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Case Series

Rare and life-threatening complications in early pregnancy

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ABSTRACT

Rare complications in early pregnancy can cause risks to maternal health and foetal viability. Ovarian malignancy complicating early pregnancy poses diagnostic and therapeutic dilemmas. Anatomical and hormonal changes obscure typical presentations and limit interventional options. Spontaneous early fundal rupture in a case of previous caesarean is a rare occurrence, often arising from prior uterine surgery, congenital anomalies, or invasive trophoblastic disease, and may present with sudden pain and intra-abdominal haemorrhage. An early intrauterine foetal demise with undiagnosed fundal placenta accreta, in a case of previous two caesarean, characterized by abnormal adherence of chorionic villi to the myometrium—can lead to catastrophic bleeding, complicating diagnosis and management. Together, these conditions exemplify the complex interplay of early gestational physiology and pathological disruption, requiring heightened clinical vigilance and multidisciplinary care for optimal outcomes.

Keywords: Early pregnancy, Rare complications, Ovarian tumour, Uterine rupture, Placenta accreta

INTRODUCTION

Early pregnancy complications account for a significant proportion of emergency obstetric admissions. Common conditions include ectopic pregnancy, miscarriage, and gestational trophoblastic disease. However, rare and potentially catastrophic complications may occur even in the first trimester and early second trimester, often presenting with nonspecific symptoms and posing diagnostic challenges. Ovarian malignancy, spontaneous fundal uterine rupture in a case of previous caesarean section and fundal placenta accreta spectrum (PAS) disorders, are uncommon in early pregnancy. Most adnexal masses are found incidentally at the time of the first trimester ultrasound screening and the vast majority are benign and resolve spontaneously. Ovarian cancer is extremely rare in women of childbearing age. The overall incidence of malignant adnexal masses diagnosed during pregnancy ranges between 0.2–3.8%.[1] Uterine rupture is mainly found during the second or third trimester in women with past history of Caesarean delivery. Spontaneous fundal uterine rupture of unknown cause during early pregnancy is extremely rare. Despite the fear of this complication, there is currently no clinical tool to predict its development. Clinical diagnosis of uterine rupture in early pregnancy is challenging due to the broad variation in symptoms and progress. Imaging diagnostics might not be able to quickly and effectively identify uterine rupture, particularly in its early stages.[2,3] The majority of reported placenta accreta cases are associated with a history of uterine surgery, particularly caesarean deliveries, which create a scarred myometrium prone to abnormal implantation.[4] In contrast, fundal placenta accreta, a variant occurring in the upper uterine segment away from previous uterine scars, remains poorly understood due to its rarity and atypical presentation.[5] Advances in imaging, particularly ultrasound and magnetic resonance imaging (MRI), have significantly enhanced the diagnosis of PAS. The diagnosis of fundal placenta accreta presents unique challenges due to its unusual location and lack of a scar-related risk factor, often

leading to delayed recognition and increased peripartum complications.[6] Their rarity, coupled with overlapping clinical and imaging features, can lead to misdiagnosis or delayed treatment. Early recognition is crucial, as these conditions may rapidly progress to haemorrhagic shock and threaten maternal life.

CASE SERIES

We present a case series of three rare complications occurring in early pregnancy, highlighting their clinical presentation, diagnostic dilemmas, and management strategies, with a review of relevant literature.

Case 1: ovarian malignancy detected in early pregnancy

Mrs. X, 37 years old G3P1L1A1 with 9 weeks and 1 day of gestation presented in gynae casualty with complaints of amenorrhea for 2 months and bleeding per vaginum since 1 day with passage of clots. UPT was positive at home. There was no history of pain in abdomen, trauma, or MTP pill intake. On examination, there was no pallor, BP-120/76mmHg, PR-96/min. Per speculum examination-Bleeding was seen through the OS. Per vaginal examination- uterus was around 8 weeks size, anteverted. A mass of size around 5×5 cm, which was soft to firm in consistency was felt separate from the uterus. On investigation, Beta-HCG was 8000u/l.

