Post-partum duodenal perforation

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This case highlights the diagnostic conundrum when women present with non-specific symptoms for a surgical acute abdomen in post-partum period.

Case report

A 31-year-old mother (KS) was booked under the midwives. Her pregnancy was **low risk** and she had a normal delivery. However, a **post-partum haemorrhage** followed and she was conservatively managed with syntometrine and syntocinon infusion. Bleeding settled and her vital signs were normal.

KS was on regular analgesics and normal diet by day 1. However, she made limited progress with **pubic symphisis pain** and was unable to be discharged even by day 3.

By day 4, KS developed a gradual onset of right upper quadrant **pain**. Her abdomen was soft on palpation. Blood results were unremarkable. Ten hours later, midwifery team sought further medical review. KS started complaining of **vomiting and worsening pain**. Bloods suggests stable haemoglobin, rising white cell count (11.5/L), normal Neutrophil and serum lactate. CRP was 17. Abdomen was felt to be tender but not peritonitic. Thirty minutes later, KS started **bilious vomiting**.

Her care was discussed with obstetric consultant on call and an urgent **CT scan** was arranged. Working diagnosis was of probable endometritis. CT finding is as below.

The general surgical team was immediately consulted. KS was taken to theatre

Figure 1: Axial CT scan suggested duodenal perforation with trans-luminal air and localised fat stranding in front of duodenum.

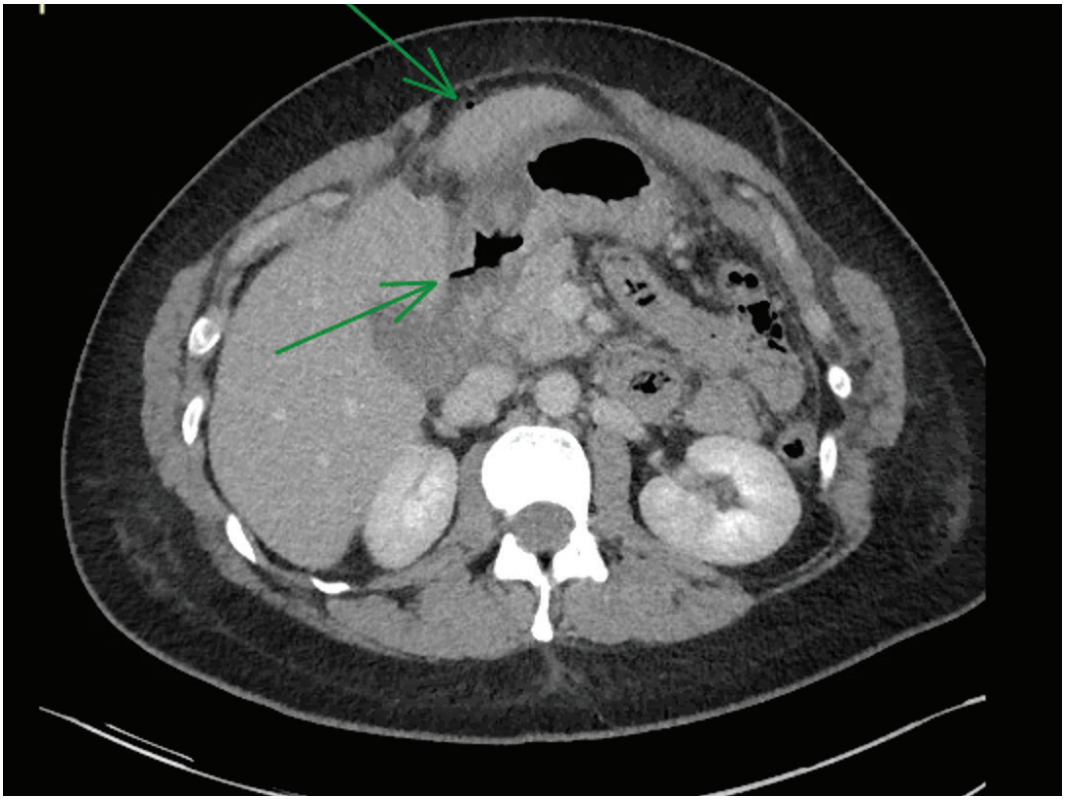


Figure 2: Coronal: Trans-luminal gas identified. Note post-partum uterus.

