

## CASE REPORT

# An Interesting Case of an Adnexal Mass Mimicking a Mesenteric Cyst in Pregnancy

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### ABSTRACT

**Aim:** Due to the widespread use of first-trimester screening ultrasound, the incidence of adnexal masses in pregnancy has risen. However, the diagnosis of adnexal masses is not always straightforward and all differentials need a thorough evaluation.

**Background:** Adnexal masses during pregnancy are not uncommon. Large simple ovarian cysts can mimic a mesenteric cyst rarely.

**Case description:** A 21-year-old female with complaints of acute pain in the abdomen, with vomiting and two episodes of fever presented on the 7th day of vaginal delivery. She was diagnosed as having a large mesenteric cyst in the antenatal period, however, on repeat imaging and exploration, it was an adnexal mass with torsion detorsion.

**Conclusion:** This case report highlights the importance of the diagnosis of adnexal masses accurately early during pregnancy and one of the potential challenges faced thereof.

**Clinical significance:** An accurate diagnosis and planned management of the pregnancy with an adnexal mass can lead to favorable maternal and fetal outcomes. All differentials need thorough consideration.

**Keywords:** Hysterectomy, Leiomyoma, Magnetic resonance imaging, Uterine artery embolization.

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### INTRODUCTION

Pregnant women experience adnexal masses at a rate of 2–20 per 1000, which is roughly 2–20 times higher than in an age-matched group.<sup>1</sup> Adnexal masses have been reported to occur more frequently in pregnant women because of the more frequent use of ultrasound. Adnexal masses are most commonly identified in the first-trimester, and evaluation of the adnexa is a part of the standard first-trimester obstetrical sonogram.<sup>2</sup>

### CASE DESCRIPTION

A 21-year-old female, gravida 2 para 1 living 1, was registered at a peripheral hospital of 12 weeks gestation with a first-trimester ultrasound (US) suggestive of a midline cystic structure measuring 11 × 8 × 14 cm. All routine antenatal investigations were within normal limits. She was referred to the tertiary care center for further antenatal follow-up. A repeat US at 18 weeks gestation with a targeted anomaly scan was suggestive of an 18 × 15 × 10 cm well-defined simple cystic lesion with low-level echoes in the retroperitoneal plane with a wall thickness of 2 mm and no evidence of solid structures, papillary projections, calcifications, or internal vascularity, with the differential diagnosis being mesenteric cyst or chocolate cyst and subsequently an MRI abdomen and pelvis was advised. Antenatal MRI was suggestive of a 13.3 × 13.6 × 17.4 cm (AP × ML × SI) well-defined T2 hyperintense/T1 hypointense cystic lesion noted predominantly in the left-upper abdomen, including epigastric, left hypochondriac, and left lumbar region, not showing restricted diffusion suggestive of mesenteric cyst more than lymphangioma. As a result, the patient in our case underwent assessment using ultrasonography and MRI of the pelvis and abdomen, both of which indicated a cystic lesion with

