

Case Report

Pregnancy problems: a case report

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ABSTRACT

Appendicitis is a common surgical cause of abdominal pain. Investigation and diagnosis of the cause of right lower quadrant abdominal pain is more complex in women who are pregnant. A 27 year old, 34 week pregnant female presented with migratory RIF pain. Inflammatory markers were mildly elevated. There was a strong patient preference to avoid unnecessary. In this case we demonstrate the importance of keeping a broad differential diagnosis despite imaging findings. With a higher index of suspicion in this case surgery could potentially have been avoided. This could have avoided potential morbidity and additional psychosocial stress during the patient's pregnancy. As such the limitations of diagnostic certainty with imaging especially less common modalities such as MRI should be appreciated.

Keywords: Deciduos, Appendicitis, Pregnancy, Open appendicectomy

INTRODUCTION

The diagnosis and management of acute appendicitis has greatly changed as new technologies have been adopted.¹ The introduction of laparoscopic surgery and increased availability of imaging studies represents the biggest change in management of presumed appendicitis in recent times though their application to the diagnosis of appendicitis in pregnant patients has been limited.² The increasing availability of magnetic resonance imaging (MRI) means there is a cross-sectional radiation sparing option to investigate possible appendicitis in pregnant females, those of childbearing age and children with the potential to avoid the morbidity related to unnecessary surgery for presumed appendicitis that are found to have a normal appendix.³

CASE REPORT

A 27 year old pregnant female presented with sudden onset of cramp like central abdominal pain early in the morning. There had been two short (5 minute) episodes of similar, self resolving pain some weeks earlier. She

was thirty-four weeks into an otherwise uncomplicated pregnancy and presented to the maternity assessment unit at her local regional hospital with concerns for premature labour as the pain persisted. Her pain localised to the right iliac fossa when she mobilised. She was initially assessed by the obstetrics team and found to be tender in the right iliac fossa without any evidence of premature labour. She was then referred to and reviewed by the surgical team who found her to have localised percussion tenderness in the right iliac fossa and a positive Rosving's sign.

The patient had previously been diagnosed with endometriosis and haemachromatosis but was not current receiving any treatment for these conditions. This was her first pregnancy. Blood results demonstrated an elevated white cell count (WCC) of 14.9 predominantly neutrophils (11.8) with a slightly raised C reactive protein (CRP) of 5. At this point she was commenced on intravenous antibiotics to treat empirically for appendicitis with an abdominal ultrasound planned for the morning. Her pain was well managed with opioid analgesia. The ultrasound was unable to visualise the

appendix, prominent lymph nodes (7.8 mm) in the right iliac fossa and probe tenderness were noted. Pain had partially subsided since admission. After discussion with the patient a radiation sparing approach of abdominal MRI was chosen to further elucidate the possible diagnosis. The MRI was performed that afternoon and reported a dilated distal appendix to approximately 11 mm with a markedly distended tip to 19 mm with surrounding free fluid. There was no free fluid or gas and a single intrauterine pregnancy.

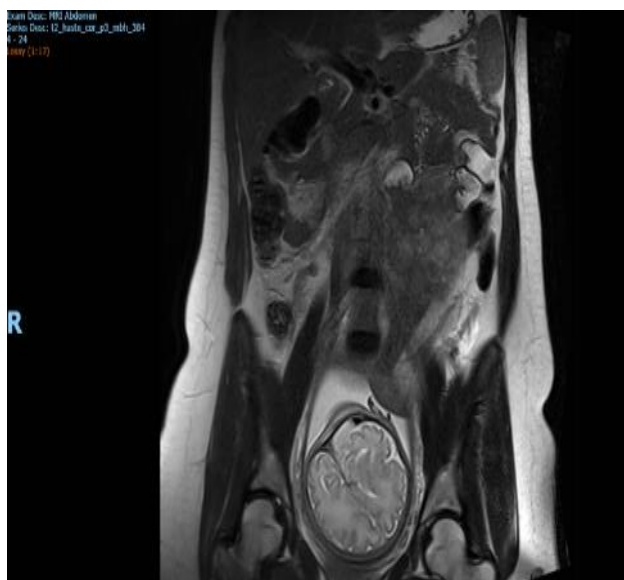


Figure 1: MRI abdomen of fetal position and base of appendix.

Further discussions between the surgical team and the patient regarding the risks and benefits of an open appendicectomy compared to non-operative management resulted in a shared decision to operate. At the time of operation a McBurney's incision was performed with dissection down to peritoneal cavity. The appendix was identified. The appendiceal tip was seen to be adherent with a possible adnexal structure by gelatinous/ mucinous tissue. An intraoperative consult from the consultant gynaecological consultant was sought and the decision to resect this tissue en bloc with the appendix preserving the right fallopian tube and ovary made. This was performed without complication and after suctioning the abdomen was closed in layers. The tissue was sent for histopathology with concern for a possible malignancy. There were no immediate post operative surgical or obstetric complications and the patient was discharged on post operative day two. She went on to deliver a healthy baby at term and has not suffered from any post operative complications since.

Histopathology went on to demonstrate a normal appendix with an attached mass consisting of decidua covered by serosa with no malignancy present.

DISCUSSION

The described case highlights the challenges of diagnosing right lower quadrant abdominal pain in pregnancy. Along with the common surgical causes of pain clinicians must consider the possibility of common and uncommon obstetric complications of pregnancy.⁴ The involvement of all relevant specialty teams and multidisciplinary discussion help facilitate the further investigation of causes by not omitting possible pathologies due to either the surgical or obstetrics team not encountering them in their usual practice.⁵

It should continue to be recognised that MRI, though advantageous for avoiding radiation exposure, has diagnostic limitations especially when a narrow differential diagnosis is considered, and clinical decisions often require weighing the risks of surgical versus non-surgical management.⁶ Imaging with MRI is not a panacea for diagnostic uncertainty and there remains a role for diagnostic and therapeutic procedures to sample tissue and remove suspicious organs and masses as happened in this case. This case further demonstrates the ongoing importance of histopathology in confirming the final diagnosis, as imaging findings alone may not capture or consider unusual presentations, such as decidualis.⁷ For clinicians, this case underscores the need for a high index of suspicion and collaborative decision-making when addressing abdominal pain in pregnant patients.

Deciduosis of the appendix is becoming increasingly well recognised as an appendicitis mimic in pregnant women.⁸⁻¹⁰ Management consists of surgical removal of the appendix and attached deciduosis for confirmed histopathological diagnosis. This reflects that it is nearly always an unexpected-findings during a planned appendicectomy. The role of conservative management has not been established.¹¹

CONCLUSION

This case demonstrates that though appendicitis is well described in patients during pregnancy a broad set differential diagnoses should be considered. It also demonstrated the ongoing utility and reliance on histopathological diagnosis as the gold standard for obtaining a definitive diagnosis. As MRI imaging becomes more available clinicians should remain cognisant of its limitations and reviewing cases such as these once the final diagnosis is known remains an important learning opportunity for all clinicians involved especially the surgical team and radiologists that report these emerging imaging modalities.

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