Video Article

Accessory cavitated uterine mass: A rare cause of severe dysmenorrhea

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Abstract

We present a rare Müllerian anomaly known as "accessory cavitated uterine mass (ACUM)," which causes severe, refractory dysmenorrhea, and review the literature. A 17-year-old patient experienced severe, cyclic left-sided pelvic pain, correlating with menstruation. Magnetic resonance imaging (MRI) revealed a cystic lesion surrounded by myometrial tissue. Medical treatment with oral contraceptives was unsuccessful. Laparoscopic excision of the mass was performed, and histopathology confirmed the diagnosis of ACUM. At six months postoperatively, she remained asymptomatic, and follow-up MRI showed a normal-appearing uterus. ACUM is a rare Müllerian anomaly that is challenging to diagnose preoperatively, even with advanced imaging. Surgical excision remains the definitive treatment. This case highlights the importance of clinicians considering Müllerian anomalies in adolescents presenting with severe dysmenorrhea. [J Turk Ger Gynecol Assoc.]

Keywords: Accessory cavitated uterine mass, ACUM, severe dysmenorrhea, Müllerian anomaly, juvenile cystic adenomyosis

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Introduction

Dysmenorrhea affects nearly 80% of adolescents, with severe cases that may indicate rare Müllerian duct anomalies, such as "accessory cavitated uterine mass (ACUM)" (1). ACUM is characterized by progressive worsening of dysmenorrhea, potentially related to gubernaculum dysfunction, and the presence of a non-communicating, accessory uterine cavity, without other uterine anomalies (2-4). Differential diagnoses include juvenile cystic adenomyosis, rudimentary cavitated uterine horns, and degenerated leiomyomas. Diagnostic criteria for ACUM include an isolated accessory cavitated mass; a normal uterus, fallopian tubes, and ovaries; excised mass with confirmatory histopathological examination; an accessory cavity lined by endometrial epithelium with glands and stroma; chocolate-brown fluid content; and no adenomyosis except for small foci of myometrium adjacent to the mass. ACUMs are typically located on the anterior uterine wall (3).

ACUM is an uncommon pathological condition, primarily observed in young individuals, characterized by severe dysmenorrhea and recurrent pelvic pain (5). The accompanying pain often localizes to the side of the mass and does not respond well to non-steroidal anti-inflammatory drugs (NSAIDs) or combined oral contraceptives (COC) (3). The primary treatment for ACUM is surgical excision, which provides permanent relief and recovery. We present a 17-year-old adolescent girl diagnosed with ACUM, detailing her diagnostic process, surgical management, and follow-up visits.

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Case report

A left-sided 27x10 mm mass with a hemorrhagic component on the anterior corpus of the uterus, suggesting a non-communicating uterine horn, was detected by pelvic ultrasound in a 17-year-old patient with severe cyclic dysmenorrhea. Pelvic magnetic resonance imaging (MRI) revealed a hemorrhagic segment within the mass, surrounded by myometrial tissue (Figure 1). Laparoscopic mass excision with diagnostic hysteroscopy was scheduled to assess for any ostia from the cavitated mass into the endometrial cavity, after refractory pain during medical treatment with COC.

Both tubal ostia were patent during hysteroscopy, which revealed a regular endometrial cavity without signs of any accessory cavity or ostia.

Subsequently, laparoscopic resection of the mass was performed (Figures 2-5). A brief video of the operation is available in Video 1. The following steps were performed during surgery. Firstly, the opening of the anterior surface of the uterine peritoneum. After that, a uterine mass was observed on the left side of the uterus. The incision was extended along the left round ligament. Unipolar cautery was used for the excision of the mass. During cauterization, chocolate-brown colored endometriotic fluid was released from the cavitated uterine mass. The fluid was aspirated from the cavitated mass. Following that step, the ACUM was enucleated from the uterus. After the excision of the mass, the resulting uterine defect was repaired with V-Loc™ suture.

The procedure was well tolerated with no postoperative complications. She was discharged the next day. Histopathology confirmed the endometrial glands and stroma within the cavity tissue, with small foci of adenomyosis in the adjacent myometrium. At six months postoperatively, she reported resolution of dysmenorrhea with regular menstrual cycles, and

