



ORIGINAL RESEARCH PAPER

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MISSED DIAGNOSIS OF DERMOID CYST IN EARLY PREGNANCY CAUSING OBSTRUCTED LABOUR: CASE REPORT

KEY WORDS: Dermoid cyst, magnetic resonance imaging, obstructed labour

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ABSTRACT

INTRODUCTION: Adnexal masses in pregnancy are common with a prevalence rate of 0.19-8.8%. Adnexa should always be assessed at routine ultrasound examination in early pregnancy so that early identification of a mass can be valuable in subsequent management of the pregnancy. The enlarging uterus gradually displaces the adnexa and obscures its view, especially as pregnancy advances, making radiological assessment of adnexal masses difficult.

CASE PRESENTATION: We report a rare case of a large dermoid cyst, misdiagnosed as fibroid at 14 weeks of gestation. Later on as the diagnosis was indeterminate, MRI was done at 34 weeks and a large dermoid cyst was reported. Patient had to undergo LSCS for obstructed labour and fear of rupture of cyst.

CONCLUSION: Dermoid cysts less than 6 cms are generally asymptomatic in pregnancy. Cysts greater than 6 cms. are prone to torsion. When ultrasound scans reveal indeterminate masses, magnetic resonance imaging (MRI) is helpful for identifying features that suggest 'fat content', which is diagnostic of a mature dermoid cyst. A dermoid cyst more than 10 cms can cause obstructed labour and needs to be removed at 16-18 weeks of gestation.

INTRODUCTION

Dermoid cysts are most common cystic adnexal lesions diagnosed after 16 weeks of gestation [1]. Dermoid cysts which are less than 6 cm in diameter are usually asymptomatic in pregnancy. Those which are greater than 6 cm are prone to torsion, rupture, infection and obstruction. Yen et al suggest the risk of torsion to be about 27% [2]. Ultrasound is of paramount importance in evaluating a pelvic mass. Both transabdominal and transvaginal scans are used together as complementary techniques, though more detailed morphological assessment of the mass is better with TVS, especially in early pregnancy. When ultrasound scans reveal indeterminate lesions, magnetic resonance imaging (MRI) is useful for identifying features that suggest 'fat content' which are typically found in a mature dermoid cyst.

CASE REPORT:

A 28-year-old women, G3P2L2 presented with labour pains at 40⁺ weeks to the labour ward. This was a spontaneous conception. Her first and second trimesters were uneventful. She had two previous uneventful vaginal deliveries. She booked late and did not have any first trimester ultrasound scan. Antenatal USG in second trimester which was a transabdominal scan showed a single live intrauterine foetus of 15 weeks with adequate liquor. Placenta was posterior not low lying. A fibroid of 93x51mm near internal os was reported. A repeat ultrasound at 28 weeks showed a single live intrauterine foetus of 28 weeks along with a large complex echogenic cyst in right adnexa converging up to the level of cervical canal possibly dermoid cyst. She was followed up conservatively. Another repeat USG at 34 weeks was indeterminate, so a MRI was done. MRI pelvis revealed a large well defined oval thin walled complex lesion having internal fluid intensity, irregular subtle T1/T2 hypo intense eccentric soft tissue component and small irregular mural fat intensity nodule along left lateral wall, measuring approximately 108 mmx103mmx82mm, seen posteriorly to the uterus/cervix extending into left-adnexa-most probably a large dermoid.

There was no relevant past or family history. Her LMP was on 8.6.19 and EDD was on 15.3.20

On examination her vitals were stable; she had mild pallor and mild bilateral pedal oedema. Cardiovascular and respiratory systems were clinically normal. A single live

foetus at term with cephalic presentation, with unengaged head was felt on palpation. Fetal heart rate was 140 beats per minute regular. Uterus was contracting, about 2-3 contractions/10 minutes. On per vaginal examination cervix was fully effaced felt with great difficulty, high up behind the pubic symphyses. Os was 4 cm dilated, presenting part was high up. The entire pouch of Douglas was occupied by a mass which was deeply impacted, cystic but firm in consistency, could not be pushed up beyond the presenting part. A decision for LSCS followed by salpingo-oophorectomy was taken in view of anticipated obstructed labour and fear of rupture of cyst.

Her haematological and biochemical investigations were normal. She underwent LSCS under spinal anaesthesia. An alive female baby of 2.8 kg was delivered. Placenta and membranes were delivered completely and uterus was stitched in 2 layers. A right ovarian cyst of 12 cm x 10 cm size was found behind the uterus in the pouch of Douglas. After exteriorising the uterus, the large dermoid cyst was gently delivered out of pelvis and removed intoto. (Figure 1). There was no free peritoneal fluid or adhesion and other ovary was found normal. Right salpingo - oophorectomy with left side tubal ligation. (sterilisation) was done. Mother and baby were later discharged in good condition. Cut section revealed sebaceous material with hair and cartilage (Figure 2). Histopathological examination (HPE) of the specimen reported it as mature cystic teratoma.

