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Ovarian Dermoid Cyst In Pregnancy- Clinical Spectrum And Management- Case Series

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Abstract

Background:
Benign ovarian tumors are common in women of reproductive age, with mature cystic teratoma (dermoid cyst) being the most frequent benign ovarian neoplasm encountered during pregnancy. Although often asymptomatic, dermoid cysts may lead to complications such as torsion, rupture, or infection due to anatomical and hormonal changes of pregnancy, posing risks to both maternal and fetal health.

Objective:
To highlight the clinical presentation, diagnostic challenges, and management strategies of dermoid cysts during pregnancy through a series of cases, emphasizing individualized decision-making to optimize maternal and fetal outcomes.

Methods:
This presentation includes three cases of dermoid cyst diagnosed during early pregnancy at a tertiary care center. Diagnosis was primarily established using ultrasonography, which demonstrated characteristic features of dermoid cysts. Management strategies varied based on gestational age, cyst size, symptomatology, and complications, ranging from conservative monitoring to surgical intervention during pregnancy or at the time of cesarean section.

Results:
Among the three cases, one patient presented with acute torsion in early pregnancy requiring emergency laparotomy and left salpingo-oophorectomy. The second case was managed conservatively throughout pregnancy, with cystectomy performed at the time of elective cesarean section. The third patient underwent laparoscopic cystectomy during the second trimester due to acute pain suggestive of complications. All cases had favorable maternal and fetal outcomes, and histopathological examination confirmed dermoid cysts.

Conclusion:
Dermoid cysts in pregnancy require careful monitoring and an individualized management approach. Ultrasonography remains the primary diagnostic modality. Conservative management is appropriate for asymptomatic cases, while timely surgical intervention is essential in symptomatic or complicated cysts, preferably during the second trimester.

Keywords: *Dermoid cyst, Pregnancy, Ovarian torsion, Ultrasonography, Laparoscopic cystectomy, Maternal outcomes*

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I. Introduction:

Mature cystic teratoma is the most common benign tumor or cyst in pregnancy containing mature forms of three germ layers i.e ectoderm, mesoderm, endoderm. On cut section they are unilocular cysts containing hairy and cheesy sebaceous material, teeth etc. There is usually an area of localized growth in one part of cyst protruding into cavity called rokitansky protuberance. Benign diseases of ovary are commonest accounting for 90% of all ovarian diseases. Prevalence of symptomatic adnexal masses is 1:1000 in reproductive age group women. Dermoid cysts are usually asymptomatic, but can lead to complications such as torsion, rupture of cyst, or infection, particularly during pregnancy when the anatomical and hormonal changes increase the risk of such events. Often, these cysts are discovered incidentally during prenatal ultrasounds.

CASE 1: A G2P1D1(previous normal delivery) BD-7.0 weeks , BS-7.0(7.0) weeks came with chief complaints of pain in left flank region. Pt was vitally stable. On per abdomen examination tenderness present over left flank region. Urgent ultrasonography was done which was suggestive of single live intrauterine pregnancy of 7.0 weeks

with bilateral adnexal lesion possibility of dermoid cyst with torsion on left side (left sided cyst measures 7.7 *6.9cm , right sided cyst measures 5.0*4.2cm).Patient immediately taken up for exploratory laparotomy. Detorsion was done and waited for regain of vascular supply. There was total cut off vascular supply and ovary was completely necrosed , hence, left sided oophorectomy with salpingectomy done. Right sided ovary was preserved for continuation pregnancy. Postoperatively patient was vitally stable and started on progesterone supports and follow up was taken, antenatal period was uneventful and patient was taken up elective lower segment caesarean section at 37 weeks of gestation.

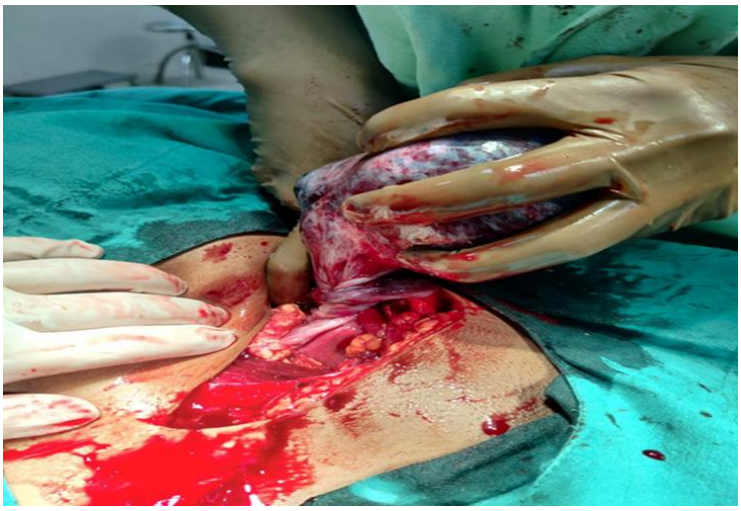

Image 1: left side ovarian dermoid cyst with torsion .

CASE 2: A G2A1 with BD-10.2 weeks, BS-9.6 (6.0) weeks with IVF conception with k/c/o rheumatoid arthritis with ultrasound s/o left side dermoid cyst of 4.6*3.2cm. Serial ultrasounds were done to see the growth of the cyst or change in apperance of the cyst. Patient was taken up for elective lower segment caesarean section at 37 weeks of gestation. After delivery of the baby and uterus closure, left sided cystectomy was done. Sample sent for histopathological examination which was suggestive of dermoid cyst.

