

Dermoid cyst and its bizarre presentation during pregnancy: A tangled case

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ABSTRACT

The most common ovarian germ cell tumour found in women of reproductive age is a dermoid cyst, also known as a mature cystic teratoma. They are generally unilateral, yet they are bilateral 10-12% of the time. They are made of ectodermal tissues like skin, hair and nails, mesodermal tissues like fat and muscle and endodermic tissues derived from germ cell layers. Adnexal torsion is thought to occur in 8% of instances of presumed benign ovarian tumour during pregnancy, most frequently at the end of the first trimester and during the second trimester. Ultrasound has a decreased specificity for malignancy it is still the gold standard for characterising an ovarian tumour during pregnancy. Pelvic MRI is accurate in spotting ovarian tumours during pregnancy. In this case, a 22-year-old primigravida who was 39 weeks pregnant and living in a rural region reported abdominal pain, a rare mass felt during a clinical examination, a lack of regular follow-ups and an important finding overlooked. A big lump measuring 20x15 cm that was producing pressure shifts across the lungs and respiratory discomfort was discovered during the patient's ultrasonography after being admitted. The patient was shifted for an emergency caesarean section. A 2.5 kg healthy baby was delivered. An enormous tumour that was successfully removed was seen twisting an ovary. Dermoid and other benign ovarian cyst patients had favourable pregnancy results, including perinatal outcomes. Since problems are exceedingly rare, the cysts should, wherever feasible, be handled conservatively.

Keywords: pregnancy, dermoid cyst, reproductive age, germ cell tumour.

1. INTRODUCTION

Dermoid cysts, often referred to as mature cystic teratomas, are typically found in young, fertile women and are estimated to be the cause of 20% to 40% of ovarian masses in women who are pregnant (Bottomley & Bourne, 2009). It is a benign cystic mass composed of cells from all three germ cell layers, including ectodermal cells such as teeth, hair and sebum, as well as endoderm and mesoderm cells. They are the most prevalent ovarian germ cell tumour associated with pregnancy. Dermoid cyst outcomes include ovarian torsion and ovarian rupture of the cystic components (Milingos et al., 2004). Dermoid cysts are more likely to torsion because they frequently contain solid

components, which cause the ovary to twist on its vascular pedicle. Because the gravid uterus offers little room for the cyst to twist on its pedicle, ovarian torsion is a rare occurrence during pregnancy. Ovarian hyper stimulation syndrome is the main culprit. In this case report, we describe a rare instance of acute ovarian torsion brought on by a mature cystic teratoma during the third trimester of pregnancy.

Our results demonstrate that imaging can be incorrect even if bedside ultrasonography is a very accessible technology. Most importantly, this case shows that, despite being a very rare entity, ovarian torsion caused by mature cystic teratomas in the second and third trimesters should never be disregarded and should always be taken into consideration in the differential diagnosis of various causes of abdominal pain during pregnancy.

2. CASE DESCRIPTION

A 22-year-old unbooked case of a primigravida with 39 weeks of gestational age came to us with complaints of abdominal pain for the past two days (Figure 1). She did not receive any prenatal care up until this point. During a routine antenatal check at term, the patient had tachycardia. On deep palpation during an abdominal examination, there was discomfort, but no guarding or rigidity was noticed. The uterus' height was greater than the gestational period. On vaginal examination, the left fornix was sensitive and the os was closed. After doing an emergency ultra sound, it was discovered that there was only one live intrauterine foetus present, along with a 20x15 cm adnexal tumour that did not have any vascularity (figure 2). Patient was scheduled for an emergency caesarean section due to the possibility of ovarian cyst torsion.



Figure 1 Pregnancy with dermoid cyst.



Figure 2 Ultrasonography showing large adnexal mass.

