

Use of Intraoperative Ultrasound to Aid in Diagnosis and Management of Unusual "Endometrioma"

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Introduction

Ovarian endometriomas, often called 'chocolate cysts,' are characterized by a typical sonographic appearance. However, various ovarian and non-ovarian pathologies, such as hemorrhagic ovarian cysts, benign adnexal masses, and ovarian malignancies, can mimic their appearance, posing diagnostic challenges. When ultrasound findings are inconclusive, specialist imaging techniques and histopathological evaluation may be required to avoid unnecessary interventions and optimize care.

Case Description

A 41-year-old woman with a regular 26-day menstrual cycle presented with severe dysmenorrhea (VAS 8/10), deep dyspareunia (VAS 7/10), cyclic dyschezia (VAS 6/10), bloating, and catamenial rectal bleeding. Over time, her symptoms worsened to include heavy menstrual bleeding and non-cyclic pelvic pain. Clinical examination was unremarkable, but symptoms pointed to posterior compartment involvement. Outpatient transvaginal ultrasound identified adenomyosis, superficial endometriosis in the bladder peritoneum and rectouterine pouch, and a deep endometriotic nodule in the rectouterine pouch. No bowel or ovarian endometriosis was detected. The patient was scheduled for laparoscopic total hysterectomy, bilateral salpingectomy, and excision of endometriosis.

Preoperative and Surgical Findings

Intraoperative ultrasound, performed under general anesthesia, confirmed the preoperative findings. Additionally, a new 14 × 12 × 12 mm unilocular cystic lesion with a 'ground glass' appearance was observed adjacent to the uterus, separate from the ovary. Differential diagnoses included para-ovarian or para-tubal cyst, peritoneal endometriosis, or an accessory uterine mass (ACUM). The lesion's atypical features warranted further investigation. As such, laparoscopy-guided intraoperative transvaginal ultrasound was repeated, focusing on the right pelvic lesion's area. With the patient in Trendelenburg, the lesion was not identified. Reverse Trendelenburg was then implemented, permitting the bowel to fall back into the pelvis. At this time, the lesion was seen again on ultrasound, corresponding to a normal loop of small bowel. The planned surgery then took place according to plan, without complication.



Discussion

In this case, a targeted ultrasound examination for endometriosis performed under general anesthesia revealed a cystic pelvic lesion on the right side that had not been previously identified. Although the lesion's 'ground glass' appearance initially suggested an endometrioma, its separation from the right ovary and absence on earlier imaging prompted a broader differential diagnosis. Although this ultimately represented a normal segment of small bowel, we considered alternative possibilities. We did still consider this could be a pathology associated with the bowel unfamiliar to a gynecologic surgeon sonologist, in which case if confirmed, consultation with general surgery and general radiology would have been indicated.

Conclusion

This case exemplifies the diagnostic complexity and clinical variability of endometriosis - or in this case, when something resembles endometriosis, but it is not. The necessity of side-by-side use of transvaginal ultrasound and laparoscopy emphasizes the limitations of imaging modalities alone in some circumstances, particularly when there are unusual sonographic findings, and the importance of integrating multiple diagnostic techniques including surgery. In future instances, when an endometrioma-appearing structure does not have classic features, bowel can be considered as an alternative structure being visualized. If there is no immediate resolution of the 'cystic' content through peristaltic activity, a repeat scan after several weeks may prove helpful.