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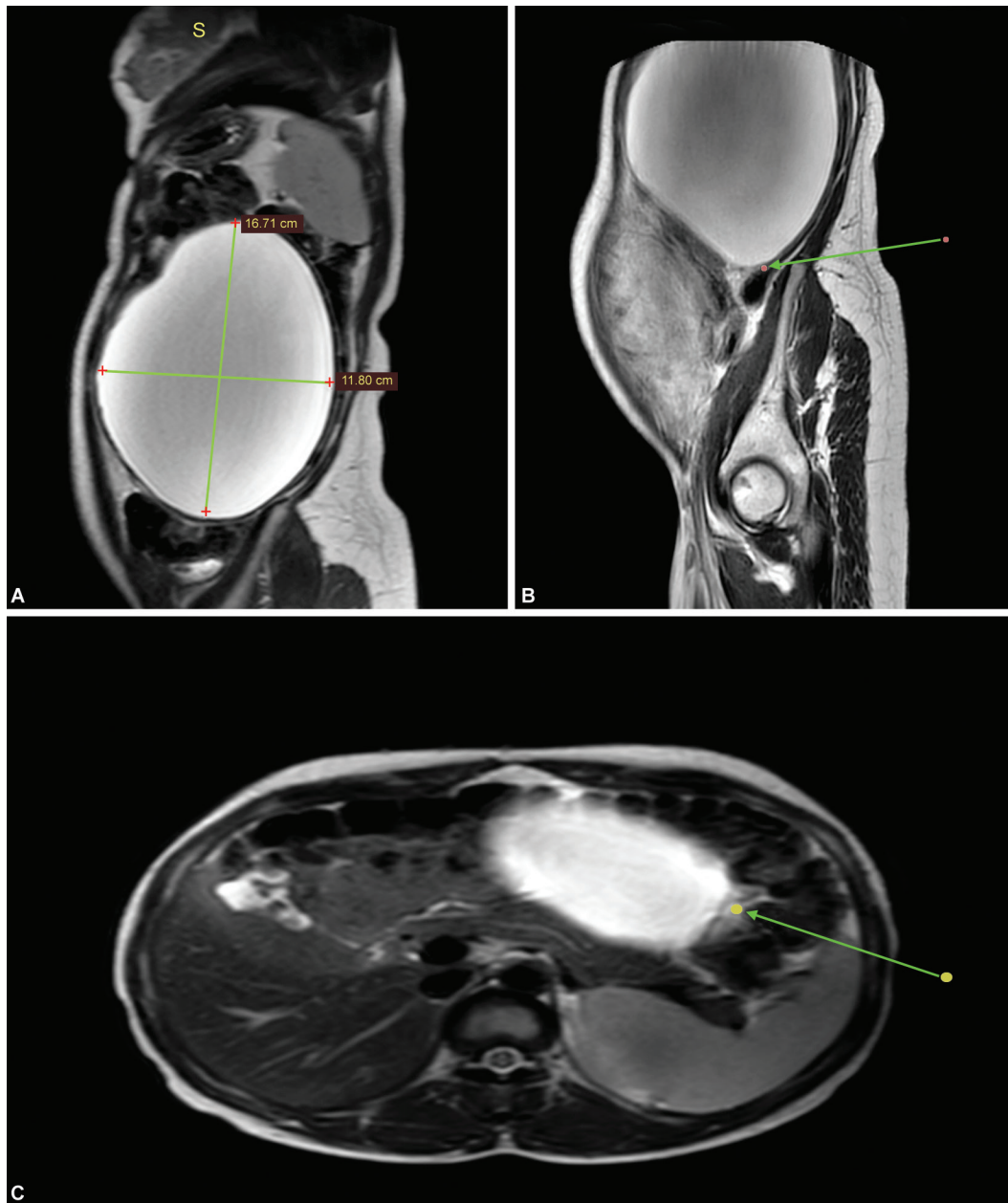
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homogeneous clear content and a differential diagnosis between a mesenteric cyst and a lymphangioma. A surgical reference was taken for the mesenteric cyst and the patient was advised to follow-up after 2 months of delivery or if she developed any symptoms related to the cyst such as pain in the abdomen, fever, or fever with chills, etc. Definitive surgery was planned after delivery (Fig. 1).

The patient at 39.2 weeks by dates and 39.0 weeks by US scan presented to the receiving room in spontaneous labor. The patient had an uneventful course in labor and delivered vaginally a female child of 3090 gm. Postdelivery, the patient had an uneventful course in the PNC ward and was discharged on the 3rd day of vaginal delivery. A reference from the surgery department was taken and she was asked to follow-up in their OPD after 15 days.

However, on the 7th day of vaginal delivery, the patient presented to the emergency department with an acute abdomen and three episodes of vomiting. The pain was not subsiding on



**Figs 1A to C:** Antenatal MRI suggestive of mesenteric cyst more than lymphangioma

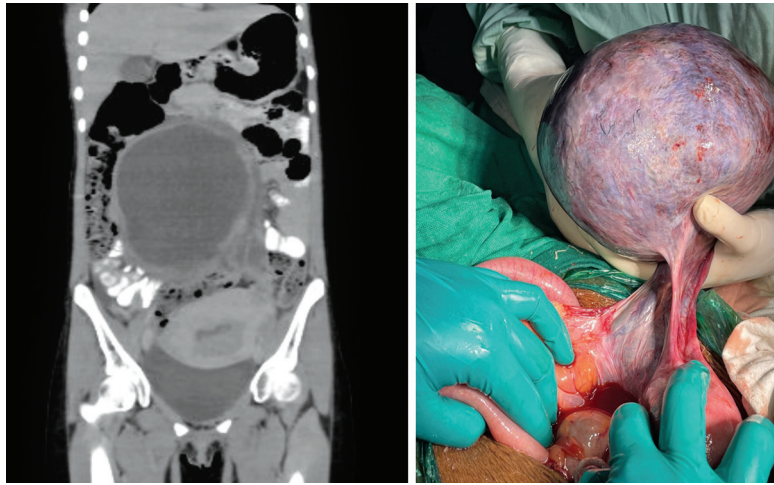
treatment and the patient was admitted to the surgery ward. On general examination, the general condition was moderate with tachycardia and two fever spikes of 38°C in 24 hours. An urgent CT scan was done to evaluate the mesenteric cyst and for complications such as torsion, rupture, intestinal obstruction, infection, or bleeding. CT scan revealed a large, well-defined, peripherally enhancing thick-walled cystic lesion measuring 14 × 17 × 21 cm with a thickened vascular pedicle measuring 3 × 4 × 8.5 cm suggestive of a left ovarian mucinous cystadenoma with torsion–detorsion syndrome more than a mesenteric cyst with a hemorrhagic component.

