Postoperative Intussusception Following Caesarean Section: Incidental Finding at Re-operation Case Report.

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Abstract

Background:

Postoperative Intussusception (PI) is an uncommon, and often misdiagnosed cause of postoperative intestinal obstruction in adults. Its aetiology is unknown. The diagnosis is usually made at laparotomy, and treatment by manual reduction is adequate in most cases.

Case report:

A 30-year old grandemultipara had an emergency lower segment Caesarean section for dystocia. Postoperatively, she developed recurrent colicky abdominal pains and features of wound sepsis. There was associated passage of watery stools but no vomiting. Features of abdominal wound dehiscence were noticed on the eighth day which required emergency surgery. At re-operation, an antegrade ileo-ileal intussusception with no lead point was found; it was reduced with ease. Recovery was uneventful following abdominal wall closure with deep-tension sutures.

Conclusion:

Although a rare cause of postoperative intestinal obstruction in adults, PI should be borne in mind in patients with recurrent colicky abdominal pain and/or other features of intestinal obstruction following Caesarean section, in order to facilitate early diagnosis and treatment. Liberal use of ultrasound in the investigation of abdominal pain following surgery is also recommended.

Keywords: Caesarean section, postoperative intussusception, wound dehiscence, operative reduction

Introduction.

Adult intussusception is reported to represent 1% of all bowel obstructions and 5% of all intussusceptions [1]. In a recent report from Jos, Nigeria, adults were found to constitute 14.6% of all cases of intussusception[2]. Postoperative intussusception (PI), a type that occurs a few days to weeks after surgery, and in which no lead point is usually found [3], is rare in the adult [4,5]. It was found by Omori *et al* [5] and Agha [6] to constitute 18% and 36% respectively of cases of adult intussusception. Consequently, it is not often suspected when features of intestinal obstruction develop after surgery, and the diagnosis is usually made at laparotomy after a prolonged period of inappropriate conservative treatment[4]. The delay in instituting the proper treatment could have grave consequences for the patient.

We report a rare case of Postoperative Intussusception following Caesarean section.

Case report

A 30-year old unbooked Para 5 housewife presented with term pregnancy, severe pre-eclampsia and in active phase of labor, to Usmanu Danfodiyo University Teaching Hospital which was 160 kilometers from her residence. Her membranes had ruptured spontaneously at home 10 hours prior to presentation. She showed a prompt response to intravenous diazepam and hydralazine. Six hours after admission, she had an emergency lower segment caesarean section for dystocia, and a live male infant weighing 2.9kg was extracted from the direct occipito-posterior position. Her immediate postoperative condition was satisfactory and she was maintained on intravenous fluids, antibiotics, antihypertensives and analgesics. She was commenced on oral fluids on the second postoperative day after return of bowel sounds was ascertained.

On the third postoperative day she complained of generalized colicky abdominal pain, which was aggravated by feeds, and passage of watery stools. Abdominal examination revealed a malodorous, bloody discharge from the operation site, distension and generalized tenderness. There was no guarding, and no rebound tenderness. The bowel sounds were present and normal. An assessment of postoperative sepsis was made and she was placed on intravenous ciprofloxacin and metronidazole after specimens were taken for microbiological

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investigation. She showed remarkable improvement after 24 hours on this regimen; however, she continued to pass watery stools twice daily.

On the seventh postoperative day she complained of colicky abdominal pain which was worse in the epigastrium. On examination, the abdominal wound was clean and dry, there was mild abdominal distension and epigastric tenderness, but no mass was palpable apart from the puerperal uterus. The abdomen was tympanitic and the bowel sounds were hyperactive. She was placed on antacids and reported some improvement. The next day, however, features of deep abdominal wound dehiscence were noticed and she was prepared for emergency surgery.

