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Intra-Operative Discovery of a 150mm Anterior Vaginal Wall Endometrioma during Repair of a Stage 4 Cystocele

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ABSTRACT

Introduction: The involvement of the anterior vaginal wall by endometriosis is exceedingly rare and may present as an anterior compartment mass simulating a cystocele or urethral diverticulum. Due to its atypical location and broad clinical spectrum, the diagnosis may be difficult and is usually incidentally established during surgery.

Case Presentation: A 36-year-old woman, with one previous vaginal delivery, with no significant medical or surgical history, presented for repair of a stage IV cystocele. Intra-operatively, a large cystic lesion of about 150 mm in size was noted between the bladder and the anterior vaginal wall. The mass was completely excised. Leakage of chocolate colored liquid confirmed the presence of endometriosis. The postoperative course was uneventful, and the patient remained asymptomatic at follow-up.

Discussion: Literature review showed only a few cases of anterior vaginal wall endometrioma, the majority of which were diagnosed preoperatively on magnetic resonance imaging. Our case is remarkable for its extraordinary size and incidental intraoperative finding. This underscores that a wide differential diagnosis must be maintained when assessing anterior vaginal wall protrusions.

Conclusion: Anterior vaginal wall endometrioma is an infrequent presentation of endometriosis that may present as pelvic organ prolapse. Preoperative imaging in atypical or unusually large anterior-compartment lesions may help in avoiding unexpected intraoperative findings.

Keywords: Endometrioma; Anterior vaginal wall; Cystocele

INTRODUCTION

Endometriosis, an estrogen dependent disease, is a condition characterized by the abnormal presence of endometrial tissue and glands outside the uterus [1]. Classical locations include the ovaries, ovarian fossa, pouch of douglas, uterosacral ligaments or even rectovaginal septum [2]. However, atypical locations like the anterior vaginal wall, bladder and vesicovaginal septum can be seen in up to 1% of all reported cases of extra-pelvic endometriosis nowadays

[3,4]. Because of these uncommon locations and their broad symptoms, anterior-wall endometriotic lesions are most commonly incidentally found intra-operatively during unrelated procedures [4,5].

Patients with anterior vaginal wall endometriosis may experience symptoms ranging from urinary frequency, to a visible bulge that can mimic organ prolapse [6]. Pelvic organ prolapse, more specifically cystocele, affects approximately 40% of women [7]. The development of a mass between the bladder and the anterior vaginal wall, clinical examination might favor cystocele, but the diagnosis may be challenging [8].

To date and to the best of our knowledge, few cases of anterior vaginal wall endometriomas were documented. Here, we present the case of an individual who presented with stage 4 cystocele and was found to have a large endometrioma in the anterior vaginal wall.

CASE PRESENTATION

We report the case of a 36-year-old female patient, gravida 1 parity 1 who presented to the gynecologic clinic complaining of worsening symptoms of a protruding mass from the vulva. Her obstetrical history included one normal vaginal delivery 9 years ago. Her menarche was at 13 years of age, with regular cycles and no menorrhagia and no dysmenorrhea. The patient was previously healthy and had only a laminectomy as past surgical history.

There was a loss of follow-up for 7 years, with no clinic visit. She then presented complaining of a mass protruding from her vagina, which was described as a Stage 2 cystocele, with no symptoms of urinary incontinence. The PAP smear done at that moment showed ASC-US, with negative HPV.

Two years later, in a follow-up visit, the patient reported worsening of her previous symptoms, alongside new onset urinary incontinence and superficial dyspareunia. On physical examination, the vulva was normal in appearance. A 150 mm mass was seen on the anterior vaginal wall, going from below the urethral meatus and out of the vulva, with a POP-Q of Aa +2. The total vaginal length TVL was normal. There were no uterine or cervical prolapse, and the posterior vaginal wall was normal in appearance. The clinical presentation was compliant with a Stage 4 cystocele.

The patient was scheduled for an anterior repair in the operating room. Dissection ranged from the urethrovesiular junction until the anterior part of the cervix. Upon the midline incision on the anterior vaginal mucosa, a chocolate fluid leaked out (Figure 1), consistent with endometrioma. After removal, the cyst cavity was irrigated with normal serum (Figure 2) and closed with vicryl sutures (Figure 3).

Few months later, the patient returned for follow-up, feeling healthy and reported complete resolution of her symptoms.

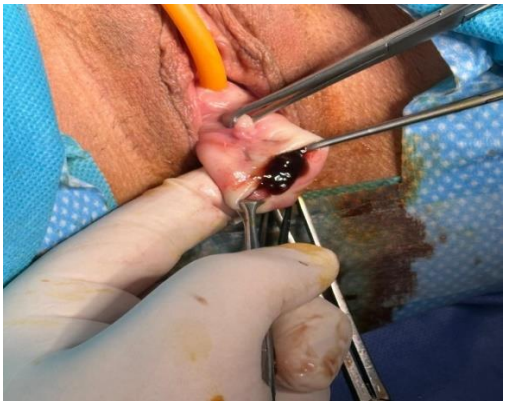

Figure 1: Intraoperative view showing a cystic mass between the anterior vaginal wall and bladder, consistent with endometrioma.

