CASE REPORT

Postpartum acute abdomen and its diagnostic challenges

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SUMMARY

This is the case of a 25-year-old primigravida with gradual onset abdominal pain and vomiting, 1 day postvaginal delivery. After three hospital admissions over the following 3 weeks, a diagnosis of small bowel obstruction secondary to adhesions was made; the patient had undergone a previous appendicectomy. The patient was taken to theatre for laparotomy and adhesiolysis, where the bowel was found to be viable but with two small serosal tears. Postoperative recovery was uncomplicated. This case highlights the importance of assessing abdominal pain in the puerperium in a similar manner to that done in a non-pregnant state, to avoid delay in diagnosis.

BACKGROUND

We considered that it was important to highlight how easily common problems are missed when the clinical picture is complicated by pregnancy.

CASE PRESENTATION

A 25-year-old woman, gravida 1 para 1, presented 17 days following a vaginal delivery. Labour had been induced due to premature rupture of membranes and there was 24 hours of post-partum haemorrhage. The patient had reported onset of cramping upper abdominal pain and vomiting 1 day postpartum to her midwife, who attributed it to afterpains. The patient attended the emergency department a few days later and was admitted for 4 days and treated for constipation; an outpatient abdominal ultrasound was booked. The patient's symptoms continued and 8 days later she attended a different emergency department and was discharged the same day after an abdominal ultrasound.

We met the patient 2 days later as part of the gynaecology team. The previous day she had represented to the same emergency department, with evolving symptoms; the upper abdominal pain was now spreading to her lower abdomen and she had experienced an episode of vaginal bleeding. By this time she was 16 days postpartum. Bowel habits were unchanged and the patient had not experienced any fevers. She appeared dehydrated with a tachycardia; her abdomen was soft but with tenderness in the midline from the epigastrium to suprapubic region, with guarding and sluggish bowel sounds. A vaginal examination revealed offensive smelling lochia.

Medical history included an appendicectomy and Polycystic ovarian syndrome. The patient had, early in pregnancy, been diagnosed as having protein C

and antithrombin 3 deficiency and was given prophylactic dalteparin, to be stopped 6 weeks postpartum. She lived with her husband and baby, and had an office job prior to pregnancy.

INVESTIGATIONS

Firstly, an abdominal ultrasound was arranged, which excluded biliary colic; however, it did reveal a trace of free fluid along the lower liver and splenic borders. A transvaginal ultrasound was performed, which showed free fluid in the Pouch of Douglas but no retained products. An increasing C reactive protein from 51 mg/L on admission to 95 mg/L and mildly raised white cell count of 11.4×10^9 suggested an inflammatory process. At this point, the diagnosis remained unclear and, as the clinical picture was worsening, an abdominal/pelvic CT scan was ordered, which confirmed concerns of small bowel obstruction. It showed dilated loops of non-contiguous small bowel with multiple transition points (figure 1) and a definite stricture (figure 2). The imaging was consistent with obstruction secondary to adhesions, however, concurrent enlarged mesenteric nodes raised a concern regarding inflammatory bowel disease or lymphoma.

DIFFERENTIAL DIAGNOSIS

One differential on admission was gastritis, but imaging was also arranged to exclude gallstones. Proton pump inhibitors and antacids did not relieve the discomfort, so a Gynaecology opinion was sought. Intrauterine postpartum complications were ruled out, however, the patient had been covered with antibiotics for postpartum sepsis. She continued to vomit and her abdomen was distended with guarding. Despite these investigations, the teams involved were no closer to a diagnosis and a CT scan was requested.

TREATMENT

The patient was initially treated for both, gastritis and postpartum sepsis. When the CT was reported, a nasogastric tube was inserted and the patient booked for emergency theatre, where she received a laparotomy by the general surgeons. The majority of small bowel had passed through an internal hernia, created by adhesion of omentum, sigmoid colon, right ovary and fimbria, which had stretched to the centre of the abdomen. The small bowel was viable and relocated to a normal position through the hernia. Two small serosal tears in the bowel were repaired and adhesions lysed.

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Figure 1 An axial abdominal CT (with water preparation) image showing one of the multiple transition points in the small bowel.

Figure 2 A coronal abdominal CT (with water preparation) image showing a definite stricture of the small bowel with proximal dilated small bowel loops.

OUTCOME AND FOLLOW-UP

The postoperative period was uneventful. Follow-up arrangements were difficult as the patient was not from the local area, so an appointment was made with her own general practitioner for review of the surgical wound and referral on to the appropriate colorectal team, if required.

DISCUSSION

The delayed diagnosis and management in this case highlights the clinical uncertainty that is encountered when assessing the acute abdomen in a postpartum patient. Bowel obstruction in pregnancy is rare but well documented, with an incidence of around 1/3500 pregnancies. The third trimester is when the patient is most highly prone to surgical complications, adhesions secondary to previous surgery are cited as the main cause.¹ A thorough literature review of postpartum bowel obstruction following vaginal delivery, however, found only seven cases in the past 35 years.

The most recent was reported a year prior, describing a 22-year-old presenting 8 days postpartum with 3 days of abdominal pain, vomiting and fever. Abdominal X-ray showed air under the diaphragm and laparotomy with biopsy concluded a caecal perforation due to colonic pseudo-obstruction, known as Ogilvie's syndrome: classical investigation findings prompted urgent management.² In 2013, however, a 40-year-old primigravida presented similarly day 3 postpartum, with prominent bowel loops on X-ray, however, she was thought to have constipation until bilious vomiting prompted a CT, laparotomy and eventual colostomy: less classical findings delayed diagnosis.³ Other cases describe postpartum bowel obstruction in a patient with previous Roux-en-Y gastric bypass,⁴ and idiopathic and lymphoma-induced intussusception.^{5 6}

Rarity results in diagnostic dilemma. It is therefore of great importance to report these unique cases so we can continue to learn from their challenging presentations. We urge those caring for postpartum woman to maintain an open mind and to not attribute all abdominal presentations to uterine or ovarian

pathology, particularly if there is a history of previous abdominal surgery and potential for adhesions, as in this case. Finally, perform imaging early, as you would in those cases where the clinical picture is uncomplicated by pregnancy.

Learning points

- ▶ Abdominal pain should be approached in the postpartum period as in any other non-pregnant state, to avoid delayed diagnosis.
- ▶ Bowel obstruction is uncommon in pregnancy but it is most prevalent in the third trimester and puerperium.
- ▶ In diagnostic uncertainty, a multidisciplinary approach can aid timely diagnosis and management.

Competing interests None declared.

Patient consent Obtained.

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