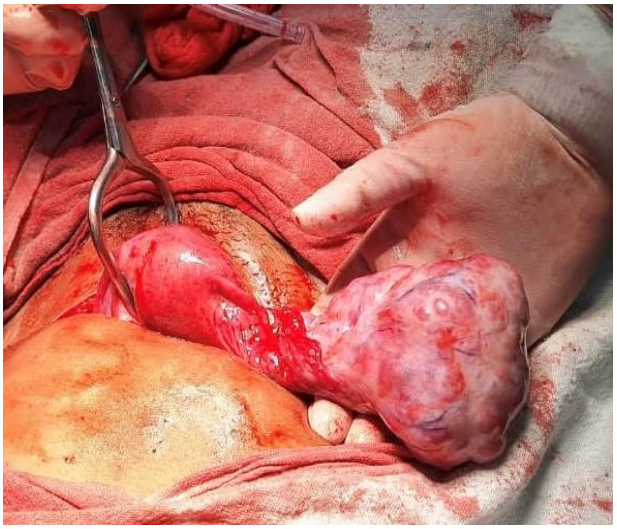

Figure 1: Intraoperative findings showing right ovarian mass with irregular surface about 7×6 cm.

On Ultrasound, thickened decidua seen, no gestational sac was seen in the intrauterine cavity. An echogenic space occupying lesion was seen in the right adnexa and posterior to the uterus of size 6.7×6.5×5.6 cm, volumes 148cc. She was taken up for laparotomy in view of suspected ectopic pregnancy adnexal mass. Intraoperative, a solid ovarian tumour of size around 7cm with irregular surface was seen in the right ovary. It was removed and sent for histopathology examination along with peritoneal washings.

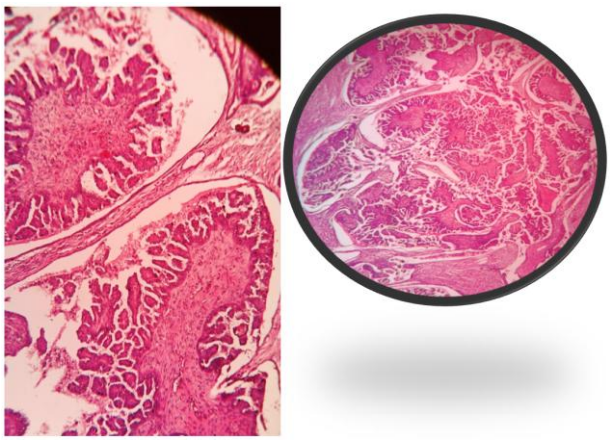

Figure 2: Histopathology showing papillary serous adenocarcinoma.

The abdomen was thoroughly examined, no signs of implants, adhesions or metastasis were found in peritoneal cavity, omentum, liver, under surface of the diaphragm. Peritoneal washings were negative for malignancy. Histopathology reports confirmed the diagnosis of ovarian papillary serous adenocarcinoma. She was then referred to a Gynae Oncosurgery department of tertiary hospital. CT chest was normal, CECT of the abdomen and pelvis showed no residual disease. Tumour markers-Beta-HCG was 40.5IU/l, CA-125 was 172U/ml, alpha-fetoprotein-3.2 ng/ml, LDH-299U/l, CEA-1.86ng/ml, CA-19.9-2.8U/ml. She underwent repeat laparotomy for staging. Total abdominal hysterectomy was done with bilateral salpingectomy with left oophorectomy, bilateral pelvic and para-aortic lymphadenectomy, greater omentectomy and peritoneal washings-uterus and left ovary were normal, all lymph nodes were normal. Molecular tests - PAX-8 +ve, WT1+ve, p-53-wild type. Final diagnosis was low grade serous ovarian carcinoma stage 1A. Patient was advised for follow-up.

Case 2: spontaneous fundal uterine rupture in early pregnancy

A 29 years Gravida 2 Para1 Live1 with previous cesarean at 13 weeks 5day by early scan presented to antenatal clinic with complaints of pain in abdomen. Previous pregnancy was uneventful which was 10 years back. Her menstrual cycle was irregular, and she only had withdrawal bleeding. On examination, pallor++, BP:100/60 mmhg, PR:90 bpm. On per abdomen examination uterus was 14weeks size, with diffuse tenderness present. On per speculum examination no bleeding was seen.

