

APPENDICEAL ENDOMETRIOSIS : A RARE PRESENTATION AS ACUTE APPENDICITIS IN PREGNANCY

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Objective

The objective of this study is to present a rare case of appendiceal endometriosis presenting as acute appendicitis in pregnancy and leading to preterm delivery at 35+6 weeks’ gestation.

Case Report

A 31-year-old primiparous woman with an otherwise uncomplicated pregnancy and no diagnosis of endometriosis presented at 19+1 weeks' gestation with right iliac fossa (RIF) pain, elevated white blood cells (11 x10⁹/L), and C-reactive protein (CRP) of 69 mg/L. MRI revealed a mildly distended bowel loop in the right lower quadrant suggestive of early appendicitis, hepatic lesions (advised for ultrasound follow-up), and mild bilateral hydroureteronephrosis due to the gravid uterus. Following extensive multidisciplinary discussions with the Obstetrics and General Surgery teams, the patient opted for conservative management initially with intravenous antibiotics which were then switched to oral antibiotics with clinical improvement.

At 35+6 weeks' gestation, she re-presented with ongoing RIF pain, a raised lactate of 5 mmol/L, and normal inflammatory markers. An ultrasound scan at 34+6 weeks for persistent RIF pain had been inconclusive. Given the prior MRI findings and worsening symptoms, the multidisciplinary team (MDT) decided upon an open appendicectomy and simultaneous caesarean delivery given the gestation.

Intraoperatively, an inflamed appendix was identified and removed without complications, with no other sites of endometriosis noted. The baby was born in good condition. Histopathology revealed appendiceal ‘endometriosis with an endometriotic cyst and marked decidualised stroma in keeping with pregnancy effect’. The patient was asymptomatic of endometriosis outside of pregnancy and did not require follow-up, but histological and surgical findings were explained.

References

1 Endometriosis [Internet]. [cited 2025 Jun 2]. Available from: <https://www.who.int/news-room/fact-sheets/detail/endometriosis>

2. Allahqoli L, Mazidimoradi A, Momenimovahed Z, Günther V, Ackermann J, Salehiniya H, et al. Appendiceal Endometriosis: A Comprehensive Review of the Literature. Diagnostics [Internet]. 2023 Jun 1 [cited 2025 Jun 2];13(11):1827. Available from: <https://pmc.ncbi.nlm.nih.gov/articles/PMC10253163/>

3. Giorgakis E, Karydakis V, Farghaly A. Perforated endometrial appendicitis in pregnancy. Hippokratia [Internet]. 2012 [cited 2025 Jun 2];16(2):181. Available from: <https://pmc.ncbi.nlm.nih.gov/articles/PMC3738423/>

4. Lebastchi AH, Prieto PA, Chen C, Lui FY. Appendiceal endometriosis in a pregnant woman presenting with acute perforated appendicitis. J Surg Case Reports [Internet]. 2013 [cited 2025 Jun 2];2013(12):rjt104. Available from: <https://pmc.ncbi.nlm.nih.gov/articles/PMC3888003/>

*Histology slides provided by Melisa Clark (Biomedical Scientist) and Dr Caroline Hughes (Pathologist). *

Discussion

Although endometriosis is a prevalent disorder affecting approximately 10% of women of reproductive age worldwide (1), appendiceal endometriosis is a rare manifestation of the condition, found in only about 0.05%-1.69% of those cases (2). Typically identified incidentally during gynaecological surgeries, it can occasionally manifest symptomatically as endometrial appendicitis, sometimes leading to perforation. This risk may be elevated in pregnancy due to higher levels of progesterone, though evidence remains inconclusive (3). Its presentation often mimics acute appendicitis, making pre-operative diagnosis difficult, particularly in pregnant women, where the causes of abdominal pain are often unclear, and imaging options are limited (4).

