



**ORIGINAL RESEARCH PAPER**

**Obstetrics & Gynaecology**

**COLLOSAL MUCINOUS CYSTADENOMA OF OVARY IN PREGNANCY –SERIES OF TWO RARE CASES MANAGED DIFFERENTLY..**

**KEY WORDS:** Surface water, iron and manganese treatment, aeration, chlorination, KMnO4.

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**ABSTRACT** Cystadenomas in pregnancy are rare in occurrence .Mucinous cystadenomas are benign epithelial ovarian tumors which tend to be unilateral and multilocular with smooth outer and inner surface, tends to be large reaching upto 20-40 cm in size and contain mucinous fluid. These cysts can complicate pregnancy by their size or torsion.They can mimic pregnancy symptoms and may be missed. Ultrasound or MRI scan is used for diagnosis of origin and extent of such enormous tumours.Such large cysts need to be managed conservatively in third trimester till term and may need to be operated in second trimester or if complicated anytime during pregnancy.here presenting series of two large cystadenomas presenting at different gestation and managed differently.

**INTRODUCTION**

Ovarian masses commonly encountered during pregnancy are functional cysts of ovary and luteomas being unique to pregnancy<sup>1</sup>.Cystadenomas in pregnancy are rare in occurrence .Mucinous cystadenomas are benign epithelial ovarian tumors which tend to be unilateral and multilocular with smooth outer and inner surface, tends to be large reaching upto 20-40 cm in size and contain mucinous fluid. The other benign masses such as functional ovarian cysts, benign cystic teratomas, and serous cystadenomas are more commonly seen in pregnancy.<sup>(2)</sup>About 80% of mucinous tumours are benign, 10% are borderline and 10% are malignant.<sup>(3)</sup>

The incidence of ovarian tumour is 1 in 1,000 pregnancy and those which are malignant occur 1 in 15,000-32,000 pregnancies.(4-7)Ovarian cysts are estimated to occur in 4.1% of second-trimester and third- trimester obstetric ultrasonographic examinations.Torsion is the most common and serious complication of benign ovarian cysts during pregnancy, cyst may rupture into the peritoneal cavity due to torsion. Incidence of ovarian torsion is 5 per 10000 pregnancies. These cysts can complicate pregnancy by their size or torsion and need to be managed conservatively in third trimester and may need to be operated in second trimester or if complicated anytime during pregnancy.

In this report we present two cases of mucinous cystadenoma presenting differently,one of them as acute emergency while other asymptomatic one was managed conservatively till fetal maturity was reached.

**CASE 1 –**

A 24 year old G2P1L1 with 27 weeks of gestational age with previous full term normal vaginal delivery was referred to this hospital with diffuse abdominal pain with ultrasonography suggestive of huge left sided ovarian cystadenoma.ovarian mass was diagnosed in her prior pregnancy 3years back which was smaller in size then,surgical removal was advised for same which she avoided due to domestic and financial reasons. Her previous menstrual cycles were irregular with interval of 45-60 days .she didn't use any interval contraception.Her previous 2year old male child delivered vaginally was alive and healthy. On examination,she appeared malnourished ,was afebrile, well

oriented to time , place and person . Her pulse was 102/m , blood pressure was 110/80 mm of hg .paloor and edema feet were present. On abdominal examination , her abdomen was over distended and the whole abdomen was full of cystic mass mimicking ascites. Uterus could be palpated separately ad corresponded to 24 weeks size ,FHS was present and regular.Obstetric and abdominal ultrasound revealed a large hypoechoic mass in upper abdomen of approx. 40 x 22 cm size with internal debris and septae within. Suggestive of ovarian cystadenoma. It also showed single live intrauterine fetus of 24 weeks of gestational age with effective fetal weight of 887 gmwith funadal placenta and normal amniotic fluid.

As suggested by radiologist (MRI)magnetic resonance was done which showed showed large lobulated cystic lesion with thin wall and few internal septae without solid component , located intraperitoneally in umbilical region extending into epigastric , bilateral hypochondrium and umbilical region , abutting and compressing uterus inferiorly , possibility of large peritoneal or mesenteric cyst or ovarian cyst. Both the ovaries were not seen separately . Gravid uterus with single live intrauterine fetus was seen .

