

Acute Appendicitis Occurring in the Late Third Trimester

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BACKGROUND

Appendicitis is a common surgical presentation characterised by right lower quadrant pain, fevers and vomiting. Occurrence in pregnancy is uncommon with a reported incidence of 0.15 to 2.10 cases per 1000 pregnancies, with incidence being lowest in the third trimester (1-3). Altered anatomy, limited imaging modalities, physiological leukocytosis and the potential to trigger pre-term labour can make diagnosis of acute appendicitis increasingly difficult with advancing gestation (4-7). Pregnant women with appendicitis have higher rates of complications and adverse outcomes than non-pregnant women (8), particularly in the third trimester (9).



Figure 1. Ultrasound image of blind ended tubular structure with periappendiceal inflammatory changes indicating acute appendicitis

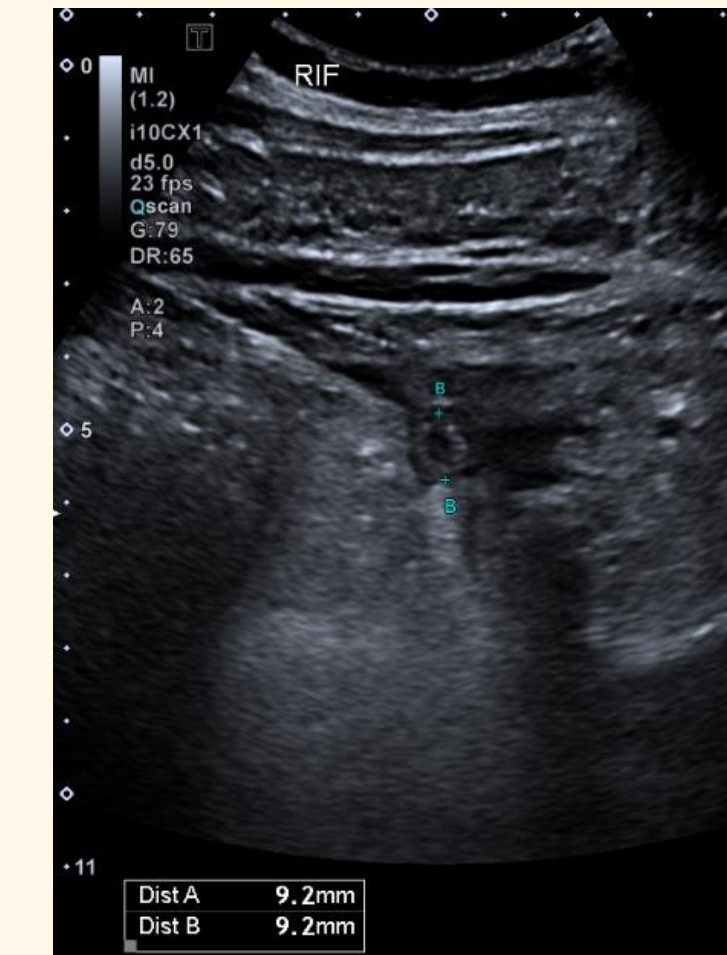


Figure 2. Ultrasound image of appendiceal diameter of 9.2mm suggesting acute appendicitis

AIMS

We present a case of acute perforated appendicitis occurring in a pregnant woman, managed with emergency caesarean section and appendicectomy.

CASE

A 34 year old primigravid woman presented to the emergency department at 36+1 weeks' gestation with right lower quadrant pain and vomiting. Her antenatal history included gestational diabetes and a growth-restricted fetus. Owing to the fetal growth restriction, she had been having serial fetal growth and wellbeing ultrasounds, received two doses of intramuscular betamethasone 11.4mg at 35 weeks' gestation and was planned to undergo induction of labour at 38+0 weeks' gestation. Vital signs were initially within normal limits and she had generalised abdominal tenderness, worse in the right lower quadrant. Initial pathology results were unremarkable. Ultrasound demonstrated acute appendicitis. Initial CTG was reassuring however subsequently became abnormal with fetal tachycardia, coinciding with our patient becoming febrile and tachycardic.

Treatment was commenced with intravenous antibiotics. Our general surgical colleagues were consulted and a joint decision made for caesarean section and open appendicectomy. Intra-operative findings included a perforated appendix with intra-peritoneal purulent fluid. Following closure of the hysterotomy, an appendicectomy and washout was performed. There was uncomplicated delivery of a female neonate with a birthweight of 1950g and APGARS of 8, 9 and 9. The baby required early respiratory support and was monitored in the special care nursery until day nine of life for management of hypoglycaemia and low birth weight.

RESULTS

Our patient suffered a post-operative ileus which resolved. She was discharged home eight days post-operatively. Histopathology of the appendix confirmed acute perforated appendicitis and placental histopathology was unremarkable.

DISCUSSION

This case illustrates the potential for acute appendicitis to occur in late pregnancy. If untreated, it can be associated with significant morbidity and mortality (8). In the non-pregnant patient, conservative management of appendicitis with antibiotics therapy is a safe and effective treatment option for uncomplicated appendicitis however appendicectomy remains the gold standard treatment for complicated appendicitis (including perforation, abscess, gangrene) (3). In pregnant women, there may be a role for conservative management of uncomplicated appendicitis to prolong the pregnancy and minimise adverse fetal outcomes due to preterm birth, however the evidence favours surgical management (5, 8), particularly for complicated appendicitis owing to the higher rates of poor fetal outcomes (10). Therefore, early recognition, diagnosis and a multidisciplinary team approach is warranted to reduce potential risks to mother and baby.

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