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Ovarian Tumours in Pregnancy: A Case Series of Three Surgical Interventions

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Type of Publication: Case Series

Conflicts of Interest: Nil

Abstract

Background: Ovarian tumours during pregnancy are uncommon, with most being benign. Their management is challenging because maternal and fetal safety must be considered simultaneously.

Methods: We present a case series of three pregnant patients with ovarian tumours who underwent surgical management at the Department of Obstetrics and Gynaecology, Karnataka Institute of Medical Sciences (KIMS), Hubli. The cases differed in gestational age, clinical presentation, operative indication and pregnancy outcome.

Results: Two patients underwent successful surgery with one continuation of pregnancy and delivery of healthy infant. One patient experienced spontaneous abortion following surgical removal of a large ovarian mass.

Conclusions: Early identification and appropriate management of ovarian tumours during pregnancy are important for favourable maternal and fetal outcomes. Surgical intervention should be individualized according to gestational age, symptoms, tumour characteristics and clinical suspicion of malignancy.

Keywords: Ovarian tumour; pregnancy; adnexal mass; laparotomy; salpingo-oophorectomy; cystadenoma.

Introduction

Ovarian tumours and adnexal masses may be detected during pregnancy, most commonly incidentally during

first-trimester ultrasonography. Reported adnexal masses occur in approximately 2.3–8.8% of pregnancies, and the majority are benign.[1,2]

Although many adnexal masses resolve spontaneously, some require intervention because of complications such as torsion, rupture, persistent enlargement or suspicion of malignancy.[2,3,4]

Ultrasonography is the principal imaging modality for evaluation of adnexal masses during pregnancy. Magnetic resonance imaging can provide additional characterization when ultrasonographic findings are indeterminate. Tumour markers should be interpreted cautiously because pregnancy can alter their levels and specificity.[5,6]

We report three cases of ovarian tumours managed surgically during pregnancy at KIMS, Hubli, highlighting different clinical presentations, operative approaches and maternal-fetal outcomes.

Case Series

Case	Age / Obstetric status	Gestation	Presentation / Tumour	Surgical management	Histopathology / Outcome
1	25 years, G2P1L1	22 weeks	Acute abdominal pain, nausea and vomiting; 10 cm right ovarian mass with torsion	Emergency laparotomy; right salpingo-oophorectomy	Haemorrhagic corpus luteal cyst; pregnancy continued; term male infant, 2.8 kg
2	29 years, G3P1L1A1	38 weeks	10 × 12 cm right ovarian cyst on ultrasonography;	Elective LSCS with right salpingo-oophorectomy	Mucinous cystadenoma;
3	29 years, G4P2L1A1	18 weeks	Large left iliac fossa mass; 15 × 15 cm ovarian tumour	Exploratory laparotomy; left salpingo-oophorectomy	Serous cystadenoma; spontaneous abortion at 20 weeks

Case 1:

A 25-year-old G2P1L1 at 22 weeks of gestation presented with acute abdominal pain, nausea and vomiting. Ultrasonography showed a right ovarian neoplasm with torsion. Emergency laparotomy revealed a 10 cm ovarian mass with three loops of torsion and necrosis. Right salpingo-oophorectomy was performed. Histopathological examination revealed a haemorrhagic corpus luteal cyst. The pregnancy continued uneventfully, and a healthy male infant weighing 2.8 kg was delivered at term.

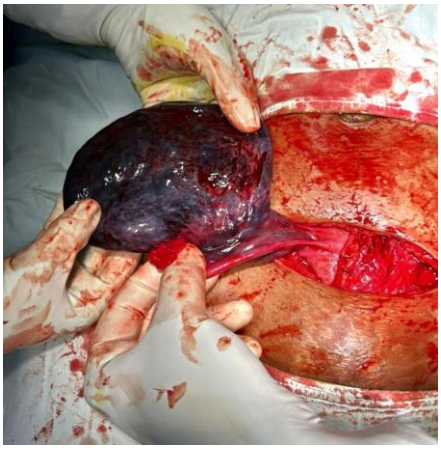


Figure 1: Intraoperative appearance of ovarian torsion in pregnancy.

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Case 2:

A 29-year-old G3P1L1A1 at 38 weeks of gestation with a previous lower-segment caesarean section was referred from a peripheral centre. Ultrasonography showed a 10 × 12 cm right ovarian cyst, and CA-125 was normal. She underwent elective LSCS with concurrent right salpingo-oophorectomy. Intraoperatively, a 15 × 25 cm ovarian cyst was found. Histopathology confirmed mucinous cystadenoma. A female infant weighing 2.1 kg was delivered.

