

CASE REPORT

INTUSSUSCEPTION AS A CAUSE OF BOWEL OBSTRUCTION IN ADULTS FROM A RESOURCE LIMITED AREA, CAMEROON

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ABSTRACT

BACKGROUND: Intussusception refers to the telescoping of a proximal segment of bowel into a distal segment. It is a rare cause of intestinal obstruction in adulthood.

CASE DETAILS: We report two cases of adult intussusception in a post-operative period following Caesarean Section (with no lead point) and Appendicectomy (due to colonic adenocarcinoma) respectively.

CONCLUSION: Though rare in adulthood, intussusception should be considered as a differential diagnosis to bowel obstruction in adults even in the post-operative period.

KEYWORDS: Adult intussusception, Aetiology, post-operative intestinal obstruction, colonic adenocarcinoma, Cameroon

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INTRODUCTION

Intussusception refers to the invagination or telescoping of a proximal segment of bowel (intussusceptum) into a distal bowel segment (intussusciens). It is sometimes possible for the distal segment to invaginate into the proximal segment (retrograde intussusception) (1). This is a common cause of intestinal obstruction in children occurring commonly in terminal ileum due to lymphoid hyperplasia following viral infections. It generally presents with crampy abdominal pain, bloody diarrhoea (red-currant jelly) and a palpable tender abdominal mass (2). It is a relatively rare entity in adults accounting for 5% of all intussusceptions, and is said to cause 1-5% of all intestinal obstructions in adults (3,4). Intussusception is even all the more rare in the post-operative period. We herein report two cases of adult intussusception in the post-operative period at a rural district hospital.

A 28 years old Seamstress admitted as an emergency case presenting with a week's history of colicky abdominal pain of increasing severity, vomiting and abdominal distension. Her stools had a very small volume, were semi-formed and contained no blood. In the last 2 months, she reported having suffered from intermittent crampy abdominal pain and vomiting, which started four weeks after a term uneventful Caesarean Section. She had lost weight but had no fever. She was admitted to a hospital for these complaints for which she was managed for a functional colopathy after normal barium enema x-ray. She experienced temporal relief and was discharged. A week later, she returned to our unit with the above presentation.

On examination, she was ill-looking, hypotensive (BP=89/60mmHg) and tachycardic (HR=112b/min) with a temperature of 37.9°C. The lungs were clinically clear. The abdomen was distended centrally with visible peristalsis (Fig 1), and she did not move with respiration. There was

CASE 1

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diffuse tenderness with guarding and rebound (percussion) tenderness. Hernia orifices were normal. Bowel sounds were hyperactive. A presumptive diagnosis of strangulated small bowel obstruction was made. Plain abdominal and erect chest x-rays were also normal. A complete blood count was normal and HIV test was negative. The patient was prepared and resuscitated for four hours. Then, with satisfactory urine output, she had emergency laparotomy.



Fig 1: Visible peristalsis pre-operatively

Intra-operatively, there were dilated loops of small bowel right to the terminal ileum where there was an ileo-ileal intussusception (Fig. 2) measuring about 7cm in length. There was no free peritoneal fluid, and bowel was viable. The intussusception was reduced from the apex by gentle traction and retrograde pressure. An area of ischaemia was noted with a perforation measuring ~ 0.5cm. Due to the urgent nature of the case, bowel viability was ensured and a limited resection was done. An ileo-ileal end-to-end anastomosis was done. Histopathology results of the resected specimen revealed inflammatory lesions with no features of malignancy. She had a good post-operative recovery and discharged after 8 days.



Fig 2: Ileo-ileal intussusception (intra-operative)

CASE 2

A 36 year old male farmer was admitted to the Surgical Unit presenting with a 2 days' sudden onset history of colicky abdominal pain (initially occurring every 15mins, and later increased in frequency). This was associated with copious vomiting, mild abdominal distension and constipation. He consulted at local Health Centre and received analgesia which did not remedy his pain. Clinical deterioration thus prompted consultation. In the past, he was admitted for progressive weight loss and an appendicectomy 3 months prior to consultation. There was no history of tuberculosis in the past.

Physical examination revealed a moderately dehydrated patient, BP=100/60mmHg, tachycardia (PR=108b/min). His temperature was normal and lungs were clinically clear. The abdomen was centrally distended, with an everted umbilicus and did not move with respiration. There was generalised tenderness, but no rebound tenderness. There were hyper-resonant percussion notes and tinkling bowel sounds. Hernia orifices were free. A working diagnosis of small bowel obstruction due to adhesions was again made. Blood tests were not contributory and he tested negative for HIV. Erect chest x-ray unremarkable but plain abdominal x-ray revealed multiple air-fluid levels and pneumoperitoneum. He could afford neither an ultra sound nor CT scan. He was resuscitated and underwent emergency laparotomy following satisfactory urine output. Intra-operatively, distended bowel loops were seen with a huge mass

at the hepatic flexure of colon. Gross examination of the mass revealed a 15cm colo-colic intussusception with a tumor measuring 2cm x 2cm x 1.5cm, dense adhesions and omentum stuck to posterior abdominal wall. Following resection, histopathology reports of the sample revealed moderately differentiated adenocarcinoma of the colon involving full thickness of the muscularis propria, as well as serosa with extensive permeation of the lymphatics (Duke's C). The patient suffered constipation post-operatively and was later discharged on day 10 post-op with no further complaints but referred for oncologic evaluation and further management.

