A twisted case of abdominal pain in third trimester

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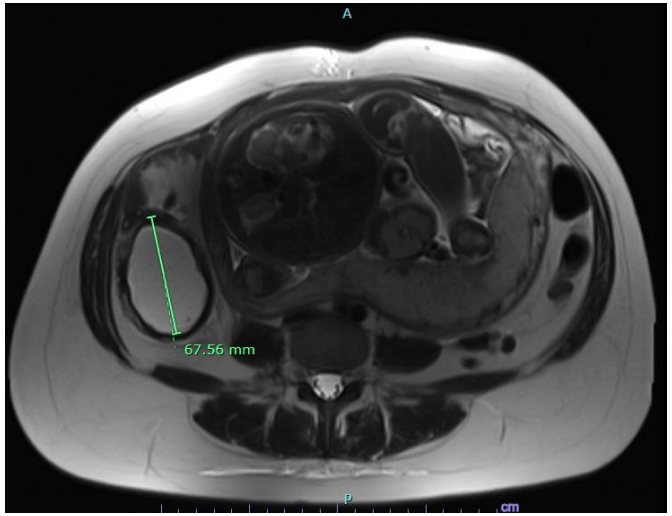
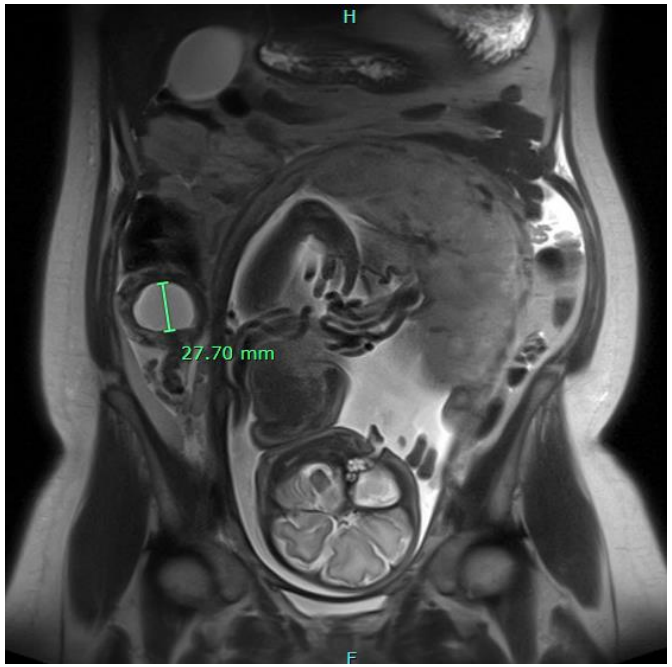
Background

- Abdominal pain is a frequent presentation during pregnancy, with a multitude of possible causes.
- Ovarian torsion involves rotation of the adnexa which can cause significant enlargement of the ovary due to arterial inflow. Though ovarian torsion is more 5 times more common in pregnancy, it is rare in the third trimester. It is more common in the right ovary, likely due to the sigmoid colon restricting movement of the left ovary.

Case

- A multiparous woman presented with right iliac fossa pain at 33+6 gestation. She awoke from sleep in severe pain. There was no associated nausea, vomiting or fevers
- She was haemodynamically stable throughout her admission and remained afebrile. The cervix was long and closed and fetal fibronectin was negative. Inflammatory markers were only mildly elevated initially, and a Kleihauer was negative. An ultrasound demonstrated a 55mm complex right ovarian cyst with vascularity and the appendix was not seen. MRI demonstrated a 67mm multiloculated cyst suggestive of a malignant cystic ovarian neoplasm. Tumour markers were normal
- Two days after conservative management, her pain worsened in severity, and she was consented for a diagnostic laparotomy and unilateral salpingo-oopherectomy for suspected ovarian torsion





Results and Discussion

- Intraoperative findings demonstrated a grossly enlarged, haemorrhagic and necrotic torted right Fallopian tube and ovary, and she underwent a right salpingo-oopherectomy. Despite preoperative nifedipine, the patient progressed into spontaneous preterm labour 12 hours post-operatively
- Identifying and treating ovarian torsion in pregnancy is made challenging, as proceeding to surgery at a later gestation comes with an increased risk of preterm birth, which occurs in up to 82% of cases in the third trimester[1]. Treatment is therefore often delayed, risking the preservation of the ovary.
- Another consideration is whether surgery should be performed by laparoscopy or laparotomy, the former is made challenging in the late second and third trimesters due to the enlarging uterus. In this case, a salpingo-oophorectomy was performed, however, other surgical options exist such as detorsion, cystectomy, and ovarian fixation.
- Deciding between surgical options is made difficult as there are no validated clinical predictors of ovarian viability. There is evidence suggesting that most ovaries thought to be necrotic at the time of detorsion show normal ovarian blood supply and follicular development at follow up, which makes ovarian preservation an acceptable option when malignancy is not suspected[2].

References:
1. Visser BC, Glasgow RE, Mulvihill KK, et al. Safety and timing of nonobstetric abdominal surgery in pregnancy 2001;18:409-417.
2. Dasgupta R, Renaud E, Goldin AB, Baird R, Cameron DB, Arnold MA, et al. Ovarian torsion in pediatric and adolescent patients: A systematic review. Journal of Pediatric Surgery. 2018; 53:1387-1391.