

Accessory Cavitated Uterine Mass Mimicking Ovarian Pathology in a Young Female

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Abstract

Accessory cavitated uterine mass (ACUM) is a rare Müllerian anomaly presenting as pelvic pain in young women, often misdiagnosed as ovarian pathology. We report a 21-year-old female presenting with right lower abdominal pain. Ultrasound suggested a complex ovarian cyst. Magnetic resonance imaging (MRI) demonstrated a well-defined, non-communicating intramyometrial cavitary lesion with hemorrhagic contents and normal ovaries. Laparoscopic excision confirmed the diagnosis. MRI is vital to prevent inappropriate surgical intervention.

Keywords: *Müllerian anomaly; Accessory cavitated uterine mass; Adenomyosis; Magnetic resonance imaging; Laparoscopy*

1. Introduction

Accessory cavitated uterine mass (ACUM) is a rare, benign congenital Müllerian anomaly characterized by an ectopic, non-communicating functional endometrial cavity located within the myometrium [1]. It typically manifests in young, nulliparous women presenting with severe pelvic pain or progressive dysmenorrhea. Due to overlapping clinical presentation and conventional imaging features, ACUM is frequently misdiagnosed as an ovarian endometrioma, cystic adenomyosis, or a degenerating uterine fibroid. Magnetic resonance imaging (MRI) serves as the non-invasive modality of choice for precise tissue characterization and pre-operative planning.

2. Case Report

A 21-year-old female presented to the outpatient department with a history of chronic, worsening right-sided lower abdominal pain. Initial transabdominal and transvaginal ultrasound evaluation performed at a primary clinic suggested a well-defined right adnexal cystic lesion, suspected to be an ovarian endometrioma or a complex ovarian cyst.

To further evaluate the adnexal mass, a dedicated pelvic MRI was performed. The MRI revealed a well-circumscribed, 2.5 cm × 2.0 cm × 2.5 cm cavitory lesion embedded entirely within the anterior myometrium, situated near the right uterine cornua. The lesion exhibited internal hemorrhagic contents, demonstrated by characteristic T2 shading on T2-weighted sequences, restricted diffusion, and prominent T2* blooming on gradient recurrent echo (GRE) sequences.

Crucially, multiplanar reconstructions confirmed that the lesion had no structural communication with the normal, central endometrial cavity. Both ovaries were visualized as entirely normal, separate, and structurally distinct from the mass.

The patient subsequently underwent an elective laparoscopic exploration. Intraoperatively, a 3.0 cm × 3.0 cm, firm, intramyometrial mass was identified near the right cornua, closely related to the attachment of the round ligament. The main uterine body, fallopian tubes, and both ovaries appeared entirely normal and unaffected.

Upon incision, the non-communicating cavitated mass was found to contain thick, altered chocolate-colored blood. A complete margin-negative surgical excision of the mass was performed successfully while preserving the surrounding myometrium. The patient's postoperative recovery was uneventful, with complete resolution of her pelvic pain symptoms at follow-up.

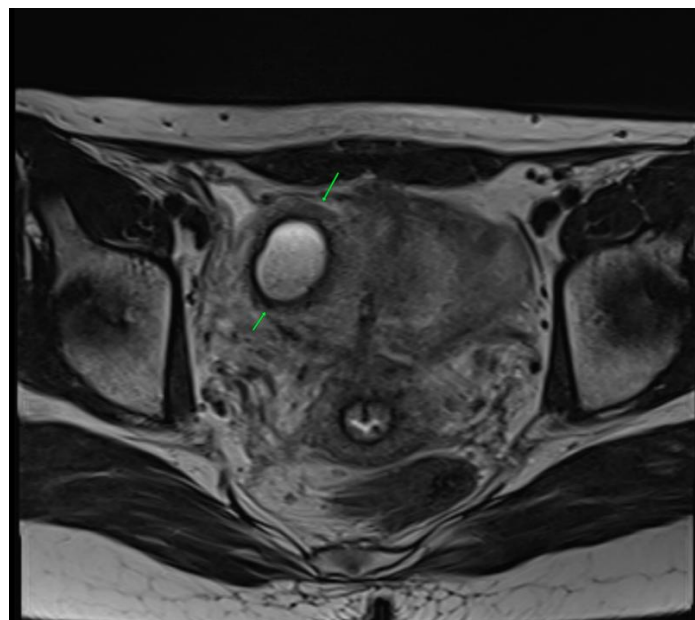


FIG. 1. Axial T2-weighted magnetic resonance image showing a well-defined intramyometrial cavitory lesion in the right anterior myometrium displaying distinct internal T2 shading.

