CASE REPORT

Accessory and Cavitated Uterine Mass in a Perimenopausal Female

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Abstract

Background: An accessory and cavitated uterine mass (ACUM) is a rare congenital Mullerian anomaly where an accessory cavity with endometrial lining lies attached to the normal functioning uterus. It is located at the level of the insertion of the round ligament. It occurs due to Mullerian duct tissue's duplication or persistence, which originated from gubernaculum dysfunction, leading to accessory uterine tissue formation. It is common among young and nulliparous women presenting severe dysmenorrhea and infertility. It is mostly seen in women below 30 years of age. Rudimentary and uterine horns and degenerating fibroids are the possible differential diagnoses.

Case description: A 45-year-old female presented with complaints of pain abdomen and irregular menstrual cycles for 2 months. On magnetic resonance imaging (MRI), a well-defined cystic lesion was seen in the left ovary measuring 54 mm × 40 mm × 36 mm, which was suggestive of a left ovarian benign cystic lesion – hemorrhagic cyst. On Pelvic ultrasound, a complex cyst of 74 mm × 52 mm with a hyperechoic area of 36 x 31 mm suggests a left ovarian tumor. The patient belonged to the perimenopausal age group and completed the family, so a total abdominal hysterectomy with bilateral salpingo–oophorectomy was done and sent for histopathological examination.

Conclusion: Transvaginal ultrasonography (TUV) and MRI aid in diagnosis. Early surgical treatment of the accessory cavitary mass is recommended treatment in this case. Detailed histopathological examination is mandatory to meet the criteria for its complete diagnosis.

Clinical significance: A rare congenital mullerian is a rare and challenging condition to diagnose. Especially when fertility is desired, a complete medical history, gynecological examination, and radiological analysis are necessary for a correct diagnosis. Laparoscopic excision of the ACUM can be performed in patients where fertility is desired.

Keywords: Cavitated uterine mass, Congenital anomalies irregular menstrual cycles, Irregular menstruation, Perimenopausal age group.

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Introduction

A rare congenital Mullerian defect known as an ACUM occurs when an accessory cavity with endometrial lining lies attached to the normal functioning uterus.[1] Duplication of the Mullerian duct caused by a dysfunctional gubernaculum leads to accessory uterine tissue formation at the level of the round ligament.[2] This condition is more likely to occur in women with severe dysmenorrhea and infertility, especially young and nulliparous women. Women under the age of 30 are more likely to suffer from ACUM. Rudimentary and uterine horns and degenerating fibroids are the possible differential diagnoses.

Case Description

A 45-year-old female with P4L4, tubectomized, presented to the outpatient department (OPD) with complaints of heavy menstrual bleeding for 3 months. She gives a history of changing 2–3 sanitary pads per day with a history of the passage of clots. She does not have a history of dysmenorrhea.

One month ago, she underwent an MRI pelvis (Fig. 1) and a TVS for similar complaints, which revealed a left ovarian hemorrhage cyst measuring 5.4 cm × 4.0 cm × 3.6 cm. Cancer antigen 125 (CA-125) was 8.5, for which she had received conservative management and progesterone hormonal pills, but the symptoms were not relieved.

After obtaining the patient's consent, a total abdominal hysterectomy and bilateral salpingo-oophorectomy was performed. Upon determining the patient's fitness for surgery, the patient was taken for surgery the following day.

Intraoperatively, a small accessory mass arose from the left lateral wall of the uterus of size 4 cm × 4 cm filled with blood. Both the fallopian tube and the ovaries were normal.

In the immediate postoperative period, the patient received broadspectrum antibiotics with analgesics, and her hemoglobin (Hb) was 9.4; WBCs count was 7,480; and platelet count was 1,69,000/mm^3. She was discharged on 6th postoperative day without any complications.

