Not to be Forgotten: Malignancy (Brenner Tumour) in Ovarian Torsion

Yi Jia LEE[1], Greggory ELOUNDOU[2]

Department of Obstetrics and Gynaecology
1. *King Edward Memorial Hospital, Western Australia, Australia*
2. *Joondalup Health Campus, Western Australia, Australia*

Corresponding author: Yi Jia Lee, yijialee26@gmail.com

RANZCOG Annual Scientific Meeting 2022 GOLD COAST
Transformation: Making Waves

Introduction

- Brenner tumour was first identified by Fritz Brenner in 1907[1].
- Malignant Brenner tumour (MBT) is a rare subtype of epithelial ovarian tumour (< 1% of all ovarian malignancies).
- Limited available literature on diagnosis and management of MBT[2].
- < 2% of malignant ovarian tumours present with torsion because malignancies tend to cause inflammatory changes leading to adhesion in surrounding tissues, hence reducing ovarian mobility[3].
- Only two publications thus far in the literature report ovarian torsion in benign Brenner tumours[4,5].

We present a rare case of perimenopausal women presenting with ovarian torsion with MBT.

Case Report

Patient

- 57y/o, G1P1, perimenopausal female
- One-month hx of known 13cm right ovarian multilocular cyst with solid components under investigation by her General Practitioner.
- Otherwise, no significant past medical or surgical history.

Presentation

- Presented to the emergency department with acute onset of right-sided abdominal pain, worsening abdominal distension, nausea and vomiting.
- O/E: Abdo soft, very tender right iliac fossa with rebound tenderness

Investigations

- **Bloods**: Hb 125, WCC 12 (slightly raised), CRP 13 (slightly raised)
- **Tumour markers**: Ca-125 of 26 (normal), all other tumour markers were unremarkable.
- **Pelvic ultrasound (USS)**: 137 x 93 x 102mm right mixed cystic solid ovarian lesion. There is circumferential colour Doppler flow in the wall of the lesion and moderate internal vascular flow. Trace free pelvic fluid visualised. Unable to rule out ovarian torsion (see Figures 1 and 2).