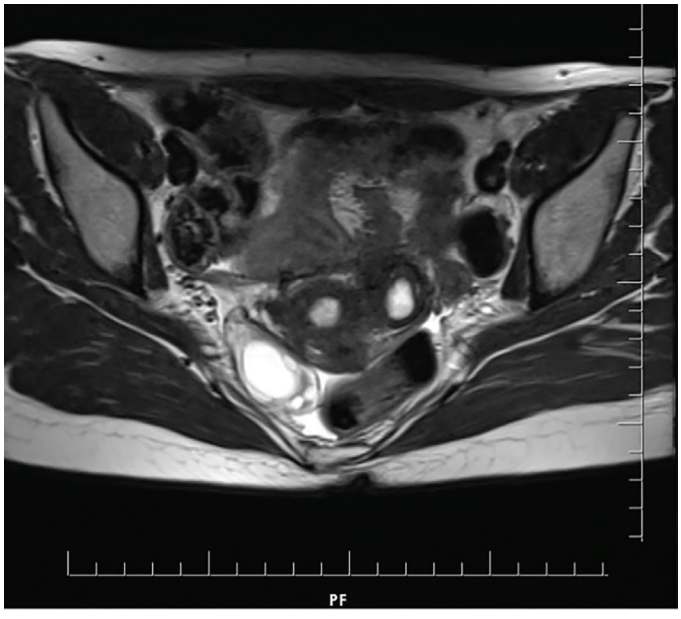

Figure 1. T2-weighted magnetic resonance imaging image of the mass (accessory cavitated uterine mass)

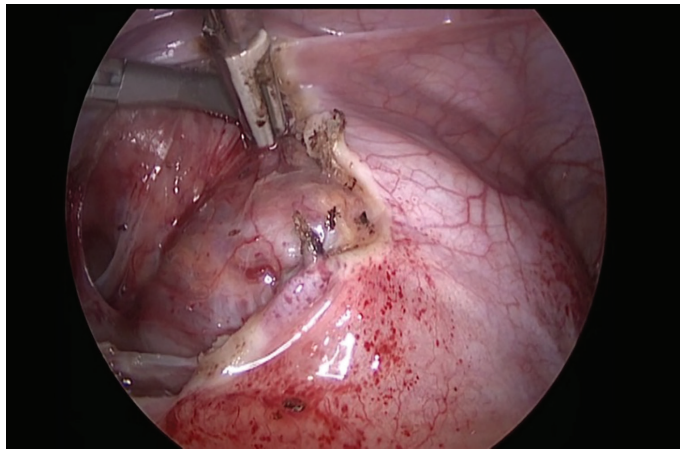

Figure 2. Opening of the anterior surface of the uterine peritoneum

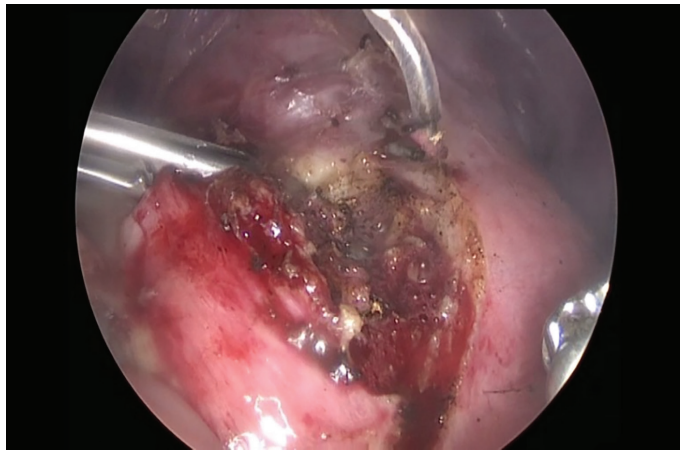

Figure 3. Endometrial lumen of the accessory cavitated uterine mass

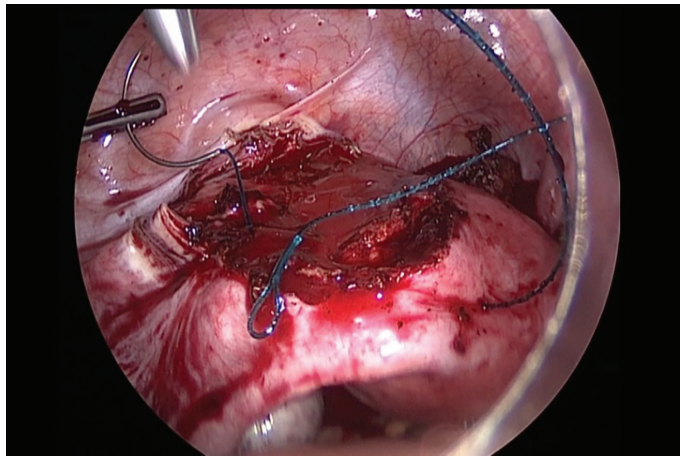

Figure 4. Suturing of the myometrial defect

follow-up MRI showed a normal appearing uterus (Figure 6).
Written informed consent was obtained from the patient and her parents for both the surgical procedure and the publication of this case report, with approval of the Başkent University Non-Interventional Clinical Research Ethics Committee (approval number: 22/226, date: 28.12.2022).board.