At re-operation (laparotomy) on the same day, deep abdominal wound dehiscence was confirmed. In addition, dilated loops of small intestine and antegrade ileo-ileal intussusception were noted. The general surgeons were invited. Transmural palpation revealed no evidence of tumor and the mesenteric lymph nodes were not enlarged. Further examination revealed no evidence of gangrene of the bowel and confirmed the absence of intramural and intraluminal masses. No adhesions were present. The intussusception was manually reduced with ease, peritoneal lavage was undertaken with normal saline, and the abdominal wall closed with deep-tension nylon sutures. She had an uneventful recovery. However, due to the 160-kilometer distance between her home and the hospital and the attendant difficulties with access in case of an emergency, she was discharged home fourteen days after the second surgery.

Discussion.

The exact etiology of Postoperative Intussusception (PI) is unknown [4, 7]. However, its relationship with disorders of peristalsis due to prolonged bowel handling and/or extensive dissection in lengthy operations has been emphasized [3, 7]. Other factors related to PI include intra-abdominal adhesions, presence of suture lines, sub-mucosal edema, electrolyte imbalance, chronic dilatation of the bowel, use of intestinal tubes, and a postoperative regimen of radiation and/or chemotherapy [5-8]. These possibilities seem unlikely in our patient who had a straightforward primary Caesarean section with minimal handling of the bowel, and return of bowel sounds 48 hours after surgery.

Typically, PI occurs within the first four weeks of the primary operation [7], as occurred in this case. Our patient's presentation - colicky abdominal pain, watery stools and abdominal distension - was similar to that reported for adult intussusception from other causes [2]. However, following Caesarean delivery, these symptoms are by no means specific to PI, while other symptoms associated with PI such as vomiting were notably absent [3,9]. Not surprisingly therefore, the diagnosis was not suspected prior to surgery. Other workers have commented on the low index of suspicion of PI [3, 4]. Indeed, in the 16-year retrospective analysis of 11 patients reported by de Vries *et al* [3], the diagnosis of PI was made before laparotomy in only one case, while in none of the two patients with PI in Omori *et al*'s series was the diagnosis made before surgery [5]. The occurrence of wound dehiscence in this patient is thought to be mainly due to wound sepsis which may have developed in this patient due to the ten-hour period of membrane rupture at home. Surprisingly though, the wound looked deceptively clean and dry on the seventh postoperative day.

Ultrasonography and computed tomography have been shown to enhance the preoperative diagnosis of adult intussusception [5, 10], while plain abdominal radiographs usually demonstrate features of small bowel obstruction, but cannot distinguish between intussusception and adhesive obstruction [9]. Our patient did not benefit from any of the investigations as re-operation was deemed necessary based on the clinical findings. As observed in other reports [3, 9], the intussusception in our patient was enteric rather than colonic and single rather than multiple.

Given that PI represents an entity different from the usual intussusception presenting *de novo* in the adult [7, 8], most authors recommend its treatment by operative reduction providing that reduction is possible, bowel is viable, and there is no suspicion of malignancy [2,4,7,8]. Following such treatment, the risk of recurrence is remote [4,7,8]. The above factors predicated our choice of treatment in this patient. Those who advocate primary surgical resection without reduction in all adult patients [1] regardless of anatomical site, do so for the fear that malignant cells may be disseminated during manipulation [10]. This fear was not justifiable in our patient. Measures to prevent PI include gentle handling and avoidance of drying of intestines at operation [4].

In conclusion, PI is a rare cause of intestinal obstruction in the adult which should be borne in mind when recurrent colicky abdominal pain and/or other features of intestinal obstruction develop following Caesarean section. Although computed tomography is expensive and not readily available in most developing countries, ultrasound is ubiquitous, cheap and non-invasive. A case is therefore made for more liberal use of ultrasound in the investigation of

abdominal pain following surgery, especially in the absence of gross gaseous abdominal distension. Once the diagnosis of PI is suspected or confirmed, re-operation should be undertaken. In most cases, operative reduction is all that is required, and recurrences are rare following surgical therapy. We hope that this report will raise awareness of PI as a rare complication of Caesarean section.

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