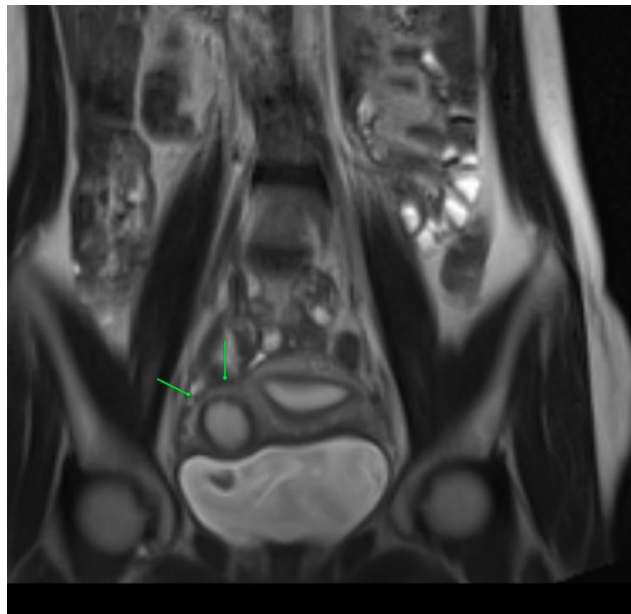


FIG. 2. Coronal T2-weighted magnetic resonance image confirming the cornual location of the accessory mass (green arrows), demonstrating a completely normal central endometrial cavity with no communication pathways.

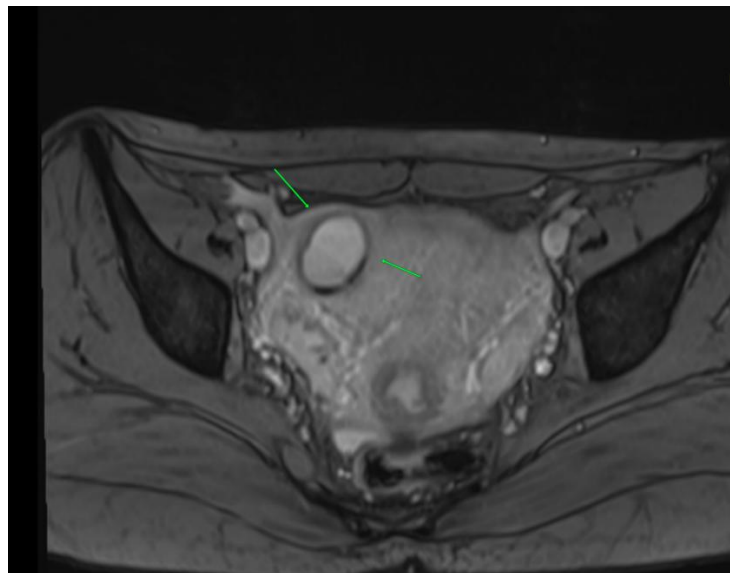


FIG. 3. Gradient Recurrent Echo (GRE) sequence showing prominent magnetic susceptibility blooming artifacts within the lesion, confirming its dense, altered hemorrhagic content.

3. Discussion

ACUM is increasingly recognized as a distinct Müllerian duct anomaly resulting from a localized developmental dysfunction during embryogenesis [2]. Diagnostic delay is common because the clinical features mimic other benign gynecological disorders. To establish a standardized diagnosis and prevent diagnostic confusion, the Vitagliano diagnostic criteria are utilized. These criteria require the presence of an isolated intramyometrial mass, a structurally normal uterus and infantile/normal

adnexa, a complete lack of communication between the mass cavity and the main uterine lumen, and histological confirmation of a functional endometrial lining [1].