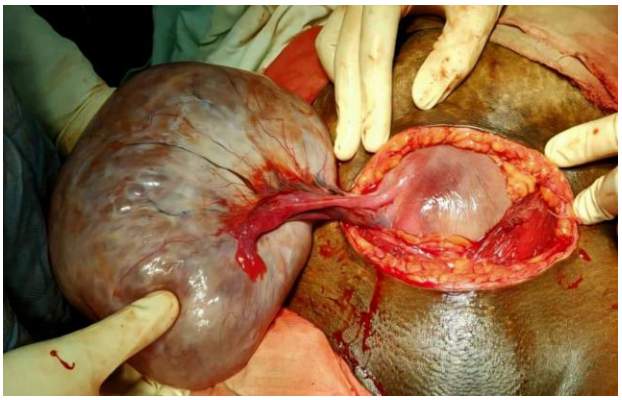


Figure 2: Intraoperative appearance of mucinous cystadenoma in pregnancy.

Case 3:

A 29-year-old G4P2L1A1 at 18 weeks of gestation presented with a large left iliac fossa mass. Imaging revealed a 15 × 15 cm ovarian tumour, and CA-125 was normal. Exploratory laparotomy with left salpingo-oophorectomy was performed. Histopathological examination confirmed serous cystadenoma. Unfortunately, the patient experienced spontaneous abortion at 20 weeks of gestation.

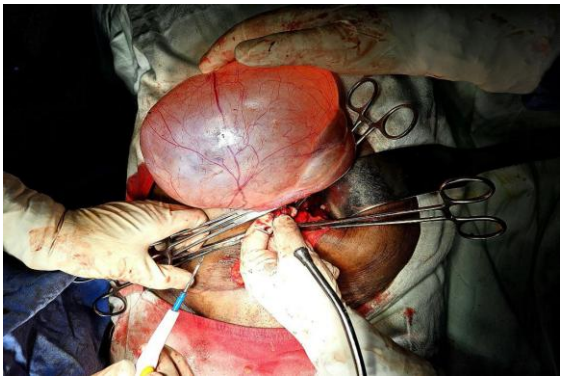


Figure 3: Intraoperative appearance of serous cystadenoma in pregnancy.

Discussion

The management of adnexal masses during pregnancy is clinically challenging because the clinician must consider the natural history of the lesion, the possibility of complications and the effects of intervention on the pregnancy. Small and asymptomatic cysts may regress spontaneously, whereas large, persistent or symptomatic masses may require surgery.[2,3,5]

When elective surgery is necessary, the second trimester is generally considered a suitable period, although urgent surgery may be required at any gestational age for complications such as torsion, rupture or a strong suspicion of malignancy.[4,5,6]

In Case 1, emergency surgery was required at 22 weeks because of torsion with necrosis. Acute abdominal pain associated with nausea and vomiting should prompt consideration of adnexal torsion in a pregnant patient, particularly when an adnexal mass is known or suspected.[6,7] The histopathological diagnoses in this series were a haemorrhagic corpus luteal cyst, mucinous cystadenoma and serous cystadenoma. These findings are consistent with the predominance of benign lesions among adnexal masses encountered during pregnancy.[1,4,5] CA-125 was normal in the two cases in which it was documented. Tumour markers have limited specificity during pregnancy and should not be

interpreted in isolation when evaluating an adnexal mass.[4,5] Two patients had favourable pregnancy outcomes, whereas one patient experienced spontaneous abortion at 20 weeks following surgery at 18 weeks for a large ovarian tumour. Because this is a three-case series, the pregnancy loss cannot be attributed definitively to surgery alone; gestational age, tumour characteristics and perioperative factors may all have contributed.

This small case series emphasizes that management should be individualized according to symptoms, tumour size and morphology, persistence, suspicion of malignancy, gestational age and the presence of acute complications.[2,4,5]

Limitations

This is a small three-patient case series from a single tertiary-care centre. Therefore, the findings cannot be generalized to all pregnant patients with adnexal masses, and no causal inference regarding the pregnancy loss can be made.

Conclusion

Ovarian tumours in pregnancy are uncommon but require careful clinical assessment, particularly when a patient presents with acute abdominal pain or a large adnexal mass. Early diagnosis, appropriate imaging and timely individualized surgical management are important for optimizing maternal and fetal outcomes. Surgical planning should take gestational age, symptoms, tumour characteristics and potential complications into account.

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