Serum CA125 was 20.65 IU/L . Her Hb was 8.3 gm . Her routine urine analysis , fasting blood sugars , post prandial blood sugar , liver function tests , kidney function tests , blood group were all within normal range . HIV and HBSAG were negative.She was given 2 units of blood transfusion to correct anaemia .Due to enormous size of cyst and association with pregnancy patient was getting increasing severity of abdominal discomfort mandating removal of cyst. Exploratory laparotomy under epidural anaesthesia with ateam of surgeons.prophylactically tocolytic was given .Due to its benign nature predicted by previous reports 4cm vertical incision was made in umbilical region.Seven litres of mucinous clear fluid was aspirated with care of not spilling it intraperitoneally. As seen in image 1 and image 2 after decompression the cyst was delivered out of the incision it was a left sided ovarian cyst.Frozen section report intraoperative was suggestive of mucinous cystadenoma(Image 3- slide of an ovarian mass stained by rapid H & E stain 10 x view shows multiple cystic cavities lined by tall columnar epithelial lining).

.Left salpingo-oophorectomy was done .



Image-1



Postoperative recovery was uneventful. Patient was discharged without any complication at 28 weeks of gestational age . At present patient is 34 weeks of gestational age having normal antenatal period as shown in Image 4 depicting healed laparotomy scar and well growing fetus

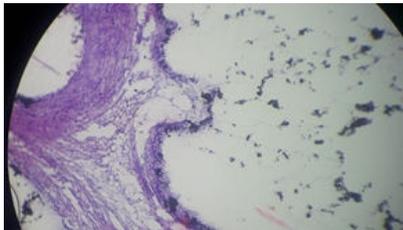


Image3



IMAGE-4

**CASE 2**

26 year old G2P1L1 with 34 weeks gestational age with previous full term normal vaginal delivery with mild anemia came with history of distension of abdomen along with pregnancy which she noticed since previous 4months.

On examination her general condition were fair, well oriented to time, place and person, Afebrile to touch, BP-100/60 mmhg, P- 80 bpm. Abdomen was overdistended large cystic mass was occupying all abdomen was felt which was tense. Uterus could be felt separately corresponding to 30 week size(Image 5- demarcating fundal height of uterus from abdominal distension due to cyst with sponge holding forcep),and uterus was full of fetus in cephalic presentation with normal fetal heart rate.



**IMAGE 5-**

Her ultrasounography was done on 29.9.2017 s/o large multiseptate cystic mass noted arising from right adnexa of approx size 44x19cms occupying whole peritoneal cavity suggestive of ovarian cystadenoma.

Obstetric scan revealed single live intrauterine fetus corresponding to average gestational age of 34 week 2 days gestational age with effective fetal weight 2404 gms with liquor index less than adequate (LI-6) with placenta anterior grade 3 with colour doppler suggestive of reduced diastolic flow in umbilical artery. Serum CA-125 was 22.8 IU/ml, Antenatal profile revealed normal blood and urine analysis report except moderate anaemia .In view of impending delivery anemia was corrected with two units of blood transfusions. Injection betamethasone was given for accelerating lung maturity of fetus. After two days was posted for emergency caesarian section in view of fetal bradycardia Exploratory laparotomy was done under combined spinal and epidural anesthesia. Caeserian section was done first to deliver 2.2 kg make baby which cried immediately at birth. Placenta was delivered and uterus and uterovesical fold of peritoneum was closed. Image 6 and 7 show postcaesarian uterus (black arrow) ovarian cyst(red arrow) Due to enormous size of the cyst as shown in Image 6and 7 about 7 litres of mucinous clear fluid was drained to decompress it with due care avoiding spillage.The right sided decompressed ovarian cyst was delivered out of the incision as shown in Image 4.Right sided salpigooophorectomy was done .Frozen section report revealed multiple cystic cavities lined by tall columnar epithelial lining suggestive of benign cystadenoma of ovary as shown in Image 8.

Peritoneal was given and abdomen was closed.post operative recovery was uneventful.both mother and baby were discharged on 8<sup>th</sup> postoperative day.