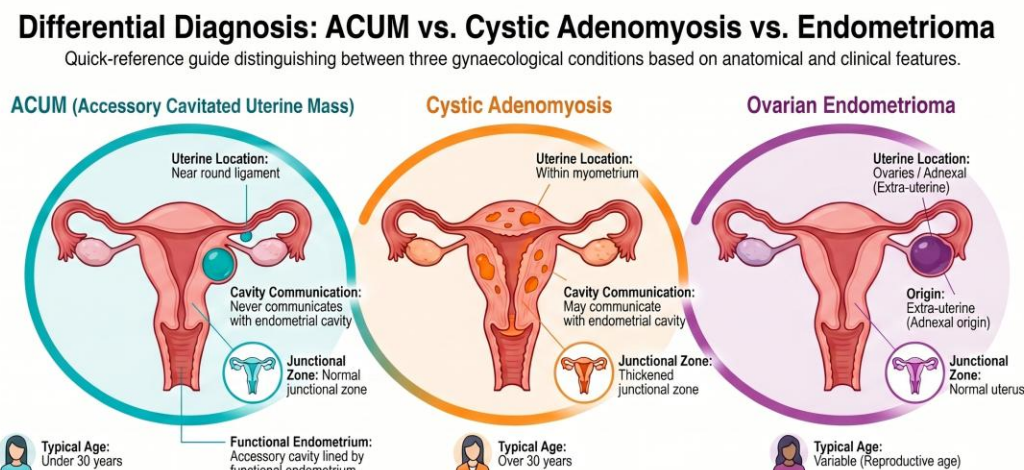
High-resolution MRI is essential in distinguishing ACUM from its close mimics, most notably cystic adenomyosis and ovarian endometriomas [4]. While cystic adenomyosis is generally accompanied by diffuse myometrial thickening, a poorly circumscribed junctional zone, and widespread small hemorrhagic foci, ACUM presents as a solitary, well-demarcated capsule-like mass near the uterine cornua in an otherwise pristine uterus. Furthermore, demonstrating that both ovaries are completely separate from the lesion rules out a primary adnexal or ovarian mass pathology.

In this case, the intraoperative laparoscopic findings strongly correlated with the preoperative MRI diagnosis, confirming a localized, non-communicating cavitated uterine mass. Complete surgical excision remains both the definitive diagnostic standard and the curative management of choice, offering immediate pain relief and preserving future fertility potential [3].

4. Conclusion

ACUM represents an essential differential diagnosis for young women presenting with refractory pelvic pain and suspected adnexal masses. Timely utilization of pelvic MRI allows for accurate non-invasive diagnosis, preventing inappropriate medical therapeutic pathways or radical adnexal surgeries.

To facilitate radiological differentiation, a schematic comparative illustration highlighting the distinguishing anatomical and imaging characteristics of ACUM, cystic adenomyosis, and ovarian endometrioma has been included (FIG. 4). The diagram emphasizes lesion location, relationship to the endometrial cavity, junctional zone morphology, adnexal origin, and age distribution, thereby serving as a practical visual reference for diagnostic interpretation.



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FIG. 4. A schematic comparative illustration highlighting the distinguishing anatomical and imaging characteristics of ACUM, cystic adenomyosis, and ovarian endometrioma has been included.

5. Abbreviations

- **ACUM:** Accessory Cavitated Uterine Mass
- **GRE:** Gradient Recurrent Echo
- **ICMJE:** International Committee of Medical Journal Editors
- **MRI:** Magnetic Resonance Imaging

6. Explanation of Terminologies

- **T2 Shading:** A phenomenon seen on MRI where a lesion showing high signal intensity on T1-weighted images demonstrates a loss of signal (shading) on T2-weighted images, highly characteristic of chronic, concentrated intracellular hemorrhagic contents or endometriomas.

7. Conflict of Interest

The authors declare that they have no competing financial or non-financial interests that could perceive to influence the presentation or interpretation of the data in this manuscript.

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REFERENCES

1. Vitagliano A, Noventa M, Di Spiezio Sardo A, et al. Accessory cavitated uterine mass: a systematic review of a rare Müllerian anomaly. *Hum Reprod Update*. 2017;23(6):746-61.
2. Takeuchi H, Kitade M, Kikuchi I, et al. Accessory cavitated uterine mass: a new type of Müllerian anomaly? *J Minim Invasive Gynecol*. 2010;17(6):771-4.
3. Acién P, Acién M. The presentation and management of Müllerian anomalies. *Hum Reprod Update*. 2016;22(1):48-69.
4. Chalouhi GE, Bernard JP, Ville Y. Accessory cavitated uterine mass: MRI features and differential diagnosis. *Eur Radiol*. 2013;23(5):1363-70.