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A rectovaginal epidermoid cyst mimicking an adnexal mass: a rare case report

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ABSTRACT

Epidermoid cysts are benign lesions arising from ectodermal epithelium and are most commonly located in the skin or subcutaneous tissue. Pelvic localization is rare. This article presents the case of a 41-year-old woman who presented with pelvic pain and was found to have an adnexal cystic mass on preoperative ultrasound and magnetic resonance imaging. During laparoscopic excision, a massive 15-cm cyst originating from the rectovaginal space was identified. Histopathological examination confirmed an epidermoid cyst. This case highlights that rectovaginal epidermoid cysts should be considered in the differential diagnosis of apparent adnexal masses when both ovaries appear normal, and that complete laparoscopic excision can provide both definitive diagnosis and treatment.

Introduction

Epidermoid cysts are benign lesions originating from ectodermal epithelium and are typically found in the skin and subcutaneous tissues. Pelvic localization is extremely rare and has been reported in only a few cases in the literature (1). When these cysts originate from deep pelvic compartments such as the rectovaginal, presacral, or retrorectal regions, they can pose diagnostic challenges both clinically and radiologically (2).

The rectovaginal space is a complex anatomical region bounded anteriorly by the posterior wall of the vagina and

posteriorly by the rectum. Lesions in this region may cause pelvic pain, dyspareunia, or constipation. However, they are difficult to diagnose due to the absence of specific clinical findings and their radiological similarity to adnexal pathologies (3). We present a giant rectovaginal epidermoid cyst mimicking an adnexal mass and discuss the diagnostic approach and surgical treatment.

Case Report

A 41-year-old parous woman presented with progressive pelvic pain of approximately six months' duration. The pain,



which was initially mild, became constant over time and worsened particularly with prolonged sitting. Dyspareunia developed within the last two months. The patient had no history of surgery or comorbidities.

On pelvic examination, a mass with a smooth surface and limited mobility was detected in the posterior fornix; no adnexal tenderness was noted. Abdominal examination revealed no rebound tenderness or guarding; however, tenderness was elicited on deep palpation.

Transvaginal ultrasound revealed a complex cystic lesion approximately 15 cm, characterized by thick septations and heterogeneous echogenicity, and was interpreted as a right adnexal mass. Pelvic magnetic resonance imaging (MRI) was performed to determine the origin of the lesion.

On MRI, a lobulated cystic mass measuring approximately 15×8 cm was identified between the uterus and rectum (Figure 1). This mass demonstrated low signal intensity on T1-weighted sequences and heterogeneously high signal intensity on T2-weighted sequences. Diffusion-weighted imaging revealed marked diffusion restriction. No fat component was seen on fat-suppressed sequences, and only minimal enhancement was observed in the cyst wall after contrast administration. These findings were consistent with a benign but nonspecific cystic lesion.

Serum tumor markers were within normal limits [cancer antigen (CA)-125: 18.5 U/mL; CA 15-3: 32 U/mL; CA 19-9: 13 U/mL].

Since the patient's symptoms persisted despite medical treatment, laparoscopic surgery was scheduled for definitive