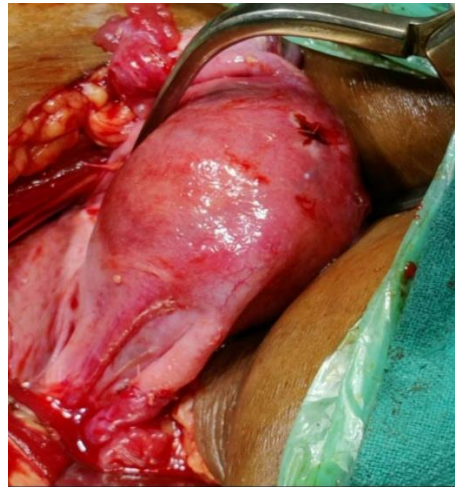


Figure 3 Patient taken for Emergency Caesarean section.



Figure 4 large ovarian cysts twisting the ovary.

The patient was shifted for an Emergency caesarean section under spinal anaesthesia (Figure 3). A 2.5 kg healthy baby was delivered. An enormous tumour was seen twisting an ovary which was successfully removed. Cheesy material was heavily adhered to the uterus and the stomach intra operatively and covered the whole abdomen. We looked for any gastrointestinal pathology in the gut. Ovaries on each side were seen. The left ovary had a 20x15 ovarian cyst (Figure 4) twisting the ovary. Left sided Oophorectomy of the patient was done and peritoneal lavage was carried out. The cyst revealed cheesy material with hair. A sample was sent for histopathological analysis (H.P.E.). The patient with stood the procedure well. Her recovery went without any hindrance and on the seventh post-op day, the patient was discharged. The histopathological analysis (H.P.E.) report was suggestive of benign cystic teratoma likely to be a dermoid cyst.

3. DISCUSSION

Germ cells that have been stopped after the first meiotic division give rise to dermoid cysts. It makes up between 20 and 40 percent of all ovarian tumours during pregnancy. It rarely enlarges and has a low propensity for malignancy. Its capsule is thick, smooth, and a light shade of greyish yellow. The lining epithelium is typically stratified squamous and contains the usual cutaneous elements like sebaceous glands, hair follicles and sometimes teeth. Dermoid cysts may not cause any symptoms while a woman is pregnant and if they do, they typically appear in the second trimester and rarely at term. Ultrasound is the gold standard for spotting ovarian tumours during pregnancy. A mature cystic teratoma can be recognised on CT or MRI scans as well as with ultrasonography as a diffusely or partially echogenic mass with the echogenic area being brought on by sebaceous material and hair inside the cavity (Outwater et al., 2001). Tumour markers cannot be trusted to determine whether ovarian masses are at risk for cancer during pregnancy. It rarely manifests symptoms during pregnancy if the adnexal mass is smaller than 5 cm. Every time a

symptomatic, substantial, bilateral and difficult lesion is found, surgery should be performed. Simple ovarian cysts on one side that are 5-8 cm in size should be sonographically assessed between 16 and 18 weeks (Enríquez et al., 2005). If the cysts do not retreat or grow in size, surgical intervention should be started by 18 weeks. During the first and second trimesters, a laparoscopy is an option for treating symptomatic, presumably benign ovarian lesions (Brun et al., 2014). Following surgery for an ovarian tumour, while pregnant, there is a 2.8% chance of miscarriage, according to estimates. In our case, a huge dermoid cyst was unintentionally discovered during a caesarean section performed on a patient who was pregnant due to failure of regular follow ups of the patient in rural area.

4. CONCLUSION

During pregnancy, it is possible to avoid cyst problems and poor pregnancy results by removing intact ovarian benign dermoid cysts through laparotomy. We conclude by reporting a primarily positive outcome for a term pregnancy made difficult by ovarian torsion brought on by a mature cystic teratoma. Although mature cystic teratomas seldom cause ovarian torsion, doctors should be aware that pregnant individuals can experience acute ovarian torsion. Therefore, stress should be given in rural areas for regular antenatal visits of the patients to prevent further complications.

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Informed Consent

Informed Consent was obtained from the patient.

Author's contribution

All the authors contributed equally to the case report.

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Conflict of interest

The authors declare that there is no conflict of interests.

Data and materials availability

All data sets collected during this study are available upon reasonable request from the corresponding author.

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