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# ENDOMETRIOTIC CYST RUPTURE DURING PREGNANCY: A MATERNAL NEAR MISS

Gynaecology

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## ABSTRACT

Rupture of Ovarian mass during Pregnancy is a rare event and if unrecognised can lead to mortality. A 34 year old primigravida was admitted through emergency services at 19 weeks of pregnancy as threatened abortion with low lying placenta and an USG finding of intraperitoneal fluid collection posterior to cervical region.Her complaints were pain abdomen and spotting per vaginum of 2 days duration.Her pain abdomen was not relieved with analgesics and she went in to shock after 24 hours of admission. Intraperitoneal haemorrhage with a complex adnexal mass and fetal bradycardia was diagnosed after re-evaluation and an immediate laparotomy revealed haemoperitoneum of more than a litre with 500 gms of clots which were adherent to the large rupturedendometriotic mass on the right side. Right sided salphingoovariotomy and right internal iliac artery ligation was carried out for persistent haemorrhage,.Intrauterine fetal demise was managed medically after a week.

## KEYWORDS

Pain abdomen, Pregnancy, ruptureAdenexal mass, Shock

**INTRODUCTION:**

Rupture Ovarian cyst during Pregnancy is a very rare event . Recent Literature search did not show any case reports and hence its incidence can not be commented up on. In 1960's (pre- ultrasound era) rupture corpus Luteal cysts of pregnancy were on record . External trauma, heavy physical work and sexual intercourse were cited as the reasons for rupture of Ovarian cysts1. A case of endometriotic Cyst rupture during Pregnancy which was amaternal near miss is reported here.

**CASE:**

A 34 year old primigravida at 19 weeks of pregnancyreferred as threatened abortion with severe pain abdomen was hospitalised for observation. She was married for 2 years and conceived spontaneously. She complained of intermittent pain abdomen of one day duration and spotting per vaginum of 2 days . There was no history of leaking per vaginum. No history of medical disorders complicating pregnancy. Her USG immediately prior to referral showed a single live intrauterine gestation corresponding to the gestational age and fluid collection of 7.9x5.8x6.4 cms posterior to cervix. Placenta was reported to be covering the Os At admission she had mild pallor, pulse was 86/ min regular and BP was 110/60 mm of Hg. Uterus was 18 weeks size non tender. Per speculum examination did not reveal any bleeding and Os appeared closed. An abdominal USG performed by the consultant on duty confirmed the intrauterine pregnancy and diagnosed to have blood collection posterior to cervix with a suspected aneurysm of 3 cms of right uterine artery on Doppler and planned for MRI the next day. She was admitted and was treated with micronized progesterone, and was diagnosed to be GDM the next day and wasstarted on Insulin.. Twenty fourhours after admission her pain increased and she was given injection Tramadol 50 mg intramuscularly. She developed severe tachycardia and went in to hypotension and she was shifted to Obstetric ICU. She was conscious but drowsy and her pulse was 148 /min and BP was 80/50 mm Hg . She was resuscitated with intravenous fluids and an emergency abdominal USG evaluation revealed free fluid in hepatorenalpouch , left paracolic gutter and a large echogenic mass in right adnexal region. Fetal Cardiac activity was seen but less than 60 /min.Her heamogram done 6 hours back showed Haemoglobin of 7.7 gm%, Platelet count of 1.68 lakhs/mm3 with a total WBC count of 13,600 with 88% Neutrophils. GTT done on the same day showed 100/362/211 (Fasting/ 1st hour/2nd hour). PT/INR was 15.7 1.18

She was taken up for emergency laparotomy with a provisional diagnosis of haemoperitoneum in shock most probably due to rupture Ovarian tumour or rudimentary horn rupture after high risk consent and explaining the possibility of intra uterine fetal demise. At laparotomy, there was haemoperitoneum of a litre with clots of 500 gms . Uterus was 20 weeks size and contour was intact. Right adnexa showed rupturedendometriotic cyst with 500 gms clots attached to its wall .The cyst was found to be eroding in to the right broad ligament and in to the post wall of uterus and right uterine vessels and extending into right paracolic gutter. Right SalphingoOvariotomy was performed with difficulty as the cyst was friable and adherent to the anterior wall of rectum and right uterine vessels. Decidual changes were seen on posterior surface of uterus. Multiple haemostatic sutures were taken on the anterior wall of rectum and broad ligament, posterior wall of lower part of uterus and POD. There was persistent oozing hence Right internal Iliac artery ligation was carried and abdomen was closed in layers after saline wash and keeping Surgiseal on oozing surfaces. She received 3 units of packed cells intraoperatively and was kept in ICU. Fetal Cardiac activity was absent on USG done soon after the procedure .Her FDP were positive and hence she was administered injTranexamic acid and FFP 25 ml per Kg body weight. She had persistent tachycardia for 3 days and a Cardiology evaluation did not find any cause and declared it as sinus tachycardia.

