Ovarian Mucinous Cystadenoma Complicating Pregnancy- A Case Report

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ABSTRACT

Diagnosis of ovarian tumor during pregnancy presents a management dilemma. We herein report a case of huge ovarian cystadenoma complicating pregnancy in a 25 years old gravi 3, previous two caesarian, presenting at 13 wks. pregnancy. She was referred from periphery for uterine size more than the period of gestation and ultrasound (USG) showing 25x12 cm ovarian cyst. USG was inconclusive of benign or borderline ovarian tumor. Neoadjuvent chemotherapy followed by cytoreductive surgery was planned. USG guided fine needle aspiration cytology (FNAC) was done before starting chemotherapy which suggested benign etiology. Management plan was changed to continuation of pregnancy and conservative surgery at 20 wks of pregnancy. Planned exploratory laparotomy with left sided salpingoophorectomy was done under general anesthesia at 22 wks of gestation. Post-operative period was uneventful. Patient was delivered by LSCS at 38 wks. of gestation.

Keywords: ovarian cyst, pregnancy, management.
Introduction

Most ovarian masses found during pregnancy are not malignant, even the malignant masses present at an earlier stage during pregnancy (1). Though there are suggested and researched standardized methods of care for ovarian cancer there is still not enough research due to its rarity. Treatment of ovarian cancer during pregnancy is individualized. If the tumor is in advanced stage, treatment should go on as if there were no pregnancy. Conservative surgery is reserved for early stage disease. Unless malignancy is suspected elective surgery should be delayed until 2nd trimester when the risk of spontaneous abortion is less and hormonal dependence on corpus luteum of pregnancy is reduced, also functional cysts will resolve by this time (2). Although the role of FNAC in management of ovarian tumor is controversial, it is useful in distinguishing non neoplastic cyst from true neoplasm of the ovary (3). In this report we present a case of large left sided ovarian mucinous cyst adenoma, which was diagnosed at 13 wks. of pregnancy and was managed with conservative surgery at 22 wks. of gestation with successful maternal and perinatal outcome.

Case report

A 25 years old lady resident of village in Bihar was referred from primary health center for pregnancy at 13wks with ovarian mass and raised CA-125 (119.5 U/ml) to our hospital. She was previously counseled for termination of pregnancy and laparotomy at private hospital in view of malignant ovarian mass. USG done at 12 wks. which showed 12x25cm septate right adnexal mass with trace ascites, peritoneal fat stranding and nodularity of concern of peritoneal metastasis. History revealed she had previous two lower segment caesarian section and one spontaneous abortion. Previous menstrual cycle was regular and there was no dysmenorrhea. Past medical history was not significant. Bowel and bladder habit were regular. Her general physical examination was unremarkable except mild pallor. Per abdominal examination revealed 20 wks. Suprapubic mass, cystic in consistency, mobile, non-tender, gravid uterus was not delineated separately. On per speculum examination cervix and vagina were healthy. Patient was planned for neo adjuvant chemotherapy followed by surgery by the oncology team. USG guided FNAC was done before starting chemotherapy. FNAC repeated twice suggested benign etiology. Management plan was changed to continuation of pregnancy with conservative surgery at 20 wks. of gestation. Patient was posted for exploratory laparotomy at 22 wks. of pregnancy. Duvadilon was given in the intraoperative and postoperative period for tocolysis. Per operative findings was - 20x 10 cm left sided multisepatated ovarian cyst filled with mucinous material. Mucinous fluid was present in the intra-abdominal cavity, multiple small thin walled cysts filled with mucinous material were present in the intraabdomonal cavity. Uterus was enlarged 20 wks. size. Right sided ovary and fallopian tube were normal in morphology. Left sided salpingo oophorectomy was performed. Specimen was sent for frozen section, which suggested mucinous cystadenoma; fallopian tube was unremarkable. Peritoneal fluid was free of tumor cells. Post-operative period was unremarkable. Patient was discharged on 7th postoperative day. Her pregnancy was followed closely she was delivered by LSCS at 38 wks. of gestation. Both mother and baby had uneventful post-partum period.

Discussion

Diagnosis of cancer in pregnancy is devastating for the mother and a management dilemma for the treating physician. Treatment of ovarian cyst diagnosed during pregnancy is individualized and various factors guide management (malignant potential of the tumor, period of gestation and patient preference). Management requires a multidisciplinary team approach, involving gynecologist, oncologist, radiologist and pathologist. Use of routine
ultrasonography in pregnancy has led to increase no of cases being diagnosed in pregnancy. Mucinous cystadenoma are one of the benign epithelial tumors which tend to be unilateral and multilocular with smooth surface and contain mucinous fluid. Removal of ovarian mass during pregnancy is indicated for various reasons like risk of torsion, risk of malignancy, elimination of potential cause of dystocia. In our case it was the huge size and suspected malignant potential which lead to intervention. USG is a useful diagnostic tool but sometimes other imaging modalities are required for characterization of tumor. In our case FNAC was done and helped in framing appropriate management plan; although not routinely indicated in diagnoses of ovarian cancers there are certain situations where FNAC has important role to play. In a study by S goel et al(4) USG with needle aspiration was recommended for diagnostic evaluation of ovarian neoplasms. They suggested that Aspiration of ovarian masses under image guidance is a relatively quick, easier, precise and a patient-friendly procedure with minimal morbidity.

There are limited studies on usefulness of CA-125 in pregnancy. De Haan et al(1) have reported that decidua- and amnion cells also produce CA-125 resulting in higher CA-125 levels during pregnancy especially in the first and third trimester respectively because of trophoblast invasion and detachment of the placenta. Ayaty S et al(5) in their study found that CA-125 levels are raised during the first trimester and return to a non-pregnancy range in late pregnancy. In our case value of CA-125 was 119.5U/ml, which could have been due to the effect of pregnancy rather than being secreted from tumor.
Yakasai et al \(^6\) in their study found that ovarian masses over 10 cm in diameter should be removed during pregnancy because of the substantial risk of malignancy and tumors 6-10 cm in diameter should be carefully evaluated. In our case tumor size was more than 10 cm and it was suspicious of malignancy so surgery was planned. The ideal period for scheduled surgery is probably the beginning of the second trimester. In an article by Hosam elhalwagy \(^7\) it was suggested that surgery should be avoided during the first trimester because of the high likelihood of a corpus luteum cyst, the low likelihood of an invasive malignancy, the low risk of adnexal complications associated with observation, and the potential for pregnancy loss or teratogenicity. We operated our case at 22 wks. with successful continuation of pregnancy.

**Conclusion**

Management of ovarian tumors during pregnancy should be individualized. Patient should also be involved in decision making especially if there is suspected malignant ovarian mass. Accurate diagnosis and timely intervention results in good antenatal outcome.

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**References**


