International Journal of Reproduction, Contraception, Obstetrics and Gynecology
Patil A et al. Int J Reprod Contracept Obstet Gynecol. 2026 Apr;15(4):1451-1453
www.ijrcog.org
pISSN 2320-1770 | eISSN 2320-1789

DOI: https://dx.doi.org/ 10.18203/2320-1770.ijrcog20260921

Case Report

An uncommon cause of severe dysmenorrhea in a 16-year-old: accessory cavitated uterine mass

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Received: 15 February 2026
Revised: 15 March 2026
Accepted: 16 March 2026

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ABSTRACT

Accessory cavitated uterine mass (ACUM) is a rare Müllerian anomaly characterized by the presence of an accessory cavity lined with functional endometrium within an otherwise normal uterus. It commonly presents in adolescents and young women with severe dysmenorrhea that is often resistant to medical therapy and may be misdiagnosed as adenomyosis or fibroid. We report the case of a 16-year-old girl presenting with severe cyclical dysmenorrhea for two years that was unresponsive to hormonal therapy. Ultrasonography revealed a focal lesion in the left lateral myometrium with a small cystic component, and magnetic resonance imaging demonstrated a well-defined thick-walled cystic lesion with internal blood-fluid level and no communication with the endometrial cavity, suggestive of ACUM. The patient underwent successful laparoscopic excision of the lesion. Intraoperatively, a cavitary mass containing thick chocolate-coloured fluid was identified and excised, followed by uterine reconstruction. Histopathological examination confirmed a cavity lined by functional endometrium surrounded by smooth muscle. Postoperatively the patient experienced significant relief from dysmenorrhea. This case highlights the importance of considering ACUM in adolescents with severe dysmenorrhea unresponsive to conventional therapy and emphasizes the role of MRI and laparoscopic excision as both diagnostic and definitive treatment.

Keywords: ACUM, Müllerian anomaly, Severe dysmenorrhea, Adolescent gynecology, Laparoscopic excision

INTRODUCTION

Accessory cavitated uterine mass (ACUM) is a rare Müllerian anomaly characterized by the presence of an accessory cavity lined with functional endometrium within an otherwise normal uterus.[1] Unlike other Müllerian anomalies that involve uterine malformations, the remainder of the uterus typically appears structurally normal.

ACUM is considered a rare but significant cause of severe dysmenorrhea, particularly in adolescents and young women.

ACUM was first described by Oliver in the early twentieth century in a patient presenting with dysmenorrhea. Surgical exploration revealed a globular closed sac within the broad ligament filled with chocolate-coloured fluid and lined with thick walls of cuboidal epithelium resembling normal endometrial stroma.[2]

It predominantly affects adolescents and young women, typically presenting soon after menarche with severe progressive dysmenorrhea and chronic pelvic pain that is often unresponsive to medical therapy. Because its clinical and imaging features may mimic fibroid, adenomyosis, or adenomyoma, ACUM is frequently misdiagnosed.[3] Magnetic resonance imaging (MRI) plays a key role in

identification, and laparoscopic excision offers definitive treatment with excellent prognosis.

On MRI, ACUM appears as a distinct cavitated mass located beneath the round ligament within the uterine wall, demonstrating a T2-hyperintense endometrial lining and internal blood degradation products. Preservation of the normal appearance of the uterus, cornua, and ovaries helps exclude other possible lesions.[4]

CASE REPORT

A 16-year-old unmarried nulligravida presented to the gynecology outpatient department at H. B. T. Medical College and Dr. R. N. Cooper Municipal General Hospital with complaints of severe cyclical dysmenorrhea for the past two years.

Medical management with dienogest, selective estrogen receptor modulators (SERM), and GnRH antagonists had previously been attempted at a private hospital without significant symptom relief. Her menstrual cycles were regular with normal flow. General physical examination was unremarkable and vital signs were stable.

Ultrasonography revealed that the uterus measured 6.3×5.0×2.8 cm and appeared normal in size and echogenicity. A 25×21×24 mm lesion with echogenicity similar to the myometrium was identified in the left lateral myometrium with a small cystic component. Endometrial thickness measured 3.9 mm and the endometrial cavity appeared normal in size and shape.

MRI pelvis demonstrated a well-defined T2 hypointense thick-walled cystic lesion along the left lateral wall of the uterus with internal blood-fluid level and no communication with the endometrial cavity or endocervical canal. The lesion produced mild indentation of the normal uterine cavity. These findings were suggestive of an accessory cavitated uterine mass.

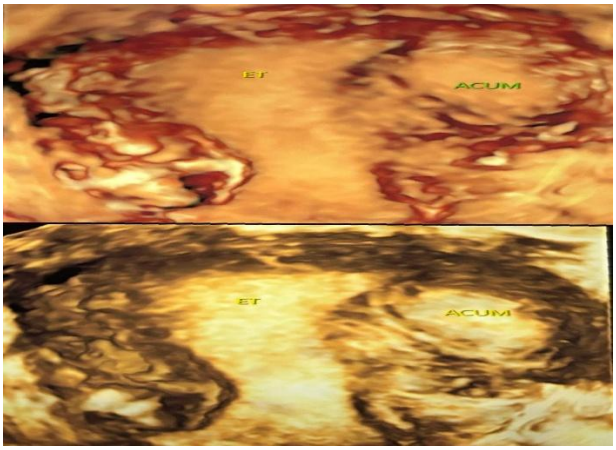

Figure 1: Three-dimensional ultrasonography demonstrating ACUM adjacent to the normal endometrial cavity.