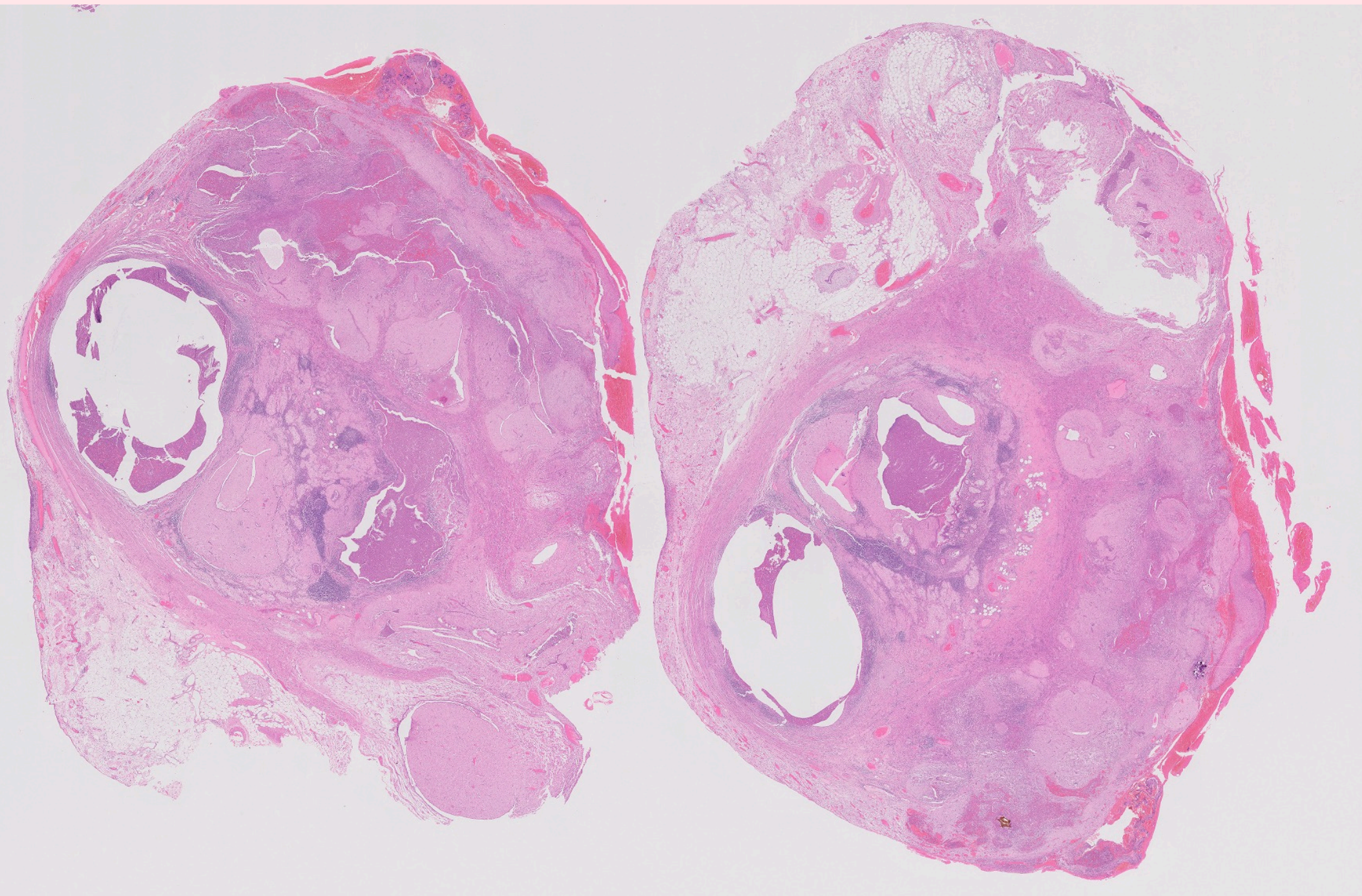


Image 1: Low power of two transverse sections of appendix with extensive endometriosis