On per vaginal examination size of uterus could not be made out, and cervical motion tenderness was noted. Ultrasound showed a dead fetus of 13 weeks lying outside uterus. Placenta was anterior and free fluid was seen in both cul-de-sac, sub hepatic, left hepatic and left flank area suggestive of uterine rupture/scar dehiscence. Emergency Laparotomy was done.

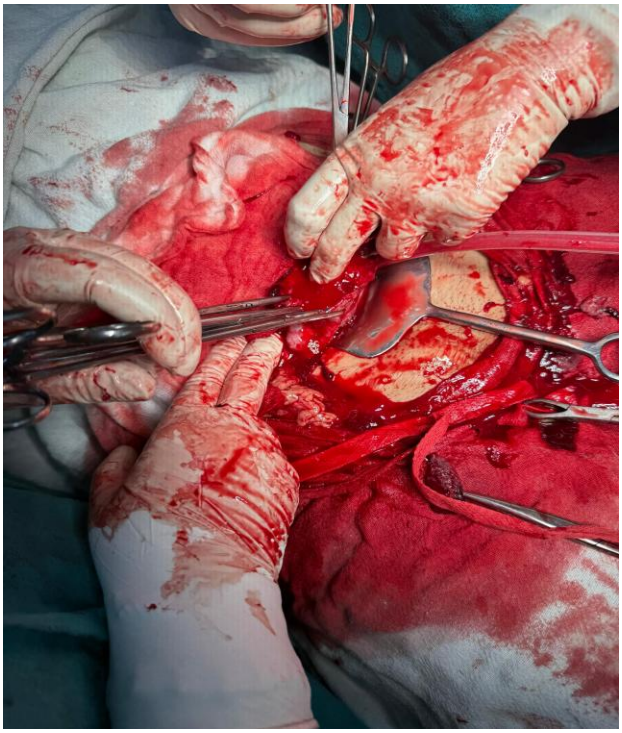

Figure 3: Fundal rupture.

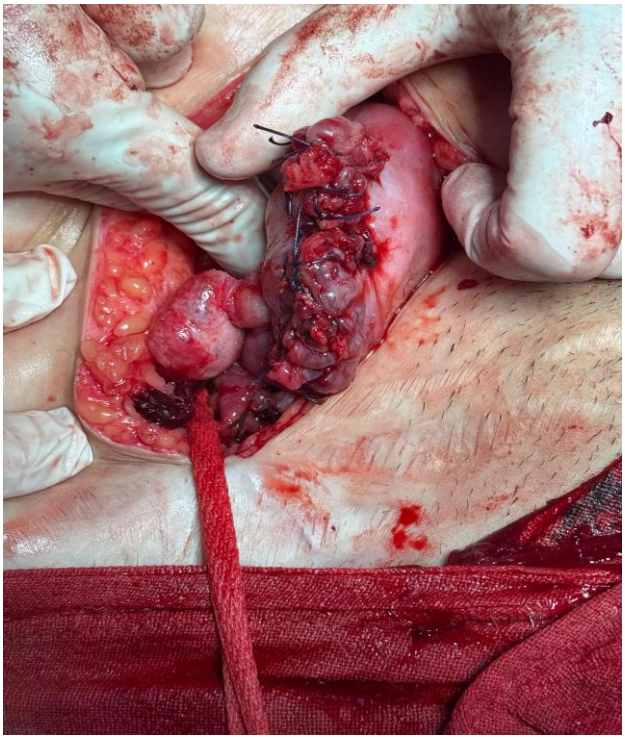

Figure 4: Repaired fundal rupture.

Intraop findings: Hemoperitoneum present. About 800cc of blood with clots was removed. Fundal rupture was seen of its entire length. Fetus with placenta was found lying outside in abdominal cavity. Previous scar was intact. Bilateral tubes and ovaries were normal and bilateral tubal ligation was done.

