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Case Report

A vaginal leiomyoma followed as a cystocele for a long time: A case report

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Abstract

Leiomyoma is a benign tumor of the mesenchymal smooth muscle that usually develops in the uterus and rarely vaginally. We detected an asymptomatic firm, non-tender, globular mobile mass approximately 4 cm in diameter at the anterior vaginal wall, mimicking genital organ prolapse leading to misdiagnosis as a cystocele, in a 45-year-old woman who presented complaining of heavy menstrual bleeding. Transvaginal ultrasonography revealed a homogeneous, hypoechoic well confined mass 37x30 mm in size, away from the urethra and the bladder. The mass was completely excised via a sagittal transvaginal approach with sharp and blunt dissection. To avoid urethral and bladder injury a catheter was introduced. Pathologic assessment of the specimen was reported as a leiomyoma. The patient was discharged doing well. At the one year follow-up no recurrence was detected. Vaginal leiomyomas occur rarely and are usually small and asymptomatic. Additionally, a leiomyosarcoma can arise vaginally, requiring prompt diagnosis and management. Therefore, during vaginal examination all vaginal sides should be inspected and palpated carefully. If any mass is encountered, it should be evaluated carefully to rule out malignancy. We report herein a case of a small vaginal leiomyoma, which had been followed with a misdiagnosis of a cystocele.

Key Words:

Vaginal leiomyoma, leiomyosarcoma, transvaginal ultrasonograpy, transvaginal incision, cystocele.

Introduction

Leiomyomas are benign smooth muscle tumors of the mesenchyme that can be classified in three categories: (i) cutaneous leiomyoma (leiomyoma cutis), (ii) angiomyomas (vascular leiomyomas), and (iii) leiomyomas of deep soft tissue [1]. Vaginal leiomyoma is a rare entity that commonly arises from the anterior vaginal wall and less commonly from the posterior and lateral walls [2,3]. Depending on size and position, it may be asymptomatic or present varied clinical features mimicking genital organ prolapse (GOP), protruding mass from the vagina, vaginal discomfort, dyspareunia, vaginal bleeding, urinary obstruction, urinary symptoms, or abdominal pain [3,4]. However, vaginal leiomyomas are benign tumors and most studies recommend that they should be removed in order to rule out leiomyosarcoma [5]. We report herein an asymptomatic vaginal leiomyoma arising on the anterior vaginal wall and mimicking cystocele, which was diagnosed incidentally while the patient was examined due to heavy menstrual bleeding. We aim to present the diagnosis and management of this rare case, which is easily undiagnosed if the patient has no symptoms or signs.

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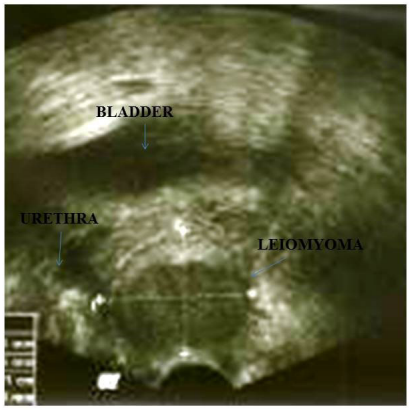
Case Presentation

A 45-year-old woman, gravida 6, para 4, presented with complaints of heavy menstrual bleeding. The patient was followed up with a diagnosis of cystocele for two years. On gynecologic examination, a 2nd degree cystocele was

observed on inspection. Vaginal examination revealed a firm, non-tender, globular, and mobile mass approximately 4 cm in diameter, located on the anterior vaginal wall under the urethra. It was covered by an intact vaginal mucosa. The uterus was normal in size and there were no pathologic findings at either adnexa. Transvaginal ultrasonography (TVUS) revealed a homogeneous, hypoechoic mass 37x30 mm in diameter, confined in a capsule. The mass was away from the bladder and urethra (Figure 1). Additionally, the endometrial thickness was 11 mm and the uterus and ovaries were normal. The patient was counseled to the urology department for assessment, whether the mass was separated from the urethra and bladder. The result of the cystoscopic evaluation has revealed normal appearance of the urethra, the bladder neck and both ureteral orifices. The urologic evaluation has not revealed any urological pathology in the patient. The patient underwent operation with a provisional diagnosis of vaginal mass and heavy menstrual bleeding.

