

Case report: Acute Gangrenous Appendicitis Complicating Pregnancy in the Third Trimester

Dr Pui Lam Kwan

Department of Obstetrics and Gynaecology, Logan Hospital, Queensland, Australia

Objective:

- Acute appendicitis during pregnancy is the most common non-obstetric emergency requiring surgical intervention, with an incidence of 1 in 800-1500 pregnancies.

Case report:

- A healthy 33-year-old 33+6 weeks pregnant woman presented with acute right-sided abdominal pain and threatened pre-term labour.
- Her abdomen was soft with tenderness in the right iliac fossa and right renal angle with regular palpable contractions.
- Speculum examination revealed a long and closed cervix with a positive Actim Partus test.
- Blood tests showed leukocytosis of $26.4 \times 10^9/L$ (4.0-11.0), a C-reactive protein (CRP) level of 41 mg/L (<5.0), and a lactate level of 1.3 mmol/L (0.5-2.2).
- Pelvic ultrasound did not visualize her appendix, and no surrounding free fluid was found. MRI showed no signs or secondary features of appendicitis.
- The surgical team recommended conservative management, as she was hemodynamically stable with reassuring imaging findings.
- Broad-spectrum antibiotics, tocolysis, and antenatal steroids were administered.
- The patient then developed persistent right iliac fossa pain and a tender abdomen with peritonism on the following day.
- An emergency open laparotomy, caesarean section, and appendectomy were performed at 34 weeks gestation.
- Perforated gangrenous appendicitis with purulent exudate was identified during the laparotomy.
- The patient developed postoperative pneumonia and pericardial effusion, which were managed by the medical team. She recovered and was discharged home on day five.

Discussion:

- The diagnosis of acute appendicitis remains challenging during pregnancy due to changes in the anatomical location of the appendix related to the enlarged uterus and physiological mild leukocytosis.
- Presenting symptoms, such as abdominal pain, nausea, and vomiting, can be difficult to differentiate from common pregnancy-related symptoms.
- The perforation rate occurs in 43% of pregnant patients whose surgical treatment is delayed for 24 hours.
- In this case, surgical management of acute appendicitis was delayed due to reassuring ultrasound and MRI findings, leading to complications, including perforation of the gangrenous appendix and preterm delivery.

Conclusion:

- Acute appendicitis should be diagnosed promptly, and early surgical intervention reduces maternal and neonatal complications.

References:

Tamir IL, Bongard FS, Klein SR. Acute appendicitis in the pregnant patient. Am J Surg. 1990 Dec;160(6):571-5; discussion 575-6. doi: 10.1016/s0002-9610(05)80748-2. PMID: 2252115.