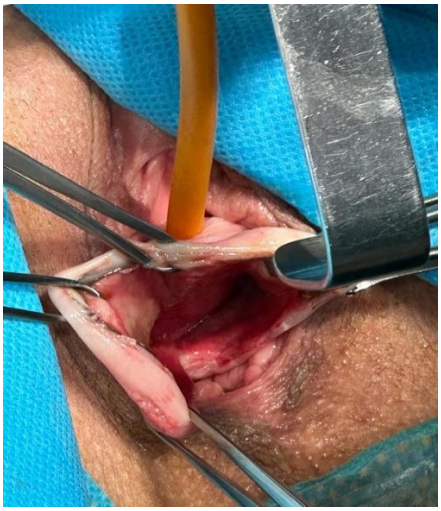

Figure 2: Cavity irrigated and cleaned with normal serum.

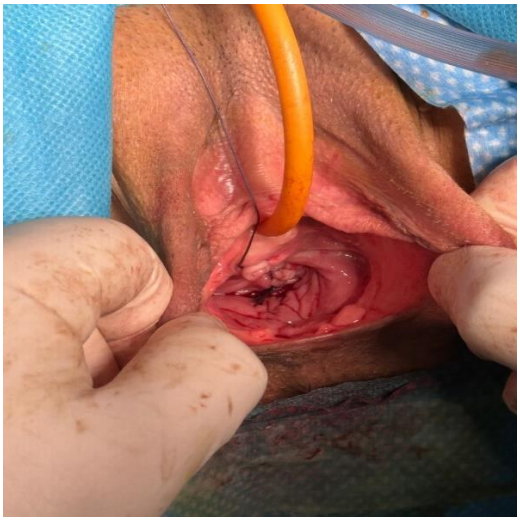

Figure 3: Closure of the anterior vaginal wall with continuous vicryl sutures.

DISCUSSION

Anterior vaginal wall endometrioma is an atypical location of endometriomas and a rare complication of this benign gynecologic disease. Its presence often causes a diagnostic challenge to physicians, thus raising the importance of imaging in the pre-operative planning. This pathology may mimic common gynecologic diseases such as cystocele, urethral diverticulum or even Mullerian cysts. In our case, this 150mm endometrioma was found incidentally while undergoing a planned anterior repair for stage 4 cystocele, underlining the burden of endometriosis.

To this day, and to the best of our knowledge, there has been only 5 cases reporting the atypical finding of endometriosis in the anterior vaginal wall (Table 1). Most cases reported patients aging from 23 years old to 46 years old. The largest two lesions documented till this day were 100mm and 80 mm [9,10]. Patients across all cases, reported one of two symptoms; vaginal bulge or urinary problems10. Such cases were intially mis-diagnosed with cystocele or pelvic organ prolapse [3,8].

In contrast to our case, a 45 years old patient known to have endometriosis, with many past urogynecologic surgeries, was found to have a 15mm anterior vaginal wall endometrioma [3]. A rationale explanation of the finding, was the dissimenation of endometriosis after repeated urogynecologic surgeries [3].

In the case described by Dilday et Al., a 23 years old patient, known to have a vaginal cyst, diagnosed at a prior institution, was then found to be of endometriotic origin4. The authors reported an incidental finding of anterior vaginal wall endometrioma, during a planned excision of Gartner cyst4. Our patient had no prior history of cysts, or any gynecologic problem and was admitted for a stage 4 cystocele repair.

Benkaddour et Al. described the case of 41 years old patient presenting with dysuria and dyspareunia. However, in contrast to our case, the pre-operative diagnosis of endometrioma was made using magnetic resonnace imaging (MRI) [10]. Our patient was not complaining of typical symptoms of endometriosis.

Nelson et al. reported the case of a 43-year-old female patient with an anterior vaginal wall mass associated with urinary frequency and pelvic pressure, which was initially thought to be due to pelvic organ prolapse [6]. Pre-operative MRI studies showed a well-defined cystic lesion, and histopathology confirmed endometriosis [6]. Özbilgeç et al. also reported a 46-year-old woman with a 100mm anterior wall cyst of the vagina, which was located just below the urethral meatus and was confused with a cystocele until imaging studies demonstrated a cystic mass located between the bladder and the vaginal wall9. Both these cases underscore the fact that anterior wall vaginal endometriomas may closely resemble cystocele and thus easily lead to diagnostic confusion. Contrasting with those findings, our patient had a much larger lesion (150 mm) found incidentally during cystocele repair, which further supports the view that even extensive endometriotic cysts may be clinically silent until surgical exploration.

The absence of typical endometriosis symptoms, such as dysmenorrhea made the clinical pre-operative diagnosis nearly impossible. This highlights the importance of having a wide differential diagnosis while dealing with patients presenting for large anterior wall protrusions.

While physical exam remains the gold standard in diagnosis pelvic organ prolapse [11], imaging such as transperineal ultrasound or even magnetic resonance imaging (MRI), can help narrow down the differential diagnosis before heading into surgery12. This said, imaging is not routinely done before anterior organ prolapse repair, and more

research and recommendations on this subject are needed in order to minimize the rate of incidental operational finding of such conditions.

CONCLUSION

The anterior vaginal wall endometrioma is a rare presentation of endometriosis, closely simulating pelvic organ prolapse. In our case, a very large 150mm lesion was found incidentally during cystocele repair, which underlines the diagnostic challenge presented by atypical anterior-compartment disease. While physical examination remains the cornerstone of prolapse evaluation, preoperative imaging, such as MRI or transperineal ultrasound, should be considered in cases with atypical or unusually large anterior vaginal wall protrusions in order to avoid surprising intraoperative findings.

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