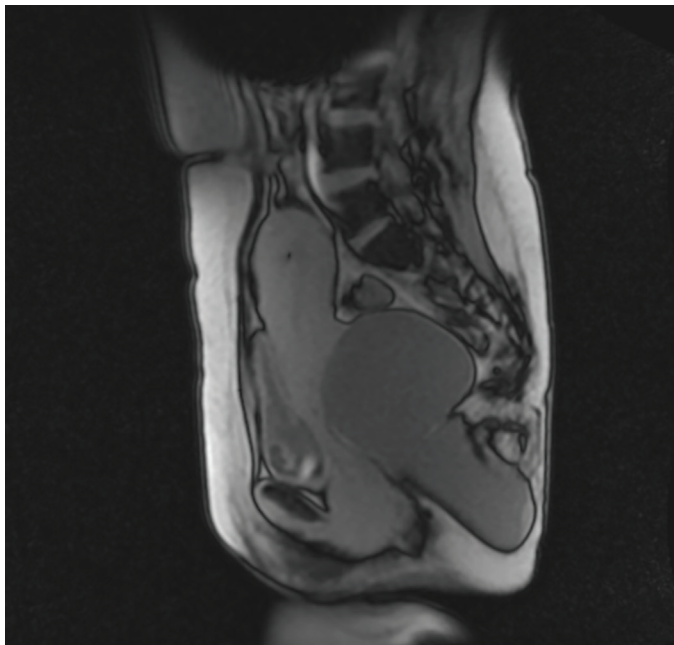


Figure 1. Sagittal pelvic MRI showing a well-defined cystic mass in the rectovaginal space with anterior displacement of the uterus
MRI: Magnetic resonance imaging

diagnosis and treatment. Informed consent forms were obtained from the patient prior to surgery. During the procedure, both ovaries and fallopian tubes appeared normal; however, a cystic lesion extending from the rectovaginal space to the Douglas pouch was observed. The cyst extended laterally toward the obturator fossa and inferiorly toward the vaginal wall, causing the uterus to deviate anteriorly (Figure 2).

The posterior walls of the rectum and vagina were carefully dissected; the bilateral ureters were visualized. The rectal wall was preserved throughout the procedure. The cyst was removed intact. It was confirmed that the cyst wall was completely separated from the rectovaginal space. The cyst was removed from the abdomen using an endobag, and the Douglas pouch mucosa was sutured. No bleeding or organ damage occurred (Figure 3).

Histopathological examination revealed a cyst lined with stratified squamous epithelium, containing lamellar keratin and lacking dermal extensions, confirming the diagnosis of an epidermoid cyst. No dysplasia or malignancy was detected.

The postoperative period proceeded without complications. The patient was discharged on the second day after surgery. At the three-month follow-up, pelvic pain and dyspareunia had completely resolved, and no recurrence was detected. At the two-year follow-up, no recurrence was detected either on clinical examination or on ultrasound.

Discussion

This case highlights the diagnostic challenges and surgical options of a large rectovaginal epidermoid cyst that mimics an adnexal mass on imaging. Although pelvic epidermoid cysts typically occur in the skin and subcutaneous tissues, they can rarely be found in deep pelvic locations; a limited number of cases have been reported in the presacral, retrorectal, retroperitoneal, or paravaginal regions (4-6). These cysts may

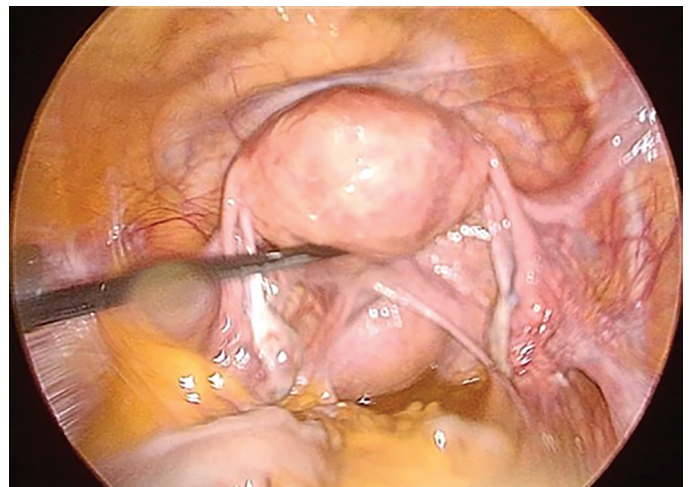


Figure 2. Laparoscopic view of a large cystic lesion occupying the rectovaginal space and displacing the uterus and bladder anteriorly

arise congenitally due to ectodermal inclusion during embryonic development or may develop following traumatic implantation of epidermal tissue into deeper structures (7-9).

Clinical symptoms largely depend on the size and location of the cyst and sometimes there may be non-specific symptoms (1,2,4,6). Presacral epidermoid cysts have been reported as a rare cause of chronic constipation, while giant retrorectal or retroperitoneal cysts may present with progressive pelvic pain (4-6). In this case, the patient's symptoms were consistent with the mass effect of a progressively enlarging cyst in the rectovaginal space.

