PREGNANCY LUTEOMA MIMICKING A MALIGNANT OVARIAN MASS

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Background

Pregnancy luteomas are rare, non-neoplastic lesions usually noted as incidental findings on ultrasound or during surgery, that often regress spontaneously in the postpartum period. Pregnancy luteomas present a diagnostic and management challenge as they may mimic the presentation of a malignant ovarian tumour. We describe a case of a woman who presented with hypertension and had an incidental finding of a pregnancy luteoma during surgery.

Case Study

A 36 year-old, gravida 6 para 5, presented with hypertension at 28+1 weeks with no prior history of hypertension or preeclampsia. On admission, she was symptomatic with a mild headache and pedal oedema. Her blood tests reported a normal haemoglobin, platelets, liver function tests, rising creatinine (60 to 149umol/L), urate of 0.58mmol/L, and a urine protein creatinine ratio of 442mg/mmol. An ultrasound performed at the time reported a single live fetus with an abdominal circumference and estimated fetal weight of 980g (both <5th centile) with normal liquor. The umbilical artery doppler demonstrated reversed end diastolic flow with a normal middle cerebral artery pulsatility index and normal ductus venosus flow. The CTG was normal. The diagnosis of severe preeclampsia with significant growth restriction was established and in view of refractory hypertension an emergency caesarean section was performed and a live baby girl was delivered by breech extraction. During the procedure, there was an incidental finding of a right ovarian mass of approximately 8cm, which ruptured during exteriorization but it was contained externally with no intra-abdominal spillage. It had a smooth glistening external surface, with areas of haemorrhage and necrosis visualised within the mass. A right salpingo-oophorectomy was performed with omental and peritoneal biopsies taken at the time as there was a suspicion of a malignancy. Histopathological examination revealed the mass to be a pregnancy luteoma.

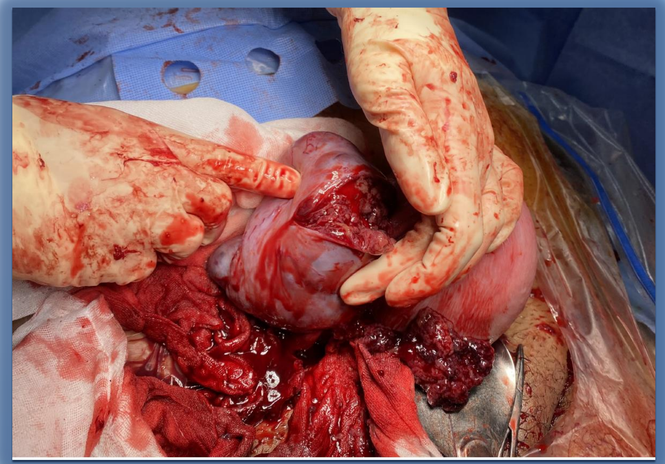

Image 1: Right ovarian mass showing a glistening external surface with haemorrhage and necrosis visualised within.

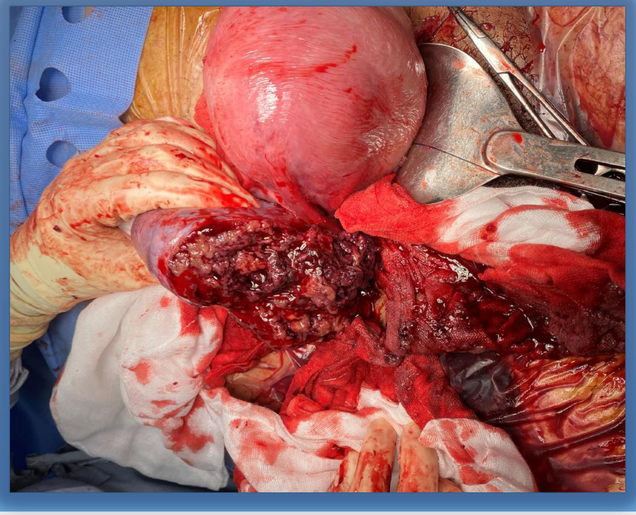

Image 2: Right ovarian mass with necrotic and haemorrhagic internal contents

Discussion

Pregnancy luteomas are benign neoplasms of the ovary. They were first described in 1963 by a Dr William Sternberg[1]. There have been fewer than 200 cases described in the literature[1]. Luteomas are thought to be caused by the hormonal effects of pregnancy, hyperplasia of luteinized stromal cells[2]. The coexistence of luteomas with conditions such as polycystic ovarian syndrome and diabetes is well established[5]. They can be hormonally active with androgen hyper-secretion, which many lead to virilization of both mothers and female fetuses including facial and abdominal hair, deepening of voice, worsening acne or clitoromegaly[3]. Luteomas are most commonly asymptomatic and self limited where they decrease in size after delivery, usually resolving in 2-3 weeks and can take up to a year. They present as bossulated, well demarcated and often bilateral ovarian masses with a necrotic centre. However luteomas are often difficult to differentiate from malignant ovarian tumours[4]. The bilateral nature of these neoplasms may be helpful because bilaterality tends to favour a hyperplastic condition, however this is not exclusive of other diagnoses. Consequently, it is important to rule out other diagnoses of adnexal masses in pregnancy including mature cystic teratoma, serous cystoadenoma, mucinous cystadenoma, corpus luteal cyst, serous carcinoma, a SERTOLI-LEYDIG cell, an immature teratoma and a granulosa cell tumour[2].

References

1. Burandt, E. & Young, R.H. 2014. *Am J Surg Pathol*, 38(2): 239-244
2. Masarie, K., Kats, V., & Balderston, K. 2010. *Obstet Gynecol Surv,* 65(9): 575:582
3. Khurana, A., & O'Boyle, M. 2017. *Ultrasound Quarterly*, 33(1): 90-92
4. Rapisarda, V., Pedalino, F., Santonocitio, V.C., Cavalli, G & Zarbo, G. 2016. *Case Rep Obstet Gynecol*, pp. 4
5. Banerjee, A., Tahmasebi, E., Myola, E., & Yoong, W. 2006. *J Obstet Gynaecol,* 26(6):572-574