Image 6



Image -7

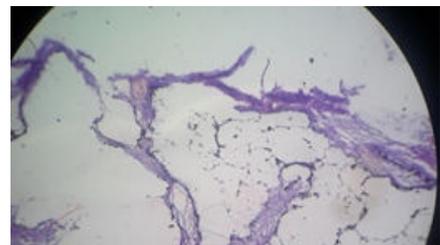


Image 8

**DISCUSSION-**

The aim of presenting these two case series was to report such rare

presentations of ovarian masses in pregnancy. The frequency of ovarian cyst in pregnancy ranges from 1 in 81 to 1 in 8000 pregnancies, and those which are malignant represent about 1 in 15,000 to 32,000 pregnancies. Most often the cyst present in the first trimester are functional cysts and are asymptomatic, usually disappear after first trimester.

Ultrasound is the primary investigation used for differentiating benign from malignant lesions based on morphology. Ultrasound evaluation is 96.8% sensitive and 77% specific in diagnosing masses during pregnancy.

Magnetic resonance imaging (MRI) can provide useful information in order to rule out probable differential diagnosis when diagnostic workup is equivocal. The level of tumor markers like CA125,  $\beta$ -Hcg are insignificant in diagnosis as they are usually raised in pregnancy. However, they can be used as indicators for the follow up if found malignant. In our case it was within normal limits in both cases.

Very few cases of ovarian mucinous cystadenoma have been reported in the literature. Mummigatti et al described the cyst had almost reached 22x18x15cm at 38 weeks of pregnancy. Her emergency cesarean section was undertaken at 38 weeks gestation due to fetal distress. After delivery of the baby, right salpingo-oophorectomy was performed. Histopathologically, a multiloculated benign mucinous cystadenoma was found.

In our cases, in case-1 the cyst was enormous in size having dimensions 40x22cm at 26 week gestational age which was removed by exploratory laparotomy. At present her pregnancy is well conserved upto 38 weeks of pregnancy. Similar case was reported by N Dahiya et al who diagnosed torsion of adnexal mass in 22 weeks of pregnancy, patient taken up for emergency laparotomy and ovarian cystectomy was performed.

Batool Kamalimanesh et al described a large mass originating from right ovary without any adhesion to surrounding tissues and a normal pregnant uterine in third trimester. The right ovary complicated by a multilocular solid-cystic mass was removed and the pathology report showed papillary serous cystadenoma of ovary. In outpatient management, the mother passed a normal pregnancy.

In case-2 of present report also size of the cyst was enormous with similar dimensions of 44x19 cms at 33 week gestational age. pregnancy was conserved till 34 weeks for correction of anemia and fetal lung maturity in better chance of survival of neonate. Emergency c-section was taken for fetal bradycardia.

Dipak Mandi et al reported a single live intrauterine fetus, delivered vaginally a boy baby within 4 hours of admission without any maternal complication, but the baby had features of intrauterine growth restriction along with low birth weight. On the 8th postpartum day, the multiloculated cystic mass, which arose from the right ovary and weighed about 11 kg, was removed via laparotomy. A mucinous cystadenoma with no malignant cells in peritoneal washing was detected in histopathology examination.

In both cases reported in our study diagnosis was made intraoperative by frozen section to confirm the diagnosis. Sennur Ilvan et al studied the accuracy of frozen section (intraoperative consultation) in the diagnosis of ovarian masses. They concluded frozen section diagnosis is a reliable method for the surgical management of patients with an ovarian mass. However, diagnostic problems can occur in mucinous and borderline tumors during frozen section examination. The clinicians and pathologists must be aware of the pitfalls of this method; therefore, a good communication established between them is necessary to obtain more accurate results and to minimize the number of deferred

cases.

As physiological and anatomical changes in pregnant women can cause abdominal pain, pathological condition like ovarian mass may be ignored. Each case has to be individualized, and the management should be done accordingly. When surgery is done in case of malignancy, staging has to be done. Sometimes chemotherapy can be used in pregnancy for a malignant tumor with minimal fetotoxic drugs when maternal mortality outweighs the fetal outcome.

### CONCLUSION-

All ovarian cysts during pregnancy should be followed up by ultrasonography due to the possibility of complications in pregnancy. In case of large cysts to know extent and origin MRI scan can be done. Treatment of ovarian masses in pregnancy should be structured individually. Best time period to operate on such tumours is in the second trimester due to obvious safe period of pregnancy. Benign cysts can be kept under ultrasound surveillance till fetus reaches maturity or till there is any complication of pregnancy or cyst whichever happens first. If the operation is scheduled, gentle action with minimal manipulation of pregnant uterus can prevent adverse outcomes.

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