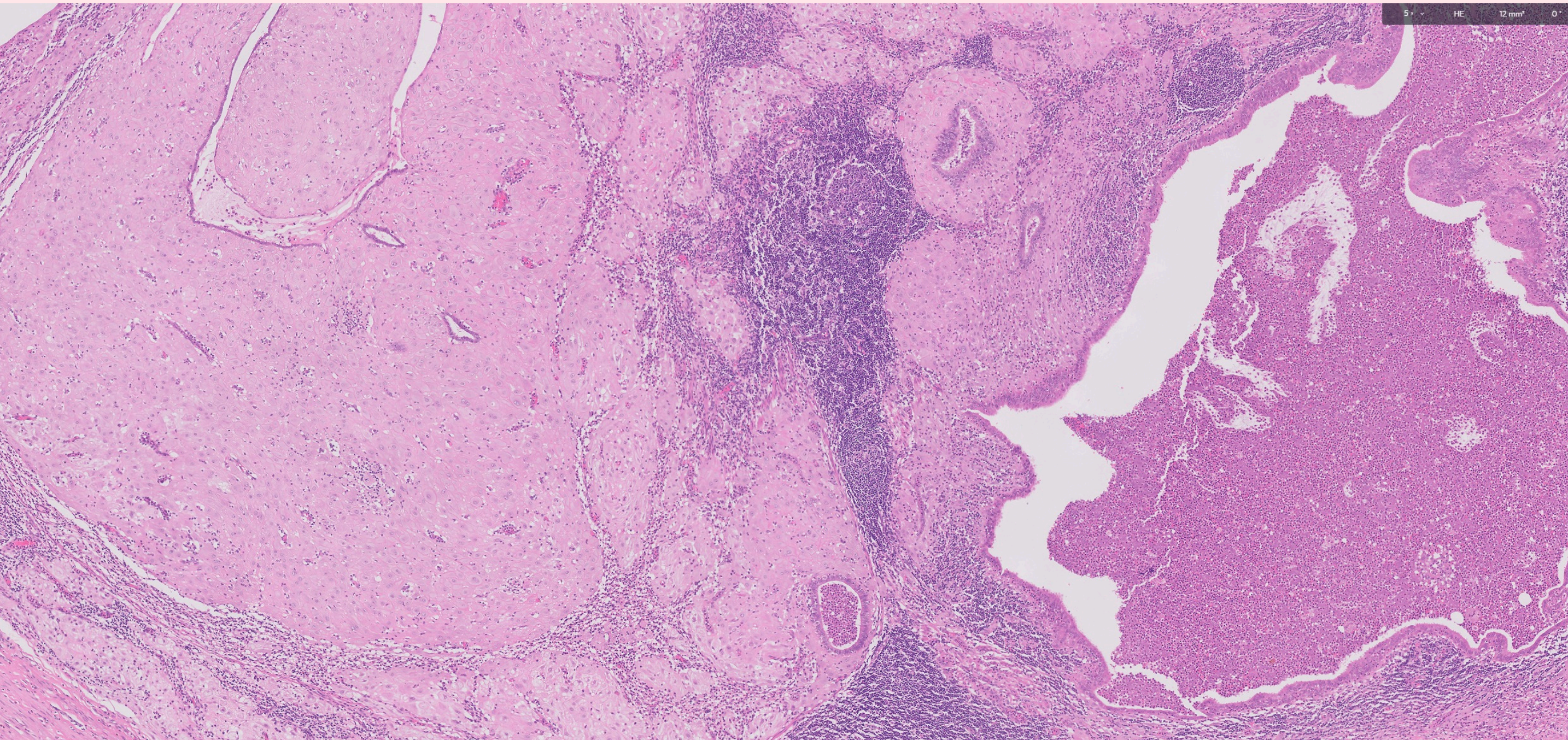


Image 2: High power of endometriosis with luteinization of stroma

Conclusions

This case emphasises the importance of a multidisciplinary approach in managing atypical presentations of abdominal pain during pregnancy. Appendiceal endometriosis is usually asymptomatic, especially in pregnancy when endometriosis is dormant and investigation modalities are limited. It should be considered in the differential diagnosis of RIF pain in pregnant patients when clinical and radiological findings are inconclusive. Timely surgical intervention and coordinated obstetric and surgical care were essential to optimising maternal and neonatal outcomes in this complex case.