Case 3: fundal placenta accreta spectrum in early pregnancy in a case of previous 2 LSCS

A 30-year-old gravida 4, para 2, abortion 1 with a history of previous two caesarean sections and one D and C presented at 19 weeks 1 day of gestation for a routine ultrasound. The scan revealed intrauterine fetal demise and abnormal, increased vascularity of the placenta at the fundus with presence of placental lacunae only in upper third, rest of the placenta was normal with clear hypoechoic retroplacental zone. She was advised admission. On per abdominal examination, uterus was corresponding to 20 weeks size, suprapubic transverse scar of previous cesarean sections was present, and there was no scar tenderness. On per vaginal examination, uterus was anteverted, the cervix was soft and early effaced. She was planned for medical termination with Tab. Mifepristone 200mg given orally, followed by Tab. Misoprostol 400mcg sublingually after 24 hours of Mifepristone. The Patient expelled the fetus, but the placenta was retained. On P/A examination uterus was corresponding to 16 weeks size. On P/V examination OS was open and placenta felt adherent posteriorly. The lower part of the placenta was removed as much as possible, but the patient had profuse vaginal bleeding. Her BP was 90/60 mmHg and her pulse rate was not recordable.

After stabilizing the vitals, a decision was taken for exploratory laparotomy and subtotal hysterectomy in view of adherent placenta (placenta accreta) with severe hemorrhage. Intraoperative findings revealed a flabby uterus. The anterior lower segment appeared thinned out. No rupture was present. Most of the placenta was adherent to the fundus and lateral wall. A Subtotal hysterectomy was performed. The patient received 4 units of packed red blood cells and 3 units of FFP and was stabilized post operatively. Patient was discharged on 7th postop day.

Figure 5: Placenta removed partially after expulsion of foetus.

Figure 6: Subtotal hysterectomy with rest of adherent placenta.

DISCUSSION

The diagnosis of epithelial ovarian cancer during pregnancy is rare. Despite being rare, the incidence may be increased in the older patients who are pregnant. The majority of ovarian cancers diagnosed during pregnancy are at an early stage.[7,8] With maternal prognosis regarding stage found to be similar to that in the non-pregnant patient. There is no evidence that pregnancy itself adversely affects the survival of patients with epithelial ovarian carcinoma. Prognosis in papillary serous adenocarcinoma is determined primarily by tumour-related factors rather than the gravid state itself. Among these, FIGO stage at diagnosis remains the most significant prognostic determinant, with early-stage disease conferring a substantially better survival outcome. Uterine rupture in the first trimester of pregnancy or even in the early second trimester is very rare. The fundus is the most common site of rupture in early pregnancy.[9] The majority of the reviewed studies indicated two main causes of uterine rupture, namely abnormal placenta invasion and previous cesarean scar. In our case fundal rupture was present, previous caesarean scar was intact, placenta was anterior not invading the fundus, hence cause could not be determined. Surgical exploration is typically needed to confirm the diagnosis and for management. Hysterectomy is not always necessary, primary uterine repair is sufficient in more than two-thirds of the cases to achieve hemostasis.[10] Fundal placenta accreta is a rare form of PAS, difficult to detect due to its upper uterine location. Diagnosis relies heavily on imaging modalities, but gray scale ultrasound has limited sensitivity for fundal lesions. Management of fundal placenta accreta presents unique challenges due to its atypical location. Diagnosis may be missed on ultrasound imaging as was in our case. Radical approaches, such as cesarean hysterectomy remains the standard in cases with extensive invasion or life-threatening hemorrhage.[5-12] This case series emphasizes the importance of maintaining a high index of suspicion, utilizing appropriate imaging modalities, and adopting a multidisciplinary approach for optimal outcomes.

CONCLUSION

Although uncommon, rare complications such as ovarian malignancy, fundal uterine rupture and PAS, can occur in early pregnancy and may be life-threatening. Awareness of these entities, prompt diagnosis, and timely surgical intervention are essential to reduce maternal morbidity and mortality.

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