# A Rapidly Enlarging Ovarian Cyst in a Pregnant Patient: The Surprise

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## ABSTRACT

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**Introduction:** More than 90% of ovarian tumors during pregnancy are less than 5 cm in size and are generally absorbed spontaneously before the 16<sup>th</sup> week of pregnancy. A big, rapidly enlarging ovarian tumor during pregnancy is an extremely rare finding and when present, should raise suspicion for malignancy. We present a case of a rapidly enlarging ovarian mass that, surprisingly, turned out to be a benign tumor.

**Case Presentation:** 23-year-old pregnant, G3P1101, at 13 weeks of pregnancy, that came to the emergency department for evaluation of abdominal pain. Patient reported she was experiencing a left lower quadrant abdominal pain. Pain was cramping, and was radiating to the back. No vaginal bleeding, nausea, vomiting or urinary complaints associated with it. Abdominal exam demonstrated a gravid uterus, and a soft abdomen with mild left pelvic tenderness to palpation. Initial pelvic ultrasound (US) showed a single live intrauterine pregnancy along with a 9.6 cm thin walled anechoic left ovarian cyst (*Image 1*).



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## **PUBLISHED ABSTRACT**



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#### **KEYWORDS:**

Pregnancy; ovarian tumor; cystadenoma; ovarian mass; ovarian cyst

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**Image 1** Demonstrating a 9.6 cm cyst.

At 22 weeks of gestation, her uterine height was noted to be much greater than expected for her gestational age and repeat US showed the cyst was 13 cm in size (*Image 2*). Subsequently, ultrasound done at 26 weeks of gestation showed a left ovarian cyst of 18 cm which contained a 7 cm multiseptated avascular daughter cyst (*Image 3*). CA 19-9, CA-125, and inhibin A were elevated. CEA and AFP were normal for this stage of pregnancy. After this, a transvaginal US showed a huge, complex cystic mass in the left adnexa measuring 21.6 cm, with a solid portion seen in the cranial aspect of the cystic mass. Because of the rapidly enlarging nature of this mass, a concern for malignancy was raised. Betamethasone was given for fetal lung maturation and patient underwent emergent exploratory laparotomy.





A 20-cm left ovarian mass adherent to the retroperitoneum was found and removed. The pathology results were significant for a mucinous cystadenoma. The patient proceeded with the remainder of the pregnancy delivered a viable newborn at 40 weeks via spontaneous delivery. There were no complications following the delivery and both mother and baby are doing well.

**Discussion:** There are many cases describing rapidly enlarging malignant tumors during pregnancy. But, there are not many cases describing rapidly enlarging **benign** tumors during pregnancy. Balci et al. published a series of 36 cases of pregnancies with adnexal masses, comprising patients over a 6-year period, and only 1 case of adnexal masses requiring surgery turned out to be a mucinous cystadenoma.

The pathogenesis of mucinous cystadenomas and the mechanism by which these tumors may grow rapidly during pregnancy is unknown. A possible theory is that these

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**Image 2** The cyst was 13 cm in size.

**Image 3** Left ovarian cyst of 18 cm which contained a 7 cm multiseptated avascular daughter cyst. tumors may be positive for hormonal receptors. However, there are cases of receptornegative tumors that expand rapidly during pregnancy as well. More study is needed to understand the origin and mechanism by which these tumors may grow rapidly, as this is unknown and may have significant implications in terms of management.

**Conclusions:** Even though a rapidly enlarging ovarian tumor during pregnancy may raise suspicion for malignancy, there is still a possibility to find a benign tumor. This is extremely rare, but, more study regarding these tumors is needed so that a timely management can be instituted to avoid miscarriages, intra-uterine growth restrictions, and other obstetrical complications.

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## **COMPETING INTERESTS**

The authors have no competing interests to declare.

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