Discussion

This case report illustrates ACUM, highlighting its symptoms, diagnostic evaluation (pelvic ultrasound and MRI), medical management, surgical excision, and follow-up. The initial physical examination revealed a mass on ultrasound and pelvic MRI consistent with ACUM. Medical treatment provided minimal relief, leading to laparoscopic resection. The patient's symptoms completely resolved following the excision.
ACUM is a rare Müllerian anomaly and is often difficult to diagnose preoperatively due to its infrequent occurrence and similarities to other pelvic conditions. In adolescents, severe cyclic dysmenorrhea, refractory to NSAIDs or COCs, should raise suspicion for Müllerian anomalies. The differential diagnosis should include pedunculated myomas, endometriomas, and para-ovarian cysts (6). Literature describes similar lesions under various names, including juvenile cystic adenomyoma, cystic adenomyoma, cystic adenomyosis, and accessory cavitated mass. The term ACUM is now preferred and has replaced the term "juvenile cystic adenomyoma" due to reflecting the nature of the condition more accurately, as described by Takeda et al. (7). Recently, Sachedina Parhar et al. (8) proposed the term "accessory uterine cavities" for this entity. Precise diagnosis depends on intraoperative and histopathological findings.
Our case meets the established diagnostic criteria for ACUM (3). While MRI can suggest the diagnosis, definitive confirmation requires surgical excision and histopathological examination (9). Video footage from the presented patient's surgery illustrates the drainage of chocolate-brown fluid, indicative of old blood, as previously reported (6). Histopathological analysis noted small foci of adenomyosis in the myometrium adjacent to the mass. Notably, our case differed from most reported cases of ACUM, which typically present on the right side of the uterus (10).

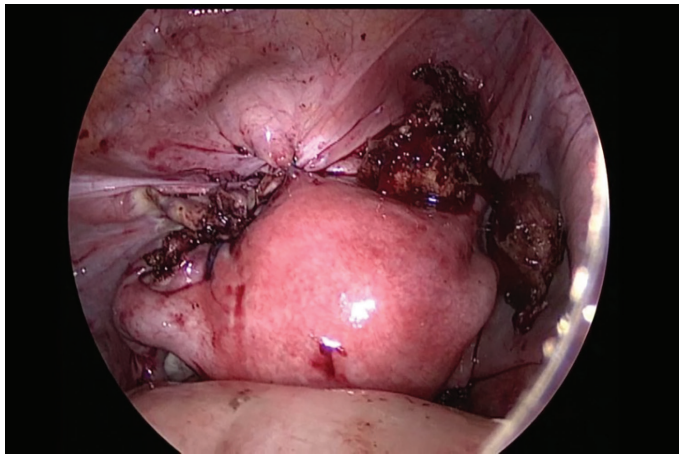

Figure 5. Final appearance of the uterus

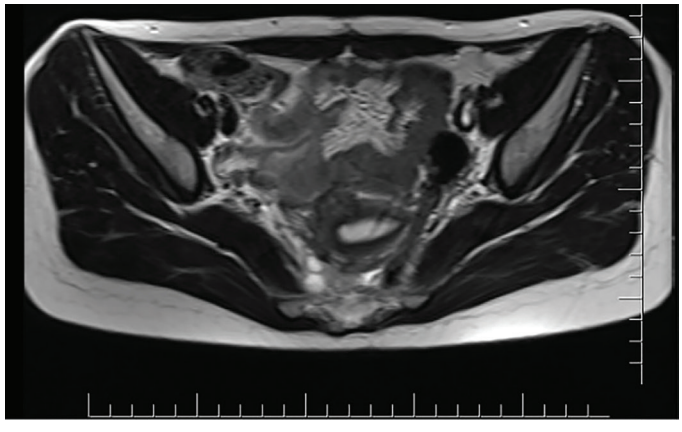

Figure 6. Magnetic resonance imaging image of the uterus after surgery

Conclusion

ACUM remains a rare form of Müllerian anomaly and is difficult to diagnose preoperatively despite advanced imaging techniques. Surgical excision performed through laparotomy or laparoscopy remains the definitive treatment. Laparoscopic procedures are associated with a lower complication rate and higher operative satisfaction (11). This aim of this report was to highlight this rare condition and so remind clinicians to consider Müllerian anomalies in this patient demographic. This report highlights the need to consider ACUM in the differential diagnosis of severe dysmenorrhea. It underscores the importance of including ACUM in the differential diagnosis and highlights the effectiveness of surgical excision for long term relief. Moreover, we offer a step-by-step video for ACUM excision. The complete resolution of our patient's symptoms without complications highlights the effectiveness and safety of the surgical approach.

Video 1.

http://dx.doi.org/10.4274/jtgga.galenos.2025.2025-10-5.video1

Ethics

Ethics Committee Approval: *This study was approved by the Başkent University Non-Interventional Clinical Research Ethics Committee (approval number: 22/226, date: 28.12.2022).*

Informed Consent: *Written informed consent was obtained from the patient and her parents for both the surgical procedure and the publication.*

Footnotes

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

Financial Disclosure: *The authors declared that this study received no financial support.*

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