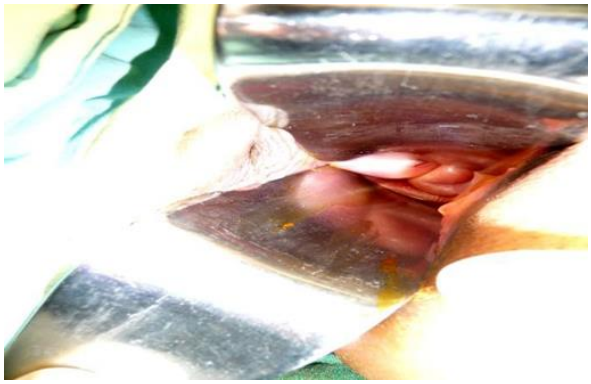
Leiomyomas are smooth muscle benign tumours developing from monoclonal expansion of a single muscle cell, responsive to steroid hormones.[1] Almost 70 per cent to 80 per cent of all women will have fibroids by age 50. It is most common in women between the ages of 35 and 50. Usually it is located in the uterus, but sometimes it can be found in other locations- for example as a primary vaginal leiomyoma. Leiomyoma of the vagina is a very rare entity: approximately 300 cases have been reported in the literature so far.[2] The benign fibromyoma usually arise from the anterior vaginal wall and the differential diagnosis in these cases must be done with benign neoplasms such as bladder leiomyoma, rhabdomyoma and benign mixed tumour, endometriosis, malignant primary neoplasms such as squamous cell carcinoma, verrucous and clear cell carcinoma, embryonal rhabdomyosarcoma, melanoma, leiomyosarcoma and mixed tumours, secondary neoplasms, cervical fibroid and uterine prolapse.[3] Usually the vaginal myoma is a unifocal, small and slow growing mass.

However, these lesions are usually oestrogen dependent and can grow rapidly during pregnancy or regress after menopause. They can be asymptomatic or present with symptoms related to the size and location of the lesion.[4] Depending on the size and location, vaginal leiomyomas may cause varied clinical presentations, such as dyspareunia, pain, or dysuria.[5]

Case details

A 45-year-old woman, gravida 13 para 3, was admitted to our clinic with complains of abnormal vaginal bleeding. Uterine myoma was diagnosed and patient underwent supracervical hysterectomy with ovarian preservation. Three months after, she was presented to the clinic with complains of acute pain in vagina for two months. There was no medical history of other diseases. On examination a round, solid, non-tender mass, measuring approximately 5cm in diameter, was palpated on the anterior vaginal wall adjacent to the uterine cervix (Figure 1). The vaginal epithelium covering the tumour was intact. The rest of the physical examination was unremarkable.

Figure 1: The tumour and the uterine cervix



Abdominal and transvaginal sonography showed a round shape, solid mass 5.72/5.35cm separate from the uterine cervix and urinary bladder.

Because of the location and image findings, we decided that an isolated vaginal leiomyoma is probably the most likely diagnosis despite the rapidly growing mass. On the previous examination, three months ago, no vaginal mass was noted. We decided to perform enucleation through the vaginal route (Figures 2 and 3).

Figure 2: The intraoperative finding

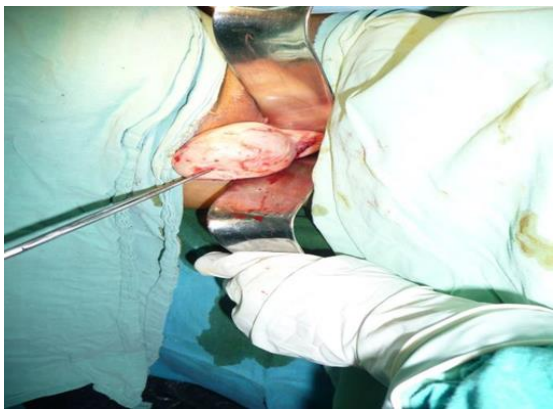
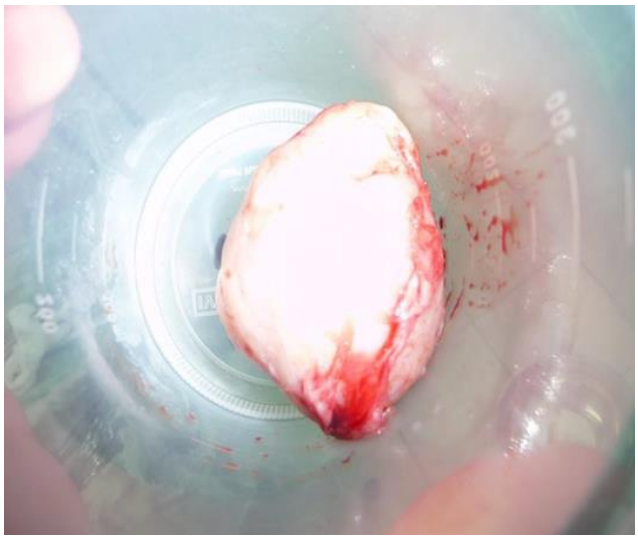