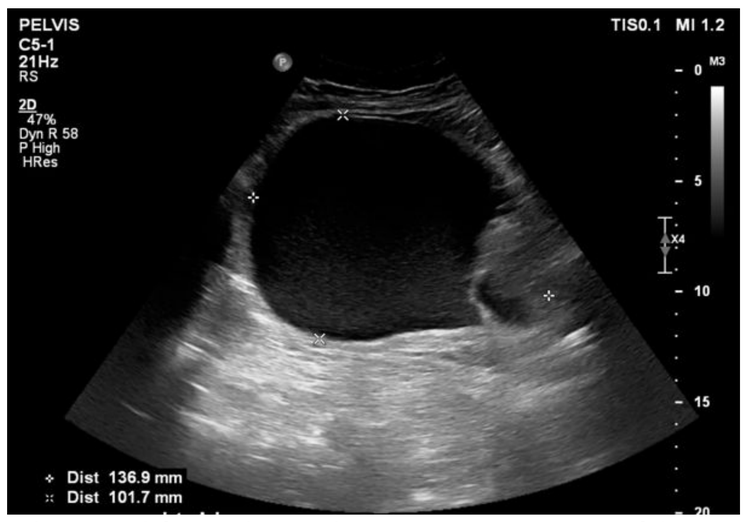

Figure 1: Right ovarian cystic mass 137x102mm on pelvic USS

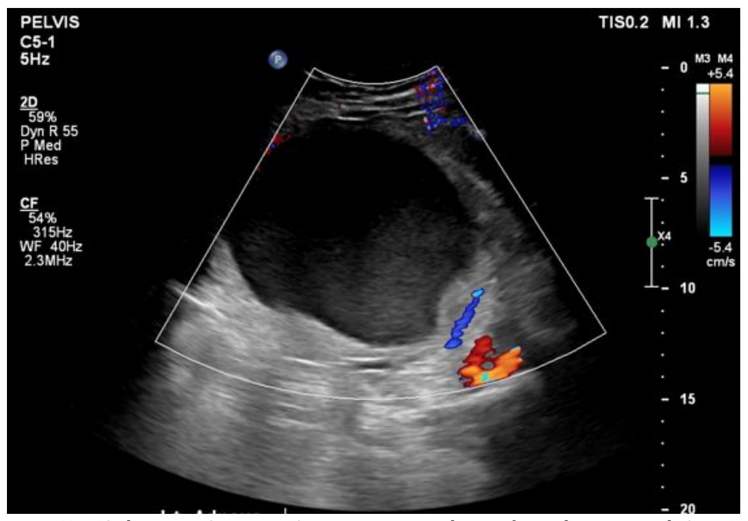

Figure 2: Right ovarian cystic mass on colour doppler on pelvic USS

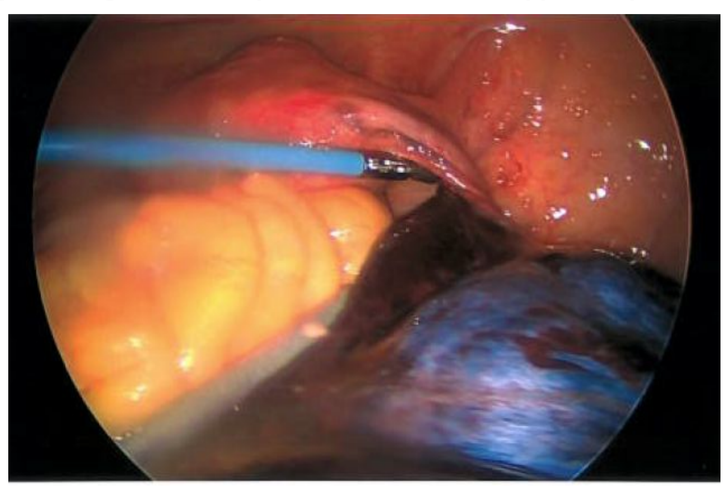

Figure 3: Point of torsion identified in right ovarian ligament.

Progress

- High clinical suspicion of ovarian torsion.
- Patient underwent emergency laparoscopic right salpingo-oophorectomy (RSO).
- Operation findings:
  - 18cm necrotic haemorrhagic cyst originating from right ovary.
  - Point of torsion identified in right ovarian ligament (see Figure 3).
  - Total RSO done with Enseal® and specimen was removed in a bag from left iliac fossa port to minimise any surgical spillage.

Outcome

- Patient recovered well and was discharged day 1 post-op.
- Right ovarian histopathology: MBT with haemorrhage.
- She underwent staging CT scan of chest, abdomen, and pelvis which revealed no evidence of metastatic disease.
- Patient was referred onto Gynaeoncology service.
- Patient subsequently underwent staging and completion surgery and treatment with Gynaeoncology service privately.

Discussion & Conclusion

- To our knowledge, this is the **first case report** of a perimenopausal woman presenting with ovarian torsion with MBT.
- Although the prevalence of ovarian torsion is uncommon in the peri/post-menopausal period, **malignancies should always be considered as a differential** and all the necessary surgical precautions should be taken to **avoid spillage and upstaging.**
- Surgery should also be considered as a **staging opportunity** with a clear description of peritoneal and diaphragmatic spread.
- It is important to keep in mind that in **peri/post-menopausal women** the **risk of malignancy might be higher than apparent** and that **tumour markers may not always positively correlate with malignancy**, especially in a rare tumour such as MBT.

References

1. *Brenner T. Das oophoroma folliculare. Frankfurt Z Pathol. 1907;1:150.*
2. *Speert H. Obstetrical-gynecological eponyms: Fritz Brenner and Brenner tumors of the ovary. Cancer. 1956 Mar;9(2):217-21.*
3. *Ding D, Huang C, Hong M. A review of ovary torsion. Tzu Chi Medical Journal. 2017;29(3):143.*
4. *Terada T, Tateoka K. Ovarian cystic tumor composed of Brenner tumor and struma ovarii. International Journal of Clinical and Experimental Pathology. 2012;5(3):274.*
5. *Belmonte M, Ramón J, Muñoz O, González C, Moreno M, Pérez M et al. Ovarian torsion as a complication of Brenner tumour. EURORAD. 2016;.*

Disclosure
None