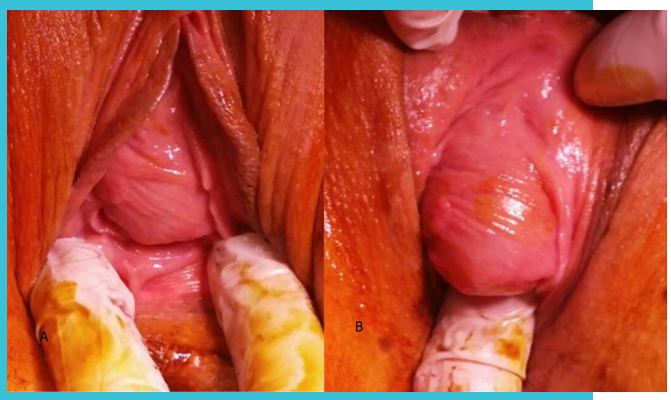
Figure 1.



Transvaginal ultrasonography revealed a small, firm, well circumscribed mass under the urethra.

Physical examination under general anesthesia revealed a firm mass mimicking a grade 2 cystocele according to the Baden-Walker halfway system (Figure 2A and 2B). At the beginning, a 16F Foley catheter was introduced into the urethra to avoid urethral injury. A 4x3x2.5 cm solid mass was dissected with blunt and sharp dissection via a sagittal incision approximately 3 cm away from the external urethral meatus (Figure 3). Diagnostic curettage was performed to evaluate the heavy menstrual bleeding. At postoperative observation no urethral injury or urinary incontinence developed and the patient was discharged on the postoperative second day. Pathologic assessment reported a vaginal leiomyoma and uterine polyp. On follow-up after 12 months, no leiomyoma recurrence was observed, and menstrual bleeding after curettage was normal.

Figure 2A-2B.



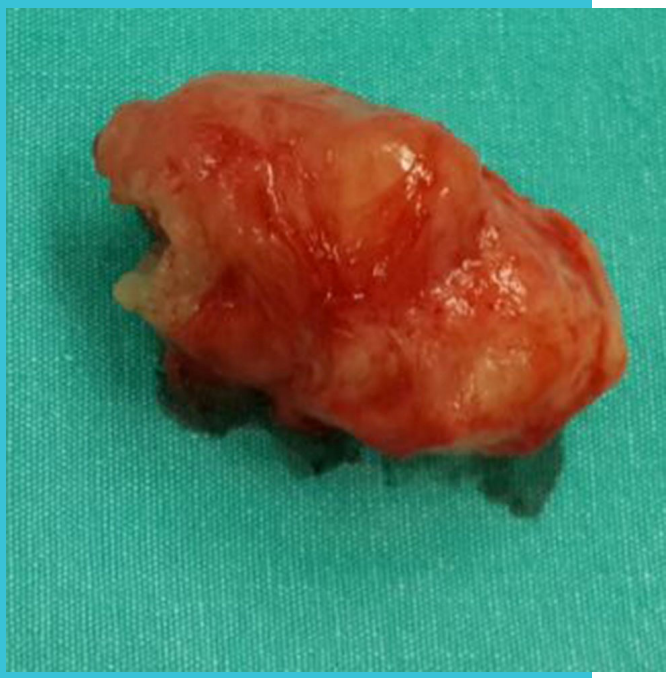
Vaginal epithelium covering a small mass mimicking a cystocele, demonstrated under general anesthesia.