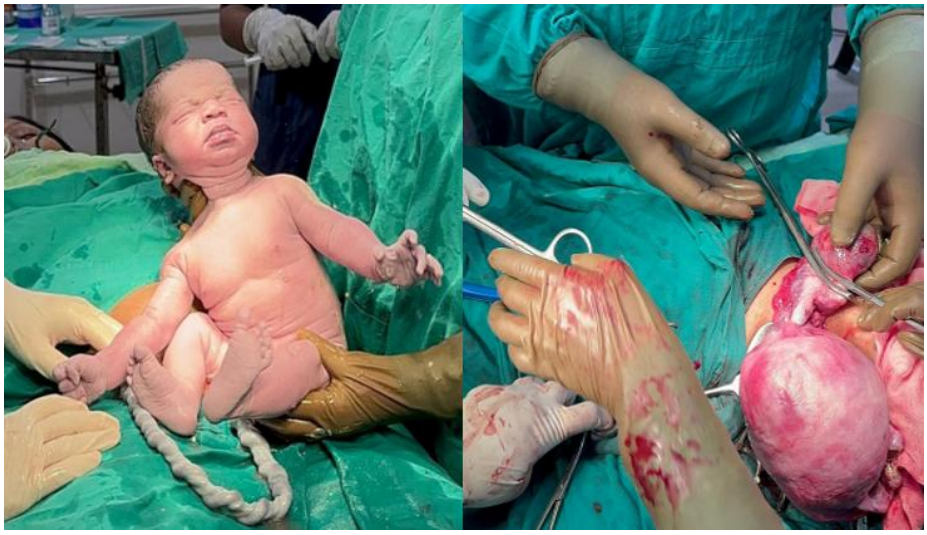

Image 2: ovarian dermoid cystectomy done after delivery of baby via cesarean section.

CASE 3 : A G2A1 with BD-10 weeks BS- 10.4(7.0) weeks with ultrasonography suggestive of Left unilocular cyst measuring 6.8*6.1*5.1cm with long echogenic (white) and bright internal echoes in left ovary most likely left dermoid cyst. Serial ultrasounds were done till 2nd trimester of pregnancy. Patient was vitally stable with no chief complaints. Per abdominal and bimanual examination within normal limits. Suddenly , patient developed pain around 20 weeks of gestation, hence, taken up for left sided laproscopic cystectomy at 20 weeks of gestation amd cyst was removed through a plastic bag to avoid any spillage during removal. Sample sent for histopathological examination which was suggestive of dermoid cyst. Post operatively patient started on progesterone supports and patient delivered at 39 weeks with normal vaginal delivery.

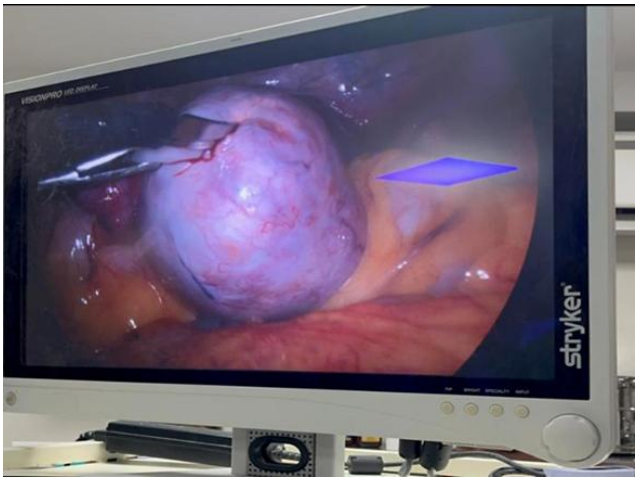

Image 3: laparoscopic left dermoid cystectomy done at 20 weeks

II. Result:

Diagnosis of dermoid cysts during pregnancy is primarily achieved through ultrasound, which effectively distinguishes them from other ovarian masses. The size, symptoms, and complications associated with the cyst influence management decisions. Conservative management with regular monitoring is preferred for asymptomatic, small cysts, while surgical intervention is considered for larger, symptomatic, or complicated cysts. Laproscopic surgery, favoured for it's minimally invasive nature and better recovery, less time consuming, is typically performed during second trimester to minimize the risk of abortions.

III. Discussion:

The presence of dermoid cysts during pregnancy can lead to several complications. The most significant risks include, ovarian torsion, where the cyst causes the ovary to twist, cutting off it's blood supply. This is a surgical emergency and can threaten both maternal and fetal health. Additionally large cysts can cause discomfort, pain and pressure effects on surrounding organs.

Hence, dermoid cyst during pregnancy require careful monitoring and appropriate management to prevent complications and ensure the well being of both the mother and the baby. Through vigilant prenatal care and individualized treatment plans, most women with dermoid cysts can have successful pregnancies and deliveries. This review underscores the importance of multidisciplinary approach to optimize outcomes for pregnant women with dermoid cysts.

IV. Conclusion:

The management of dermoid cyst in pregnancy requires a multidisciplinary approach. Factors such as cyst size, symptomatology, and Gestational age are critical in determining the appropriate course of action. Main diagnostic modality is ultrasonography. Conservative management minimizes surgical risks, while timely surgical intervention addresses potential complications such as torsion, rupture, and infection.

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