With a prediagnosis of an ovarian or a mesenteric cyst, the patient was prepared for surgery and was taken up for emergency exploratory laparotomy with SOS salpingo-ovariectomy. A vertical midline incision was taken supra- and infraumbilical up to 2 cm

above the pubic symphysis. Intraoperative findings were suggestive of left ovarian cystadenoma of about 20 × 18 cm with four and a half turns of the vascular pedicle with a flimsy adhesion band noted posteriorly to the sigmoid colon. Left-sided salpingo-ovariectomy was done and the sample was sent for histopathology. The patient was stable postoperatively and was discharged on day 4 of surgery. The final histopathology report was suggestive of a simple ovarian cyst with torsion (Fig. 2).

## DISCUSSION

Cysts originating from the mesentery and omentum may be confused with loculated acid accumulations, lymphangiomas, and adnexal masses.<sup>3</sup> In instances of torsion, early diagnosis and treatment are crucial to preserve the adnexa and minimize



**Figs 2A and B:** Ovarian torsion on (A) CT scan and (B) intraoperative images

maternal and fetal morbidity. Due to the lack of specificity in its symptoms and signs and the possibility of confusion with other acute abdominal conditions, adnexal torsion during pregnancy is challenging to identify. The distinction between solid and cystic intra-abdominal tumors can be made using ultrasonography. A CT scan may be utilized to determine the boundaries and site of a tumor lesion.<sup>4</sup> This case demonstrates one instance where CT is valuable in diagnosing adnexal mass torsion in a postnatal patient with equivocal sonographic findings. In the present case, the uterine involution could have led to torsion–detorsion of the adnexal mass and led to an acute presentation in the postnatal period. Moreover, the band of adhesion with the sigmoid colon could have contributed to the diagnostic dilemma of a mesenteric cyst *vis-à-vis* an adnexal mass. To our knowledge, this is one of the rare cases where the antenatal diagnosis of the simple ovarian cyst was confused with a mesenteric cyst due to the location of the mass and adhesions to the sigmoid colon. In conclusion, the diagnosis of adnexal mass in pregnancy can sometimes be challenging and all differentials should be considered before continuing with further management. Surgery should be performed with extra caution in the first trimester because of the elevated risk of miscarriage (about 15%). The procedure should, if at all possible, be deferred until early in the second trimester or even after childbirth. It is preferable to refrain from deferring surgical intervention until the third trimester because the larger uterus during this time makes surgery more challenging. Additionally, preterm birth may be caused. In case of a symptomatic presentation during pregnancy, adnexal masses can safely be excised, especially in the second and to some extent in the third trimester with favorable maternal and fetal outcomes. In cases of an asymptomatic presentation, the choice of expectant management *vis-à-vis* operative intervention should be guided by the size of the mass, patient autonomy after relevant counseling,

and the risk-to-benefit analysis on a case-to-case basis. All patients wanting expectant management should be counseled regarding the possible complications of the adnexal mass such as torsion, rupture, risk of malignancy, and obstetric complications such as preterm labor, labor, dystocia, etc. When ultrasound results are ambiguous, MRI may be useful for diagnosing the torsion of an adnexal mass in late gestation.

## CONCLUSION

This case report highlights the importance of diagnosis of adnexal masses early during pregnancy and the potential challenges faced thereof. Accurate diagnosis and planned management of the pregnancy with the adnexal mass can lead to favorable maternal and fetal outcomes. The choice of expectant management versus operative intervention needs deliberation on a case-to-case basis.

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