After counseling the patient and her family regarding the diagnosis and treatment options, informed consent was obtained for surgical management. The patient underwent laparoscopic excision of the lesion.

Intraoperatively, the normal external contour of the uterus made identification of the lesion challenging. Using the MRI findings as a guide, a lesion was identified medial and inferior to the attachment of the left round ligament. A vertical incision was made over the lesion, revealing a cavitary mass containing thick chocolate-coloured fluid. The accessory cavity was completely excised and the uterine wall was reconstructed laparoscopically.

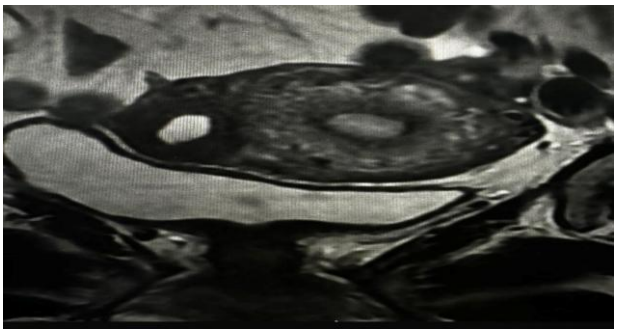

Figure 2: MRI pelvis demonstrating a cavitated lesion in the uterine wall consistent with accessory cavitated uterine mass (ACUM).

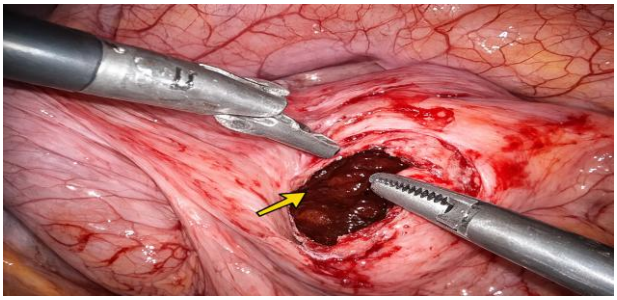

Figure 3: Laparoscopic intraoperative image showing evacuation of thick chocolate-coloured fluid from the accessory cavitated uterine mass (ACUM) after incision of the lesion.

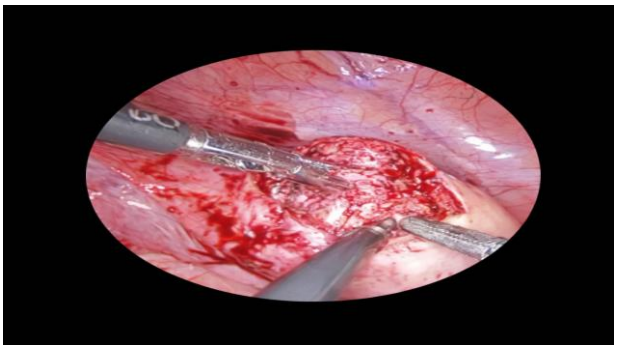

Figure 4: Laparoscopic intraoperative view demonstrating excision of the accessory cavitated uterine mass (ACUM).

Histopathological examination demonstrated a cavity lined by functional endometrium surrounded by smooth muscle fibers, confirming the diagnosis of accessory cavitated uterine mass.

The postoperative period was uneventful. The patient received GnRH analogue therapy for six months and reported significant improvement in dysmenorrhea following resumption of menstrual cycles.

DISCUSSION

Accessory cavitated uterine mass is an uncommon congenital uterine anomaly characterized by the presence of an accessory cavity lined with functional endometrium that is completely separate and non-communicating with the main endometrial cavity. Patients typically present with severe cyclical pelvic pain and dysmenorrhea that often does not respond to conventional medical therapy.[5]

Because of its rarity and nonspecific imaging appearance, ACUM is frequently misdiagnosed as cystic adenomyosis, adenomyoma, or uterine fibroid. MRI plays a crucial role in diagnosis because it clearly demonstrates a cavitated lesion with hemorrhagic content within an otherwise normal uterus.[6]

The diagnostic criteria described by Acién include the presence of a single accessory cavitated mass, a normal uterus with normal fallopian tubes and ovaries, histopathological confirmation of an endometrial-lined cavity, intraoperative evidence of a non-communicating mass, presence of thick dark fluid within the cavity, and absence of adenomyosis in the surrounding myometrium.[7]

Laparoscopic excision is considered the treatment of choice and provides both definitive diagnosis and symptom relief. Most patients experience complete resolution of symptoms following surgical removal of the lesion.[8,9]

CONCLUSION

ACUM is a rare but important cause of severe dysmenorrhea in adolescents and young women. Due to its nonspecific clinical presentation, it is often misdiagnosed as adenomyosis, fibroid, or adenomyoma, leading to delayed diagnosis and prolonged ineffective medical treatment. MRI plays a crucial role in accurately identifying the lesion and distinguishing it from other uterine pathologies. Laparoscopic excision remains the treatment of choice and provides both definitive diagnosis and significant symptomatic relief. Early recognition of this entity is essential to ensure appropriate management and improved quality of life in affected patients.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: Not required

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Cite this article as: Patil A, Fernandes E, Kanojia H. An uncommon cause of severe dysmenorrhea in a 16-year-old: accessory cavitated uterine mass. Int J Reprod Contracept Obstet Gynecol 2026;15:1451-3.