Diagnostic dilemma: Breast cancer in pregnancy

Abstract
Breast cancer is the most common malignancy in pregnancy, having an incidence of 1 in 3000 women. Larger and more advanced neoplasms are diagnosed in pregnancy compared with age-matched non-pregnancy related cases. Pregnancy commonly delays cancer diagnosis for up to 2 months due to symptoms mistaken for normal disorders of pregnancy, pregnancy related breast hypertrophy complicating discovery of tumours, lack of medical staff awareness and reluctance to conduct imaging and invasive procedures during pregnancy. Diagnosis delay by one month has a 0.9% increased risk of nodal spread.

BCP management requires consideration of both maternal and foetal wellbeing. A multidisciplinary approach, psychological support and genetic counselling are essential.

Case
A 32-year-old female presented at gestational-age 31+6 weeks of low back pain and 2 weeks of loss of appetite, vomiting, steatorrhea, pruritis and loss of weight. She had scleral icterus, spider naevi, abdominal distension and a tender epigastrum. Family history revealed the maternal grandmother had breast cancer at age 37. Investigations revealed acute renal failure, markedly deranged liver function tests, hypercalcaemia, coagulopathy and elevated LDH. An abdominal ultrasound reported hepatosplenomegaly and 90ml pelvic free fluid.

The patient was induced at 32+1 gestation to expedite delivery. A left breast lump was discovered that measured 3cm on mammography. The CA15-3 was 2403kU/L. Core biopsy diagnosed invasive ductal carcinoma that is oestrogen and progesterone receptor positive and HER2 negative. A CT scan found metastases to the spine, liver, peritoneum and bone, ascites, portal hypertension, left axillary lymphadenopathy and a left main pulmonary artery tumor.

Oncology and palliative care concluded incurable cancer. The patient's underwent chemotherapy and is now undergoing radiotherapy.

Discussion
BCP typically presents with a palpable mass and 48% have a positive family history. Ultrasound has a 100% sensitivity for the diagnosis of BCP. A core biopsy has a 90% sensitivity and is the gold standard for diagnosis during pregnancy. The most common type of BCP is invasive ductal carcinoma. Women with BCP have similar prognostic and predictive markers to age-matched non-pregnant women. Management approach is based on gestation, stage of disease and patient preference.

Conclusion
Breast cancer is the most common malignancy in pregnancy. It is age related as opposed to pregnancy related and requires prompt recognition, diagnosis and management, which is often difficult in the setting of a pregnancy. Surgery, radiotherapy and chemotherapy are all appropriate therapeutic modalities and should be individualised. This case outlines the diagnostic and management challenges of BCP.

References