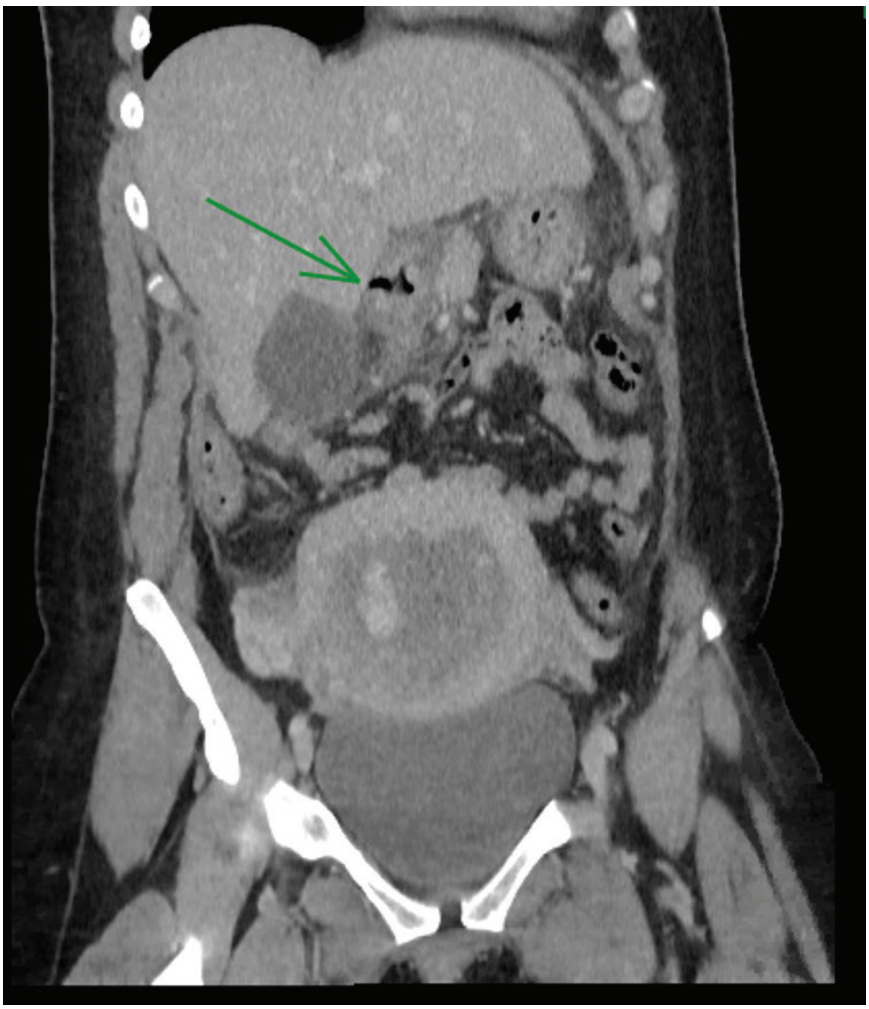
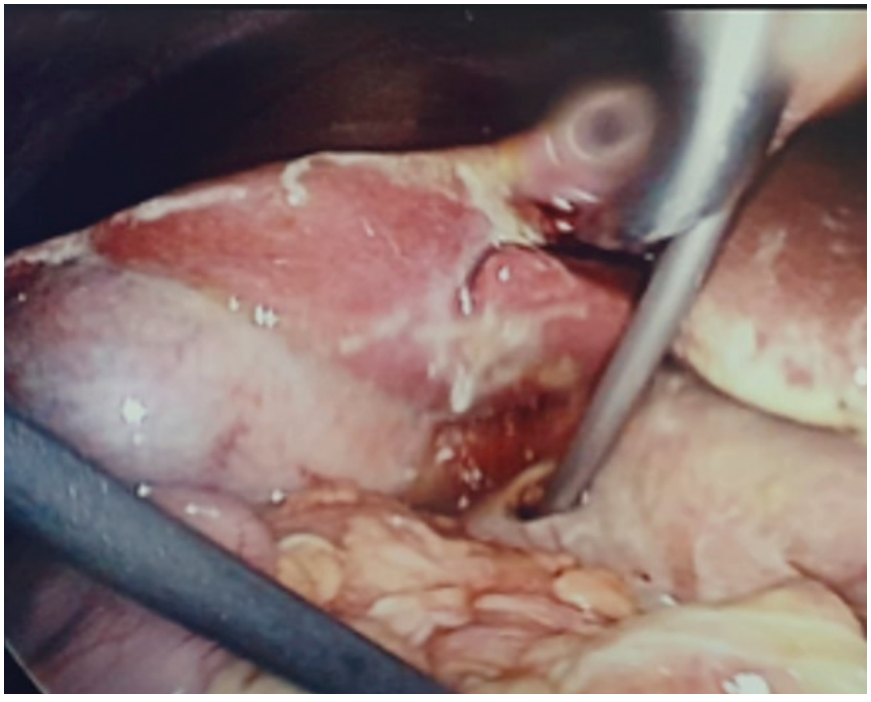


Figure 3: The suction canula in the duodenum demonstrating the perforation.



for a diagnostic laparoscopy. Intraoperative finding revealed a perforated anterior duodenal ulcer with bilious and fibrin material within the abdomen. Repair was done through a small midline laparotomy with transverse closure of the defect with omental patch over the duodenum.

Discussion

Peptic ulcer perforation disease is rare in post-partum period. Literature search suggests less than 50 cases published in English language.[1,6,7] Though the true Incidence of PUD in post-partum may be more common than reported due attribution of common PUD symptoms to those of which are experienced during post-partum,[3] mortality and morbidity rates are universally high.[1,5–7] Common risk factors still apply to the post-partum mothers including Helicobactor pylori infection, use of non-steroidal anti inflammatory medication (NSAID), alcohol consumption and smoking.[3] In this case, apart from the stress of childbirth, only post-partum use of NSAID was noted.

There are a number of unproven hypotheses for lowered incidence of peptic ulcer in pregnancy, namely related with high oestrogen concentration and increased plasma histaminase secreted from placenta.[4] These effects will be lacking in the post-partum period.

Post-partum abdominal laxity is known to mask the classical sign of peritonism. The immediate post-partum period can also distract from traditional symptoms and signs. However, perforated peptic ulcer is associated with high maternal mortality and morbidity. Prompt surgical intervention is necessary to limit morbidity.[5,6]The case report highlights need of prompt and targeted imaging when necessary and multi-disciplinary team approach. In this case, the mother underwent surgery within two hours of CT scans, emphasising the above learning points.

Competing interests:
Nil.

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