First postoperative day her Haemoglobin was 8.2 gm/dl ;WBC count was 14,750 with 93% Neutrophils hence the antibiotics were continued . Her platelet count was 84,000/mm3 . Daily monitoring of haematological parameters were done and her WBC count and platelet count showed normalising trend only after 5 days. During this time she received daily FFP for 3 days and 2 units of packed cell transfusion due to fluctuation of Haemoglobin and platelet counts.

Intra uterine fetal demise was managed by medical abortion with misoprostol after a week and she expelled the fetus without any haemorrhage and there was no post-abortal sepsis. She was discharged on 11 th postoperative day in good health. She came for follow up after 6 weeks and histopathological report wasovarian endometriosis. She was on follow up and did not conceive for more than an year and on investigation she was found to have an AMH level of 0.6 ng/ml suggesting poor ovarian reserve and was adviced ART.

**DISCUSSION:**

Ovarian Cysts during first trimester of pregnancy are most often functional and are considered as Corpus luteal cysts. A functioning corpus luteum is absolutely essential up to 7 weeks for continuation of Pregnancy. Pre-Ultrasound era these were diagnosed incidentally on clinical examination but during the current era of imaging the incidence of adnexal masses increased due to routine USG examination during Pregnancy. The incidence varies from 1 in 76 to 1 in 2328 deliveries 2. The cysts noted infirst trimester usually regress spontaneously and those persist in to the second trimester and increase in size are evaluated to be for management . The main modality of evaluation is by abdominal or Pelvic USG with or without Doppler.

The complications of Ovarian cysts during pregnancy include torsion, rupture of cyst, obstruction during labour, infection and malignancy. Of all these rupture is a catastrophic event resulting in sudden intraperitoneal haemorrhage and shock if not recognised leads to mortality.

The corpus luteum of pregnancy may occasionally bleed in to intraperitoneal cavity and produce massive haemoperitoneum2. The cause of haemorrhage was hypothesised to be hyeraemiaof thecal vessels due to inflammation such as Oopheritis and salphingitis. The

rupture is usually brought about by external force such as trauma and the clinical feature is sudden onset of pain abdomen. The clinical features in this lady also included sudden onset of pain abdomen but the history of trauma was not present. Her USG report did not specify the presence of Ovarian cyst during pregnancy and there was no definite cyst wall that was observed while doing inhouse USG when the woman went in to shock.

Rupture may also result after torsion which when not relieved or managed timely leads to haemorrhage or rupture and torsion is reported to be 5 times more common during pregnancy3.The management of Ovarian cyst during pregnancy is to do laparotomy cystectomy or Ovariotomyduring the second trimester if the cyst size increases to more than 10 cms and is complex on appearance with echogenic areas with suspicion of malignancy and also to prevent torsion and obstruction.

Endometriomasconstitue 11%of the adnexal masses encountered during pregnancy and these may increase in size and undergo decasualisation and become hyperaemic due to pregnancy hormones which act on the ectopic stromal cells in the endometrioma forming highly vascular nodules mimicking malignancy4.This may be the reason for the Doppler flow showing features mimicking false aneurysm of right uterine artery in this woman. A case of ruptured Endometriomawith similar clinical presentation was reported by Brabzan and Collegues5. The woman was 18 weeks pregnant and haemoperitoneum was less than that observed in the present case. The lesion was on right side in close proximity to recto-sigmoid. Adhesions to pelvic structures, alteration in position due to gravid uterus and increased tension in the mass were hypothesised for rupture. These may be the reasons for rupture in this pregnant woman also. The pregnancy outcome following rupture Ovarian cyst varied form abortion to continuation of pregnancy 2 and in this woman there was fetal hypoxia due to hypotension which resulted in intrauterine demise and this was successfully managed with medical methods. There is no necessity to perform hysterotomy at laparotomy for intrauterine fetal demise.

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