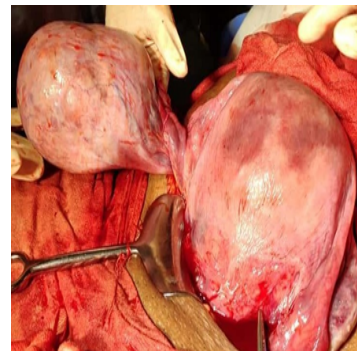


Figure -1 Large Right Ovarian cyst disimpacted from Pouch of doughlas after Cesarean Section



Figure -2 Cut section showing sebaceous material with hair and cartilage

DISCUSSION

Most of the ovarian cysts in early pregnancy are usually detected by USG. Management depends on the symptoms, character of the cyst and gestational age. A cyst which is less than 6 cm in size, asymptomatic, without features of malignancy is usually managed conservatively. If the cyst is more than 6 cm, elective surgical intervention in second or third trimester or emergency surgery as required is contemplated.

This case report highlights two important issues, one is early diagnosis of adnexal mass in pregnancy preferably during the dating scan. In our case, patient presented in second trimester and adnexal mass got misdiagnosed as fibroid and no intervention was done. The second is the role of MRI. It is often suggested that adnexa should always be assessed at routine ultrasound examination in early pregnancy so that early identification of a mass can be valuable in subsequent management of the pregnancy. The enlarging uterus gradually displaces the adnexa and obscures its view, especially as pregnancy advances, making radiological assessment of adnexal masses difficult. Greyscale ultrasound scan remains the first-line imaging tool for evaluating adnexa. It is adequate for the characterisation of ovarian masses and assessment of tumour size. [3]. Although MRI appears to be safe in pregnancy, the use of gadolinium contrast medium, which is used to enhance vascularity seen in malignant tissue, remains uncertain. MRI is useful in the management of indeterminate masses, following an ultrasound scan as happened in our case and in cases of suspected malignancy. It is also able to better characterise tissue composition (as in ovarian endometriomas), fat as in dermoid cysts of the ovary) and to assess metastasis. Majority of adnexal masses (76%) in pregnancy will be simple ovarian cysts of less than 5 cm in diameter [4]. These are most often functional cysts that resolve spontaneously by 16 weeks of gestation and require no follow-up in pregnancy [5,6]. Larger or complex cysts require a follow-up ultrasound scan at 14–16 weeks of gestation. Surgical intervention should be delayed until 14–16 weeks to allow spontaneous resolution of functional cysts and to prevent surgery on a luteal cyst that might be supporting the pregnancy. Simple ovarian cysts which are persistent, have a low risk of malignancy and can be managed conservatively.

Complex adnexal masses which appear benign on ultrasound imaging, such as dermoid cyst can be managed conservatively in the absence of symptoms. However, patient should be made aware of the increase risk of torsion in pregnancy. The risk of intervention versus conservative management should be based on size of mass, morphology and the likely diagnosis. The approach is reviewed if the women has acute pain suggestive of ovarian torsion or rupture. The indications of surgery are acute abdomen, mass suspicious of malignancy, cysts greater than 10 cm which may cause obstruction to labour as happened in our case. In our case the dermoid cyst, had it been diagnosed early should have been removed at 16-18 weeks of gestation

Surgical approach

Laparoscopy is now considered safe in pregnancy. There is improved visualisation of pelvic organs and a reduced risk of

uterine irritability in laparoscopy, less blood loss compared with laparotomy [7]. The overall size of the uterus and mass, the solid components in the lesion and the likely available intra-abdominal space, are some of the key considerations regarding the feasibility and route of surgery. Laparoscopic approach becomes increasingly more difficult from about 12 weeks of gestation to not being a practical option in the third trimester. Laparotomy may be preferred to minimise inadvertent cyst rupture, tumour cell dissemination and port site metastases when malignancy is suspected. Clearly if a laparotomy is planned in the third trimester, then delivery of the baby by caesarean section in the same operation should be considered.

CONCLUSION

Adnexa should always be assessed at routine ultrasound examination in early pregnancy so that early identification of a mass can be valuable in subsequent management of the pregnancy. As the first-line investigation, an ultrasound scan can reliably characterise benign and malignant adnexal masses in most cases. MRI can be used to characterise indeterminate or suspicious lesions. Most simple adnexal cysts will resolve spontaneously by the second trimester. A cyst diameter of greater than 5 cm and a complex morphology at imaging are the main predictors of persistence. Surgery is indicated in cases of an acute abdomen or high suspicion of malignancy or a cyst greater than 10 cm which may cause obstruction to labour

REFERENCES