Figure 3: The removed tumour



Histopathologic and immunohistochemical evaluation of the surgical specimen showed vaginal leiomyoma with hyaline change and low proliferative activity (Ki-67–7 per cent). Histopathologic reevaluation and immunohistochemical evaluation of the specimen from the hysterectomy was performed and showed uterine leiomyoma with moderate cellular polymorphism and low proliferative activity (Ki-67<4 per cent). Thus, the diagnosis of a benign leiomyoma was confirmed.

The patient was discharged on postoperative day three. Clinical examination, US imaging and whole-body contrast-enhanced CT were performed yearly. There was no evidence of tumour recurrence and the patient was symptom free at 3-year follow-up.

Discussion

Benign smooth muscle tumours of vagina are very rare and only a little above 300 cases were reported in the literature.[2] It was first described in 1733 by Denys de Leyden.[3] Uterine leiomyoma are benign tumours of the myometrium, although uncommon, loci have also been described in the urinary bladder, round ligament and broad ligament.[6] In the vagina, they present primarily through the anterior wall and secondarily through the lateral walls.[7] They may arise from the posterior wall even after hysterectomy in the form of ischiorectal abscess. Initially, vaginal leiomyoma may be asymptomatic. With the growth of the tumour, compression occurs which may precipitate symptoms -lower abdominal pain, low back pain, vaginal bleeding, dyspareunia, frequency of micturition, dysuria, or other features of urinary obstruction.[8] These tumours are described as intramural or pedunculated and solid and as cystic.[2] Usually they are presented as a slow growing single

mass but sarcomatous transformation has also been reported.[9]

US imaging and MRI gives us the possibility to recognize a mass and to discern its nature and localization, thus to choose the best therapy in each case.[2] Therefore, MRI could be often very useful for differentiating vaginal masses although it is sometimes very difficult to differentiate benign from malignant neoplasm of vagina.[7] Misdiagnosis could lead to overtreatment.[4] The gold standard for diagnosis of any kind of vaginal tumours is histopathological confirmation.

The treatment is surgical and generally the vaginal approach is recommended. When the tumour is large the combined abdominal and perineal approach can be used.[10] It is important tumour to be removed intact and the patient to be followed up because, while uncommon, recurrence has been reported.[11]

In our case, growing of the formation for less than three months is suspicious for malignancy. Although six years later, with no further therapy, the patient has neither clinical nor imaging signs for local or systemic recurrence of the disease.

Conclusion

To the best of our knowledge a clinical presentation of a vaginal leiomyoma only three months after hysterectomy for an uterine myoma has not been reported in the literature. The differentiation between leiomyoma and leiomyosarcoma prior to surgical removal of the vaginal tumour is very difficult. Therefore, it is crucial that every vaginal mass is to be treated as malignant i.e., to be removed unruptured. Keeping in mind that the primary tumour site could be inside the uterus, a hysterectomy for vaginal myoma could be performed.

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PEER REVIEW

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CONFLICTS OF INTEREST

The authors declare that they have no competing interests.

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PATIENT CONSENT

The authors, *Yordanov A, Strashilov S, Karamanliev M, Slavchev S, Vasileva P, Ivanova Y*, declare that:

1. They have obtained written, informed consent for the publication of the details relating to the patient(s) in this report.
2. All possible steps have been taken to safeguard the identity of the patient(s).
3. This submission is compliant with the requirements of local research ethics committees.