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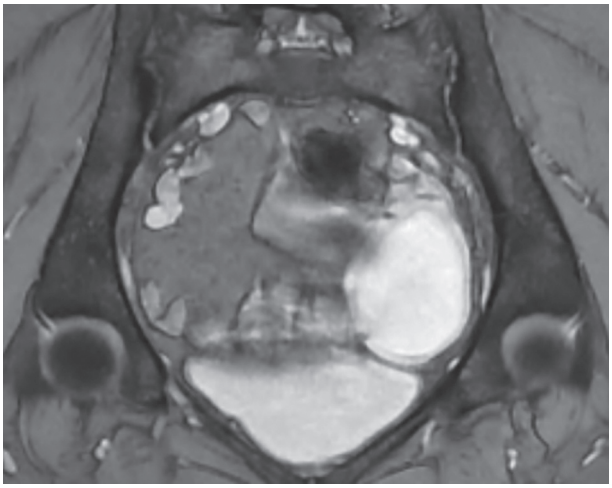

Fig. 1: An MRI image of the cystic lesion in the left ovary

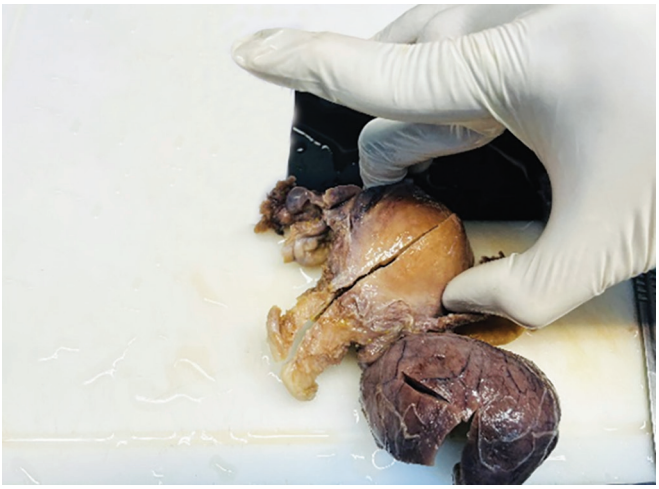

Fig. 2: Gross: Dark brown globular cavitated mass

On Gross

Dark brown globular cavitated mass (Fig. 2) attached to the left lateral side of the uterus measuring 5 cm × 4 cm × 3 cm.

Cut section shows that the wall is thick and drained 5 mL of chocolate brown material and shows a focal brown granular surface. Mass is not communicating with the uterus.

On Microscopy

Sections studied from cystic globular mass showed endometrial tissue comprising glands and stroma (Fig. 3), areas of hemorrhage, and many congested and dilated blood vessels with intervening smooth muscle fibers. Hence, an ACUM diagnosis have been made.

Discussion

The Wolffian and Mullerian ducts interact to produce the genitourinary system during development. Mullerian ducts develop when the dorsal coelomic epithelium invaginates during the 6th week of pregnancy. During pregnancy, the Mullerian ducts fuse

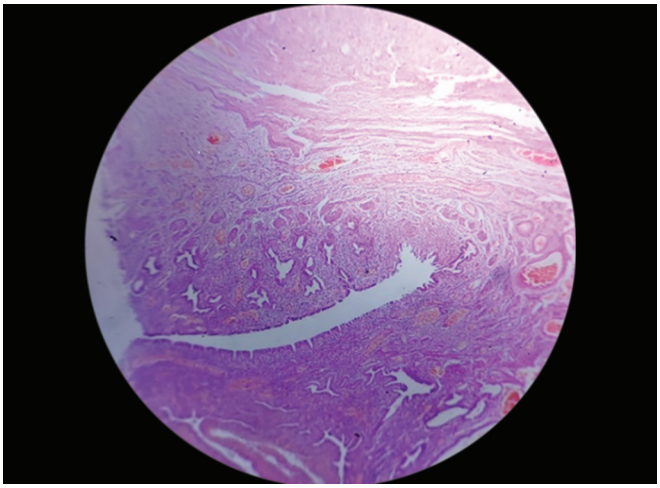

Fig. 3: Microscopy (40×): Endometrial glands and stroma

with the urogenital sinus in a craniocaudal direction, forming the uterus, bilateral fallopian tubes, and the upper one-third of the vagina. There is acceptance by many authors believing that ACUM is a congenital anomaly.