Radiological imaging plays an important role in the evaluation of pelvic masses; however, findings in epidermoid cysts are generally non-specific (1,7). MRI can help determine the anatomical location; however, as reported by Sasaki et al. (5) and Fdili Alaoui et al. (6), the signal characteristics may overlap with those of dermoid cysts, Müllerian cysts, or other retroperitoneal developmental lesions. Although the ovaries appeared normal on both ultrasound and MRI, the lesion was still interpreted as an adnexal lesion; this underscores the necessity of considering cystic lesions in the deep midline or posterior pelvis. Histopathological examination remains the gold standard for diagnosis, as rare cases of malignant transformation arising from benign cysts have been reported in the literature (10,11). Recently, Yonghan et al. (12) reported a case of a retroperitoneal epidermoid cyst diagnosed by ultrasound, which exhibited imaging findings similar to those in our case. However, unlike the retroperitoneal location in their case, we reported a case originating from the rectovaginal area, which represents an anatomically even rarer location (12).

Although transsacral or open abdominal approaches have traditionally been used, minimally invasive techniques are increasingly favoured (3,13). Laparoscopic excision allows definitive diagnosis and effective treatment, with advantages

such as reduced morbidity, shorter hospital stays, and faster recovery. It also minimises the risk of complications such as infection, rupture, recurrence, and rare malignant transformation (6). In the case reported by Yonghan et al. (12), laparoscopic surgery was chosen as the first-line treatment approach, and successful clinical outcomes were achieved in the patient using this minimally invasive method. Previous studies have shown that laparoscopic treatment is safe and feasible even for large or recurrent retrorectal cysts (3,13). In our case, laparoscopic surgery enabled complete excision of the cyst in the rectovaginal space.

This case adds to the limited literature on rectovaginal epidermoid cysts. The large size of the lesion and its radiological resemblance to an adnexal mass highlight the diagnostic challenges. When imaging findings are inconclusive, rare non-adnexal pathologies should be considered in the differential diagnosis. Given the anatomical relationships of the rectovaginal space, laparoscopic excision can be safely performed by experienced surgeons and can yield favorable outcomes.

Ethics

Informed Consent: Informed consent forms were obtained from the patient prior to surgery.

Footnotes

Authorship Contributions

Surgical Medical Practices: Ö.Ö., Concept: Ö.Ö., Ş.C.Y., Design: Ö.Ö., Ş.C.Y., Data Collection or Processing: Ö.Ö., Ş.C.Y., Analysis or Interpretation: Ö.Ö., Literature Search: Ö.Ö., Ş.C.Y., Writing: Ö.Ö., Ş.C.Y.

Conflict of Interest: No conflict of interest was declared by the authors.

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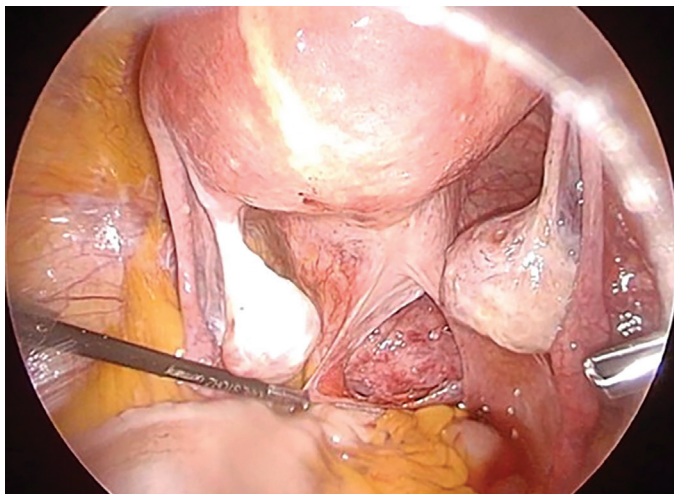


Figure 3. Intraoperative view demonstrating retroperitoneal dissection of the rectovaginal epidermoid cyst from the surrounding pelvic structures

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