

## **A Case of Successful Pregnancy Outcome with a Large Ovarian Cyst- A Case Report**

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### **Abstract**

Ovarian cysts during pregnancy are not uncommon. With increasing use of early antenatal ultrasound, the incidental discovery of adnexal masses during early gestation is a clinically relevant problem that requires careful consideration.

Here, we have presented a case in pregnancy with a large ovarian cyst with a history of unilateral oophorectomy in pre-pregnancy state due to complex ovarian mass.

She is a case of 26 years old primigravid, presented at 8 weeks of gestation with clinical and ultrasonographic detection of a large cyst (about 9.2cm x 6.9cm) in the left ovary with suspicion of dermoid cyst. She had a history of right sided oophorectomy due to complex ovarian cyst at her 18 years of age which was histologically proved to be benign. This patient was treated conservatively with relevant investigation and tumour markers which was found insignificant with an aim to continue pregnancy until at least 14 weeks of gestation and was vigilant enough for early detection of any complication. Operative interference was not done at this stage due to increased chance of early fetal loss & clinically benign nature of the tumour. The tumour was persisting and gradually increasing in nature and at 11 weeks gestation it was about 11cm x 10cm, suggestive of dermoid. Although clinically stable, with a fairly large ovarian cyst which was increasing in size & with a suspicion of future torsion that will damage the only persisting ovary, this patient underwent laparotomy followed by ovarian cystectomy at 15 weeks of gestation. Close monitoring of the rest of the pregnancy period was done & it was uneventful except at 32 weeks of gestation she developed PIH which was managed conservatively. She underwent caesarean section at 38 weeks of gestation due to fetal distress.

### **Keywords**

Ovarian cyst, Pregnancy, Caesarean section.

### **Introduction**

The overall estimated incidence of adnexal masses in pregnancy ranges from (10% to 25%).<sup>1</sup> The incidence of ovarian cyst in pregnancy has increased with the use of dating ultrasound in the first trimester. It enhances anxiety to the pregnant women as it involves increased investigation, admission and antenatal visits.<sup>2</sup>

However, as gestational age advances, the incidence of adnexal masses gradually decreases likely secondary to spontaneous resolution of many of these masses.<sup>3</sup>

The most common ovarian masses in premenopausal women are functional cyst like a follicular or corpus luteum, are due to hormonal influence. On the other hand, dermoid cyst are the most

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the most common nonfunctional ovarian masses in premenopausal women.<sup>4,5,6</sup> Observational studies evaluating sonographically detectable adnexal pathology during pregnancy estimate an incidence of 1%-4% with the majority of masses resolving spontaneously.<sup>7,8</sup>

Asymptomatic and benign cysts can be managed conservatively while persistent symptomatic ovarian cysts are at increased risk of torsion, rupture and rarely obstructing labour and few cases with a typical feature may represent with malignancy. In these instances, surgical intervention may be done.<sup>2</sup>

The timing of surgical interventions for adnexal pathology during pregnancy also requires careful consideration. There is evidence to support the ideal time for intervention is 14 to 22 weeks of gestational age.<sup>3</sup> However at any time, if there is evidence of torsion, rupture or malignancy immediate surgery is required.<sup>9</sup>

Here in we present a case of a fairly large ovarian cyst in a pregnant female who had a history of pre-pregnancy oophorectomy for complex ovarian mass and its management with a successful pregnancy outcome.

### Case Report

A 26-year-old female married since last 4 years, primigravid was booked in our antenatal outpatient department at 8 weeks of gestation with mild lower abdominal discomfort. On examination, her vital signs were stable. Per abdomen revealed no tenderness and guarding but a fairly large mass, central and deviated to left side movable in all direction about 10cm x10cm was found. Ultrasound showed a single live intrauterine gestation corresponding to 8 weeks of

gestation with a large cyst with internal echogenic mass measuring about 9.2cm x 6.9cm sized seen in the left ovary suggestive of dermoid cyst. Her basic laboratory investigations were normal. Tumour marker showed moderately increased CA-125 & CA-19-9 with other markers such as CEA, B-hCG, CA 15-3 within normal limit. Colour Doppler ultrasonography showed no other intra-abdominal pathology with same sized ovarian mass without any vascular aberration. This patient had a history of right sided oophorectomy for complex ovarian mass at her 18 years of age which proved histologically benign.

Patient was managed inpatient conservatively with supportive treatment with analgesic & progesterone support with an aim to continue pregnancy. Within few days she was discharged with good condition after exclusion of all other pathology with a weekly follow-up at ante-natal clinic. She was reasonably well until 11 weeks of gestation when she presented with lower abdominal discomfort. Clinically she was stable. Ultrasonography showed a left dermoid about 11cm x 10cm with 11 weeks live single intrauterine pregnancy with no feature of torsion or rupture. Basic investigations were normal. Repeat tumour marker showed normal findings. Our aim was to continue pregnancy until at least 14 weeks of gestation with close monitoring and supportive treatment. She was complaining of on & off lower abdominal discomfort. Although clinically stable, with a fairly large ovarian cyst which was increasing in size & with a suspicion of future torsion that will damage the only existing ovary, she underwent laparotomy at 15



The tumour markers like CA-125, B-hCG are insignificant in diagnosis as they are usually raised in pregnancy. However, they can be used for follow up in tumour control.<sup>5</sup>

In this case tumour markers was done at initial presentation and also for follow-up purpose.

Asymptomatic and benign cyst can be managed conservatively while persistent symptomatic ovarian cysts are at increased risk of torsion, rupture. In these cases surgical intervention can be done & there is evidence to support the ideal time for intervention is 14 to 22 weeks of gestation.<sup>2,3</sup> In a retrospective review of surgical intervention for adnexal pathology, 12% of women had preterm delivery, 3.3% experienced spontaneous abortions and there were 3 perinatal deaths among 60 infants, 2 of which for congenital anomalies. However Whitecar et al found adverse fetal outcomes including preterm delivery and fetal loss were significantly less frequent if surgery occurred prior to 23 weeks gestation.<sup>13, 14</sup>

Histologically the majority of adnexal masses in pregnancy are benign. The most common histological diagnoses are dermoid cyst (37-50%), cystadenoma (20-24%), endometrioma (5-11%), and functional cysts (6-13%).<sup>5,15,16</sup>

In this present case although the women presented with a fairly large ovarian cyst in early pregnancy, she was managed conservatively until 15 weeks of gestation. With the suspicion of torsion & gradual increased in size laparotomy followed by ovarian cystectomy was done.

In our case the histopathology of the cyst was mature cystic teratoma (dermoid cyst).

Her remaining antenatal period was uneventful except development of PIH which was managed accordingly. She delivered at term pregnancy at 38 weeks gestation due to foetal distress with good foetal outcome.

### Conclusion

In summary, the incidence of ovarian cyst has increased with increased use of dating ultrasonography. Prior to the use of routine first trimester ultrasound, adnexal mass only become clinically relevant if symptomatic or if they are large enough to palpate on physical examination. Knowing that the majority of ovarian cysts in pregnancy are benign and resolve spontaneously, management is usually conservative with serial ultrasound monitoring & other laboratory investigation.

So, decision for surgical management should outweigh the risks of adverse perinatal outcome. In these regard it is best to avoid surgery in the first trimester and ideal time for intervention is 14 to 22 weeks of gestation.

With proper planning, management and expertise the pregnant women with ovarian cyst can have a good maternal and fetal outcome.

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