Abnormal anatomy caused by distorted embryogenesis can be called a Mullerian anomaly. Accurate and reliable classification of Mullerian anomalies can help diagnose and manage patients with Mullerian anomalies.

Uterine-like mass (ULM) is another clinical entity characterized by cavitated cells surrounding functional endometrium and smooth muscle cells around the periphery of the mass. There can be these masses both within and outside the uterus. As ACUM can present with a normal uterus in contrast to other Mullerian anomalies, it should be classified separately.

An ACUM is a rare congenital Mullerian anomaly due to Mullerian duct tissue's duplication or persistence. Accurate diagnosis of ACUMS can improve treatment outcomes. Therefore, a proper diagnosis of the cavitated uterine mass is necessary for effective treatment. The following are the criteria to diagnose the ACUM's:[3,4]

- It is usually found under the round ligament and is an additional cavitated mass attached to the normal uterus.
- Uterus, Fallopian tubes and ovaries should be normal.
- Endometrial glands and stroma lining the cavity masses.
- A chocolate-brown-colored fluid and a pathological evaluation.
- Mass not communicating with the uterus.
- No adenomyosis in the uterus.
- It is located at the point where the round ligament insertion occurs.

After histopathology examination, an accessory cavitated uterine mass was diagnosed; in addition, because the uterus, fallopian tubes, and ovaries were normal, other Mullerian anomalies were excluded.

The ACUMs are problematic because of broad differential diagnosis and are listed below (Table 1):

In the study conducted by Acién et al., all women had experienced dysmenorrhea and were in the younger age group, in contrast to our case. In contrast, the patient in the perimenopausal age group had not experienced dysmenorrhoea.[4]

Table 1: Differential diagnosis of ACUM and their features

Accessory cavitated uterine mass	*Rudimentary uterine horn*	*True cavitated adenomyoma*	*Degenerating fibroid*
Pathogenesis It is due to the Mullerian duct's duplication or persistence.	A Mullerian anomaly occurs when one of the Mullerian ducts fails to extend into the urogenital canal.	Myometrial invasion by endometrial basalis.	Smooth muscle cells and fibrous tissue is seen.
Definition Cavitated mass resembling the normal uterus has the same appearance as the normal myometrium.	It is usually associated with uterine malformation.	Focal adenomyosis is present.	
Microscopy In addition to epithelial glands and stroma, smooth muscle cells surround the tissue.	There is an endometrial epithelium lining the cavity. Adenomyosis is not seen.	The cavity does not have an epithelial lining – lacks uterus-like smooth muscle organization.	The uterine corpus exhibits adenomyosis. Interlacing fascicles of spindle cells were noted.

Conclusion

An ACUM is a rare and challenging condition to diagnose. Both TUV and MRI make it easier to make a reliable diagnosis before surgery. Early surgical treatment, which involves adequate excision of the accessory cavitary mass, is recommended. Because ACUM is generally asymptomatic, it is challenging to distinguish it from other conditions.

Detailed histopathological examination is mandatory to meet the criteria for its complete diagnosis.

References

1. Azuma Y, Taniguchi F, Wibisono H, et al. A case report of an accessory and cavitated uterine mass treated with total laparoscopic hysterectomy. Yonago Acta Medica 2021;64(2):207–209. DOI: 10.33160/yam.2021.05.004.
2. Hu YL, Wang A, Chen J. Diagnosis and laparoscopic excision of accessory cavitated uterine mass in a young woman: A case report. World J Clin Cases 2021;9(30):9122–9128.
3. Acién P, del Campo FS, Mayol MJ, et al. The female gubernaculum: Role in the embryology and development of the genital tract and in the possible genesis of malformations. Eur J Obstetr Gynecol Reprod Biol 2011;159(2):426–432.
4. Acién P, Bataller A, Fernández F, et al. New cases of accessory and cavitated uterine masses (ACUM): A significant cause of severe dysmenorrhea and recurrent pelvic pain in young women. Human Reprod 2012;27(3):683–694. DOI: 10.1093/humrep/der471.