

## EPITHELIAL OVARIAN CANCER COMPLICATING PREGNANCY

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### ABSTRACT

#### BACKGROUND

It is estimated that 3500 cases of cancer occur in pregnant women annually complicating 1 in 1000 pregnancies. Although rare, ovarian cancer is the second most common gynaecologic cancer diagnosed during pregnancy next to cervical cancer, but it causes more deaths than any other cancer of the female reproductive tract. Ovarian tumours first diagnosed during pregnancy often present a challenge for both the obstetrician and gynaecologists providing pregnancy care and for the consulting subspecialists. Although, the vast majority of these tumours is benign, on rare occasions patients present with tumours that turn out to be malignant requiring more comprehensive and extensive surgical procedures that are more likely to lead to pregnancy loss. Hence, accurate knowledge of tumour characteristics, especially the ultrasound appearance and gestational age at diagnosis are key prerequisite for establishing the most effective management plan not just for the index, but also for future pregnancies. We report a case of recurrent advanced serous adenocarcinoma of ovary in a pregnant woman.

#### KEYWORDS

Pregnant Woman, Right Ovarian Mass, Emergency Caesarean Section with Ovariectomy, Recurrent Advanced Serous Adenocarcinoma of Ovary.

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#### CASE REPORT

A 30-year-old gravida 2, para 1, live 1, previous LSCS was admitted to labour ward with history of 34 weeks gestation and pain abdomen since two days. On examination, she was afebrile, not anaemic, no pedal oedema, vitals stable. Abdominal examination revealed a right paramedian scar, uterus overdistended for gestational age, not acting head mobile, foetal heart 146/min. On per vaginal examination, cervix was uneffaced and os closed. Basic investigations were normal. Ultrasound done showed a single live intrauterine gestation of 35 - 36 weeks with cephalic presentation and adequate liquor. There was a 17 x 12 cms large complex cystic mass with solid components and thick septations in the right adnexa. During her previous caesarean section, there was a huge left ovarian cyst of size 30 x 30 cm for which left ovariectomy was done at our hospital, Government Rajaji Hospital, Madurai. Histopathological examination of the cyst showed seromucinous adenocarcinoma of left ovary. But patient did not come for followup.

Patient was planned for surgical oncologist opinion and CA-125. CA-125 was 15 units/mL. Meanwhile, patient developed labour pains and was taken up for emergency repeat LSCS under spinal anaesthesia.

Abdomen was opened by right paramedian incision and delivered an alive preterm male baby of weight 2.35 kg. The right ovary was enlarged to 20 x 10 cms, multiloculated with areas of haemorrhage and necrosis.

There was about 50 mL of haemorrhagic ascitic fluid. Omental deposits were present. Ascitic fluid was taken for analysis. Right ovariectomy done. Biopsy taken from the omental deposits and abdomen closed in layers. Specimen sent for histopathological examination. Postoperative period was uneventful. Histopathological examination showed serous cystadenocarcinoma of ovary with metastatic deposits in the omentum. Patient was planned for hysterectomy and chemotherapy.



Figure 1



Figure 2

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**Figure 3**

### DISCUSSION

Malignant ovarian tumours constitute about 1 to 2 percent of all adnexal masses that complicate pregnancy. The most common malignant ovarian tumour complicating pregnancy is dysgerminoma. Malignant tumours of epithelial origin as a group however are more common. Sex cord stromal tumours are the third most common primary malignant ovarian tumours, representing 17 to 20 percent of such tumours. Krukenbergs and other metastatic tumours represent about 12 to 13 percent of malignant ovarian tumours complicating pregnancy. Whether malignant or benign, most ovarian tumours complicating pregnancy are unilateral. Even malignant tumours of epithelial origin noted during pregnancy are unilateral in 90 percent of cases. Transcutaneous and transvaginal pelvic ultrasound imaging is an essential reliable technique, which assists the physician in the diagnosis of ovarian tumour during pregnancy. A colour Doppler imaging should also be performed to obtain a vascular road map of the ovarian mass. Pelvic MRI with gadolinium injection can be performed after the first trimester.<sup>(1)</sup> This second line examination should only be indicated during pregnancy to remove any doubt or to provide additional information if the ultrasound examination is not sufficient. CA-125 is found at high levels during the first trimester and then returns to normal. It is not really useful, but can be used in the followup. Management of epithelial invasive tumours: surgery, if considered should be performed similar to non-pregnant state. In patients with ultrasound suspicion of stage I malignant tumour, it is recommended to perform a unilateral adnexectomy without rupture for stage IA tumours and a bilateral one for stage IB tumours associated with peritoneal cytology and complete abdominopelvic exploration in both cases. Adjuvant chemotherapy should be indicated according

to the extension and histology of the tumour and should be similar to the treatment recommended in non-pregnant patients. The final decision concerning platinum-based chemotherapy should be taken with a multidisciplinary approach involving the opinion of paediatricians and obstetricians and considering gestational age.

Treatment should start during or after pregnancy depending on prognosis, multidisciplinary decision and patient preference. The route of delivery should not be an issue. Postpartum secondary surgery should be considered. The surgical procedure should be similar to that of non-pregnant women. For more advanced stage tumours (II to IV), it seems preferable to consider termination of pregnancy before 24 weeks and perform routine surgical treatment for ovarian cancer followed by chemotherapy.<sup>(2)</sup> After 24 weeks and according to the decision of the multidisciplinary task group, histology is often ordered. A biopsy may be performed by the transparietal route under ultrasound guidance by laparoscopy or microlaparotomy. Depending on the stage of the tumour and the gestational age, the remaining options should include surgical treatment during pregnancy if possible or neoadjuvant chemotherapy. The purpose of this approach is to avoid prematurity and foetal toxicity without deferring the mother's treatment. As a result, dates for the last chemotherapy session and delivery for which a caesarean section is most frequently required should be chosen accordingly. Procedures should take place at a 4-week interval, so caesarean section is not planned during a period of aplasia both harmful to mother and child (who may also be diagnosed with aplasia). Preterm birth occurring between 32 to 36 weeks is reasonable. Complete surgical treatment should be performed by a surgical oncologist at caesarean section if possible or after delivery.

### CONCLUSION

For optimal management of a suspected malignant adnexal tumour, a multidisciplinary approach involving specialists in oncology and sometimes in paediatrics is necessary whenever possible as soon as it is diagnosed. It should be kept in mind managing cancer and pregnancy always requires a shared decision between the patient and at least a surgical oncologist, an obstetrician, a medical anatomopathologist and a paediatrician.

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