A Case Report of a Significantly Delayed Diagnosis of Appendicitis Presenting Intrapartum Leading to Morbidity

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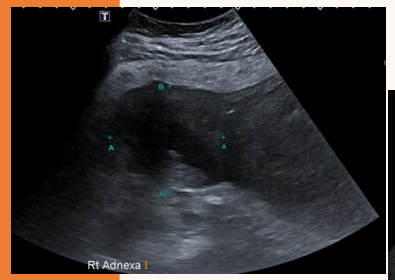
Introduction + Aims

Acute appendicitis is known to be the most common non-gynaecological emergency during pregnancy[1]. Broad ligament haematoma is a very rare event following a spontaneous vaginal delivery with an incidence of 1: 20,000[2]. This case has been reported to show the diagnostic difficulties of abdominal pain intrapartum and the possible factors that lead to a misdiagnosis and delay to management.



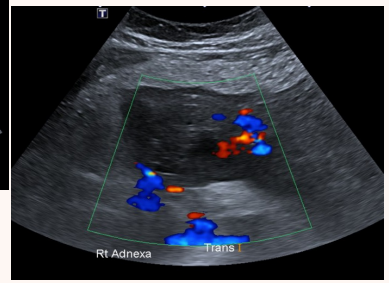


Image 1 + 2- Ultrasound of right adnexa on Day 2 PP

Table 1. Laboratory results on days post delivery

	0	1	2	3	4	5	7 (ED)
CRP	227	191	199	197	229	192	197
Hb	107	97	91	79	91	93	121
WCC	6.1	11.8	11.2	7.1	7.5	11.0	8.0
Neut	5.3	10.3	9.4	4.9	4.9	8.0	5.8

References

[1] Mantoglu B et al. Which appendicitis scoring system is most suitable for pregnant patients? A comparison of nine different systems. World J Emerg Surg. 2020 May

[2]Saleem N, Ali HS, Irfan A, Afzal B. Broad ligament hematoma following a vaginal delivery in primigravida. Pak J Med Sci. 2009

Case Report

A 27-year old primiparous female presented at 38 weeks gestation for induction of labor for suspected macrosomia. Following insertion of Cervidil, she experienced acute abdominal pain, in addition to the onset of contractions, which raised clinical concern and precipitated an earlier Artificial Rupture of the Membranes (ARM). The patient progressed to a precipitous, unremarkable vaginal delivery. Postpartum, significant Right Illiac Fossa (RIF) pain, tachycardia and an elevated CRP (see table 1) lead to further investigation with a pelvic ultrasound (see images 1 & 2) which reported a nonspecific mass in the right adnexa measuring 7 X 7 X 8cm , suggested to be either a tubo-ovarian abscess or a hematoma. Due to worsening clinical status and a Haemoglobin drop on day 3 post-partum, a CT Abdomen was performed (image 3). On CT scan, the mass was characterized as a heterogeneous fluid collection. The radiologist reports raised concern of a 'spontaneous broad ligament hematoma with active bleeding'. Second opinion was sought from a tertiary hospital radiologist that concluded there was no active bleeding, and therefore, surgery or embolization was not recommended. During this time, the patient was treated with broad spectrum IV antibiotics, with cessation prior to discharge. On day 6 post-partum, she was discharged home, still requiring a large dose of opioids for pain control. The diagnosis provided was broad ligament hematoma, for conservative management.

The patient re-presented 2 days later (day 7 post-partum) to the same hospital Emergency Department with acute exacerbation of her RIF pain and peritonism on examination. She had a repeat CT scan which showed potential perforated viscous due to gas seen. A surgical opinion was obtained. The patient underwent an emergency Laparoscopy with the General Surgical Team revealing a 4-quadrant purulent peritonitis, a large 10cm walled off abscess in the right pelvis and a perforated caecum. This required conversion to Laparotomy and 23cm right hemicolectomy.

Results

Histopathology showed acute appendicitis with perforation, with resection margins viable.

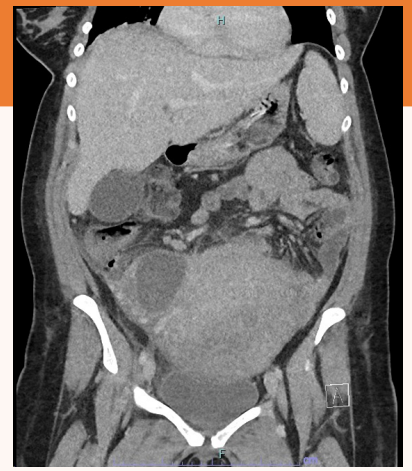


Image 3- CT Coronal views findings on Day 3 PP

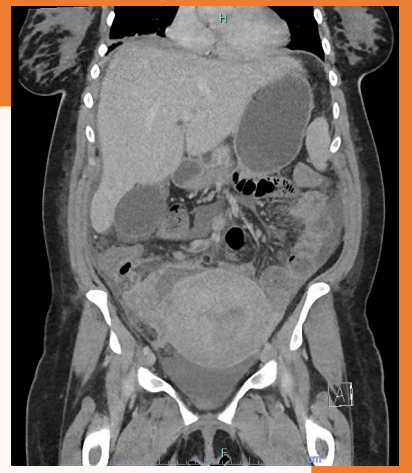


Image 4- CT Coronal views findings on Day 7 PP in ED

Discussion and Conclusion

This case highlights the diagnostic dilemmas that face practitioners who are presented with obstetric patients with abdominal pain, and the consequences of diagnostic error. There is importance in a multi-disciplinary approach early in the setting of abdominal pain in pregnancy, and of seeking a second opinion from our colleagues, both surgical (as in this case) and medical.

It is important to appropriately interpret medical imaging reports. Whilst a diagnosis is often made by our radiology colleagues, we should be mindful that imaging is only one diagnostic tool. Our radiology colleagues rarely have the advantage of a face-to-face clinical assessment of our patients, and we should therefore be judicious as we make diagnoses, using all the tools available to us as clinicians. This case also highlights the viability of diagnostic surgery (laparoscopy or laparotomy) for more definitive clinical assessment, diagnosis and management.