

Management of the incidental adnexal mass at emergency caesarean section: An asymptomatic Struma Ovarii

Wilkinson R, Evans A, Lourie R, Safa H

Department of Obstetrics and Gynaecology, Mater Mothers' Hospital, South Brisbane
Mater Pathology, Mater Health Services, South Brisbane

Introduction

Inspection of the adnexa at caesarean section is common practice and provides opportunity for detection and management of pathology. Adnexal masses are noted between 1:123 and 1:329 caesareans.^{1,2} With advancement in ultrasound, incidental or unexpected adnexal masses are encountered in fewer operations.³ Discovery of an unexpected ovarian lesion during emergency caesarean section presents many challenges; including weighing of low-risk versus suspicious features, deciding upon cystectomy versus oophorectomy, minimisation of additional operative risk and issues surrounding gaining consent intraoperatively.^{1,4,5}

Case Presentation

A 36-year-old G2P0 at 40-weeks and 2-days gestation underwent an emergency caesarean for failure to progress at 7cm dilated. Inspection of the adnexa revealed a 13x12x8cm right multicystic and vascular ovarian mass (Figure 1). Left adnexa and ovary were unremarkable. Minimal normal ovarian tissue could be discerned macroscopically. Morphology ultrasound at 19-weeks had documented a 4x3x3cm hyperechoic solid right ovarian cyst. No further ultrasounds were performed antenatally. She had no previous medical or surgical history, nor issues antenatally otherwise. Due to the suspicious macroscopic appearance, difficulty discerning ovarian border and concerns about rapid growth over 20-weeks, Gynaecological Oncology input was obtained. The patient was counselled intraoperatively and the preference being for operative management that would minimise further procedures. Recommendation to undergo a right salpingo-oophorectomy was made and consent was obtained. With the uterus and right ovary exteriorised, a window was made by opening the right broad ligament, isolating the infundibulopelvic ligament (IP) from the ureter. The IP then tubo-ovarian ligament was clamped, cut and ligated with 1 vicryl ties. Mesosalpinx was ligated in 2 points to perform the salpingectomy. Histological impression of the 320g specimen was that of a Struma Ovarii without hypercellularity, malignancy or other teratomatous elements (Figure 2). 6 days post-partum, thyroid function tests showed undisturbed thyroid function and serum thyroglobulin and anti-thyroglobulin antibodies were negative. She was incidentally diagnosed with pre-eclampsia post-partum, however remained asymptomatic and was discharged post-partum day 4.



Figure 1: (Left) Topographic and (Right) side views of right ovarian cyst externalised and positioned anterior to the externalised uterus

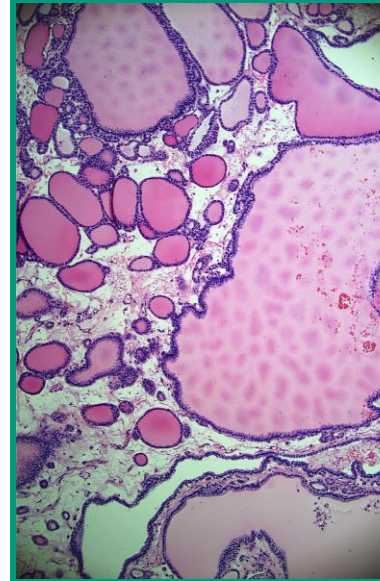


Figure 2: Large dilated follicles filled with brightly eosinophilic colloid are rimmed by bland thyroid epithelium (haematoxylin and eosin, x200 (objective x 10))

Discussion

Struma Ovarii are rare monodermal teratomas comprised of mature thyroid tissue. Struma Ovarii usually present as a pelvic mass or with abdominal pain. 5-8% cause biochemical hyperthyroidism⁶ and 5-37% of cases are associated with malignancy in the literature.⁷ A study of 46514 caesarean sections, showed 151 procedures for adnexal masses, none were Struma Ovarii, however, 2% of all adnexal lesions at caesarean sections are reportedly malignant.^{5,8} A conservative approach could have been adopted with the cyst left in situ; however, risk of malignancy, torsion, haemorrhage, rupture and need for subsequent operation should ideally be discussed. Risk of torsion is likely highest for such cysts >6cm and post-partum, with sudden reduction in uterine size.⁹ Most adnexal lesions will be managed with excision of the lesion alone, with the benefit of ovarian conservation. Although, risks include haemorrhage of the incision, spill or incomplete excision of the lesion, if the cyst is <5cm and simple, the risks are typically low. Therefore, it is usually recommended that even benign appearing cysts are excised at caesarean section.^{5,9,10} Suggested reasons to perform unilateral salpingo-oophorectomy, or more extensive staging, over cystectomy include an inability to excise the lesion with lesser procedure, extraovarian extension, ovarian malignancy, torsion with necrosis, to name a few.^{10,11} Frozen section was discussed during this case. Due to the size, atypical macroscopic appearance, normal ovary being indistinguishable from the lesion and rapid growth, it was unlikely that findings of the section would reassure the surgical team enough to not perform an excision and it was felt that it would be exceedingly difficult to perform a precise cystectomy.

Therefore, it was felt that frozen section would not have altered the recommendation for unilateral salpingo-oophorectomy and it was not requested. It may, however, have suggested that formal surgical staging may be indicated, but it was not thought that this should occur at the time of the emergency caesarean section and without further counselling and planning with the patient.

Given the complete removal of the cyst and ovary, absence of obvious extraovarian extension and no histological evidence of malignancy, the patient will not require long term follow up or surveillance.¹¹

Conclusion

Struma Ovarii are monodermal teratomas comprised of thyroid tissue, which may be associated with malignancy. It is not possible to reliably distinguish benign from malignant counterparts macroscopically. For adequate exclusion of malignancy, it was recommended that this ovarian mass was managed with oophorectomy rather than cystectomy. Frozen section of the lesion would not have resulted in a more conservative approach. This case highlights the importance of approaching unexpected intraoperative pathology in a systematic manner. Given adnexal masses are not all that uncommon, routine consent for caesarean section should include possibility of adnexal surgery to optimise patient counselling for the purpose of obtaining adequate informed consent.

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