Discussion

Leiomyomas are benign tumors arising from smooth muscle cells, and are the most common type of tumors in the female reproductive organs. They are often seen in the reproductive age, usually arise at the uterus, and around 50% of the cases are asymptomatic [6]. The occurrence of a leiomyoma in the vagina is a rare entity; the etiology is unknown, although some authors have speculated that it could be due to residual embryonic blood vessel tissues and smooth muscle fibers [4]. Vaginal leiomyomas are usually in 1-5 cm in diameter, firm, can be intramural or pedunculated and solid as well as cystic, covered with vaginal mucosal epithelium, asymptomatic until attaining a certain diameter (usually ≥6 cm) and arise on the anterior vaginal wall [3,4]. Depending on the site, they can give rise to varying symptoms, including vaginal discomfort, GOP, dyspareunia, vaginal bleeding, dysuria, urinary obstruction, frequen-

cy of micturition, lower abdominal pain, and low back pain [3,4,7]. When the mass is small and asymptomatic it mimics GOP, which leads to a misdiagnosis of GOP, as in our case [6]. Therefore, to differentiate a vaginal prolapse from a vaginal mass, the whole vaginal side must be carefully palpated during vaginal examination. Otherwise, the diagnosis of a small asymptomatic vaginal mass can be missed. The differential diagnosis of leiomyoma of the vagina includes the following: urethral prolapse, diverticulum, urethral caruncle, Skene's duct cyst, Gartner's duct cyst, Müllerian remnant cyst, epithelial inclusion cyst, fibrous polyps, ectopic ureterocele, vaginal neoplasm, or urethral carcinoma [5,6]. However, vaginal leiomyomas are often single, benign, and slow growing. Leiomyosarcomas resemble leiomyomas and very rarely arise in vaginal tissue [7,8].

Figure 3.



Excised specimen of the vaginal mass.

Therefore, any vaginal mass should undergo biopsy or be removed to rule out malignancy [9]. When a vaginal mass is detected preoperatively, its size, exact mass location, possible solid components, tissue planes between the mass and adjunct tissue, and infiltration of adjunct tissue should be evaluated with imaging modalities to choose appropriate operation modalities. Imaging modalities are TVUS, pelvic magnetic resonance imaging (MRI), computerized tomography (CT) scanning, voiding cystourethrography, and cystoscopy [9]. MRI is often preferred to delineate a vaginal mass [9]. Also TVUS may delineate the mass clearly and give an opportunity to the operator to have direct visualization and assessment of the mass preoperatively. In our case, we defined and delineated the mass clearly with TVUS preoperatively. We therefore did not need MRI, and did not obtain it. Additionally, we counseled the patient to the urology department to evaluate any effect of the mass on the urethra and bladder. Cystoscopy revealed no effect of the mass. A vaginal approach is usually the treatment of choice for surgical removal of a small well-confined vaginal tumor [7,10]. Also an abdomino-perineal approach is preferred for large tumors [7]. Some authors recommend biopsy before operation to rule out malignancy [9]. The mass was well-circumscribed, the border was well demarcated on TVUS and no size change was observed in the follow-up period, so we did not perform a biopsy. We removed the mass via a transvaginal approach, and to avoid urethral injury we introduced a catheter preoperatively. During the operation and postoperative follow-up no urethral or bladder injury was detected [7]. After removal of the vaginal mass, pathologic evaluation and confirmation is required to rule out malignancy. Recurrence of the leiomyoma may happen. Therefore the patient needs to be followed up because of the chance of recurrence [7,10]. Our patient's pathologic results reported a leiomyoma and the patient was symptom-free at the one year follow-up. In conclusion vaginal leiomyoma is a benign tumor that is usually small in size, asymptomatic, and mimics GOP. Thus, it is often diagnosed as GOP or can easily be missed. To rule out leiomyoma rather than leiomyosarcoma, any vaginal mass should undergo biopsy or be removed. During the operation, complete excision of the mass is sufficient for treatment and meticulous dissection should be performed to avoid adjunct tissue injury. After excision, recurrence may develop, so the patient should be followed up to detect any recurrence.

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Conflict of Interest Statement
The authors declare no conflict of interest

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