Sigmoid Volvulus in Pregnancy

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SUMMARY: Sigmoid volvulus is uncommon in the U.K. and more so in pregnancy. A case of sigmoid volvulus in pregnancy with a rare successful conclusion by conservative management is described and discussed, with a review of the literature.

Sigmoid volvulus in the U.K. accounts for only 0.9% of all cases of intestinal obstruction, with most cases occurring in the elderly. Intestinal obstruction in pregnancy is also uncommon, with a reported incidence varying between 1 in 3,600 maternities to 1 in 66,431 maternities. A case is reported which was successfully treated conservatively.

Case Report
A 34 year old Caucasian was admitted as an emergency at the 30th week of her third pregnancy with severe lower abdominal pain. She gave a two day history of colicky lower abdominal pain, constipation (initially relative and then becoming absolute) vomiting and abdominal distention. There was no history of previous abdominal surgery and her two previous pregnancies had been uncomplicated, ending in normal full-term deliveries.

Examination showed her to be in severe pain with a distended, tympanitic abdomen and bowel sounds suggestive of intestinal obstruction. The uterus was enlarged and compatible with a 30 week pregnancy. Rectal examination revealed an empty rectum and there were no external herniae. Plain abdominal X-ray confirmed the diagnosis of large bowel obstruction with a singleton pregnancy (Fig 1). An intravenous infusion was started and a nasogastric tube passed. Later that day screening with barium showed the 'beak' of a sigmoid volvulus (Fig 2).

The volvulus was then successfully deflated by passing a soft rubber flatus tube via the sigmoidoscope. The tube was taped in place, and kept clear by regular saline washouts. It was removed after 48 hours when her bowel sounds and abdominal X-ray had returned to normal. She remained in hospital for a further week without incident and was then allowed home on regular bulk laxatives. The pregnancy proceeded uneventfully and she subsequently had a normal delivery of healthy 3.75kg male infant.

Four months post-partum an elective sigmoid colectomy was successfully performed. At operation the sigmoid colon was found to be held partially rotated by adhesions and 40cms of redundant colon was excised. She made a straightforward post-operative recovery and was fit and well on review two months later.

Discussion
Sigmoid volvulus as a cause of intestinal obstruction in pregnancy is rare, with only 70 cases reported worldwide. There have been 15 cases of volvulus in pregnancy reported from the UK, of which only 6 involved the sigmoid colon. However, volvulus is a common cause of intestinal obstruction in pregnancy, accounting in one review for nearly 25% of cases; although this proportion may be declining. Sigmoid volvulus is very rare in the non-gravid female of child-bearing age, and in the pregnant woman occurs most often in the third trimester. Harer and Harer surmised that this may be due to the increasing size of the uterus elevating a mobile sigmoid colon from the pelvis and
producing a partial obstruction either due to pressure or kinking of the bowel. Proximal distention then causes the bowel to volve.

The first report appears to have been a postmortem, one by Braun in 1885. In the majority of reported cases the diagnosis has been made at laparotomy and the procedure has ranged from simple detorsion and insertion of a rectal tube to resection with colostomy, with or without an initial Caesarian section.

Several authors urge laparotomy as the treatment of choice. However, in the last review of the condition the foetal loss associated with such a procedure was considered to be about 30%. In the non-pregnant patient conservative management by decompression via a tube inserted through a sigmoidoscope is successful in between 50% and 88% of cases. This manoeuvre has been attempted on pregnant patients before, but has apparently been successful on only one previous occasion.

It is suggested that conservative management probably presents little danger to the pregnancy and is worth attempting before surgical intervention, provided the diagnosis can be made pre-operatively.

Fig 2. Barium screening demonstrating the ‘beak’ of a sigmoid volvulus.
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