DISCUSSION

Barbette was the first to describe intussusception in the literature in 1674 (5). Since its discovery, intussusception has always been described as a disease of infancy and early childhood. In the paediatric population, its occurrence is usually idiopathic ~ 80% as opposed to the adult population where in about 90% of the cases, there is usually a lead point or pathology (6,7). Intussusception has been documented to account for 0.1% of adult hospital admissions and 5-16% of all intussusceptions (8). Intussusceptions are divided into enteric, colonic, ileo-caecal or ileocolic. Enteric intussusceptions are those confined only to the small intestine while colonic are those confined to the large intestine. Most patients present with subacute (24.4%) or chronic (51.2%) symptoms of abdominal pain, nausea, vomiting and constipation. Hence, the non-specific presentation of intussusceptions appears to be the main reason why a preoperative diagnosis is difficult (7). Studies have shown that Ultrasound Scan of the abdomen is a relatively cheap and affordable diagnostic tool (6) but the gold standard of diagnosis is the computerised tomography (CT) Scan (6,7). Colour Doppler is also helpful in determining the degree of vascular compromise in the involved bowel segments. Endoscopy is also of great value for pre-operative diagnosis as the lead point in the second case could have been identified. However, the limited availability of such diagnostic tools in resource limited and rural settings most likely accounts for delays in diagnosis and morbidity. The management of intussusception in adults is controversial although many authors have

suggested it almost always involves laparotomy and bowel resection. This occurs especially when bowel viability is doubtful, or in the presence of a lead point or causal pathology for which malignancy has been reported to be 33%-77%. This is partly due to the fact that it is usually very difficult to differentiate benign from malignant causes in enteric intussusceptions non-operatively (7). Other relatively rare causes like lipoma (5) and even parasitic infestation have been demonstrated by *Yersinia enterocolitica* (2). In our first case following Caesarean section, there was no lead point identified, but it should be noted that co-existent colonic adenocarcinoma (instead diagnosed in our second case following Appendectomy) has been reported as lead point following caesarean section, probably initiated by bowel oedema or post-operative ileus (9). Reduction by hydrostatic decompression could be helpful in colonic intussusceptions if the bowel is not completely obstructed, though many authors advise against hydrostatic reduction with barium or air in adult patients (10) which is all the more difficult to achieve in rural and resource limited African settings as were our cases. Clinicians in resource limited settings are thus advised to have a high index of suspicion for intussusception in adults presenting with features suggestive of intestinal obstruction. Due to its non-specific clinical presentation in adults and management challenges, intussusception should invariably be considered as differential diagnosis for bowel obstruction even in the post operative period in a bid to reduce morbidity and mortality.

Intussusception is a rare entity in adulthood. An ultrasound scan is helpful but computerised tomography (CT) scan remains the mainstay of pre-operative diagnosis albeit in resource limited settings as was the case here, a pre-op diagnosis was all the more difficult due to financial constraints and non-availability of such diagnostic tools. Although a rare entity in adults, intussusception should still be thought of as a differential diagnosis to intestinal obstruction even in the post-operative period.

REFERENCES

1. Chand M, Bradford L, Nash GF. Intussusception in colorectal cancer. *Clin Colorectal Cancer*, 2008;7(3):204-5.

2. Imoto A, Murano M, Hara A, Narabayashi K, Ogura T, Ishida K, et al. Adult intussusception caused by *Yersinia enterocolitica* enterocolitis. *Intern Med*, 2012;51(18):2545–9.
3. Zubaidi A, Al-Saif F, Silverman R. Adult intussusception: a retrospective review. *Dis Colon Rectum*, 2006;49(10):1546–51.
4. Laws HL, Aldrete JS. Small-bowel obstruction: a review of 465 cases. *South Med J*, 1976 Jun;69(6):733–4.
5. Kee SK, Kim JO, Kwon OK, et al. A rare ileal intussusception caused by a lipoma of the ileum. *J Korean Surg Soc*, 2009;77:59–63.
6. Singhal S, Singhal A, Arora PK, et al. Adult ileo-ileo-caecal intussusception: case report and literature review. *Case Rep Surg*, 2012;2012:789378.
7. Xu X-Q, Hong T, Liu W, Zheng C-J, He X-D, Li B-L. A long adult intussusception secondary to transverse colon cancer. *World J Gastroenterol*, 2013; 19(22):3517–9.
8. Tito WA, Sarr MG. Intestinal Obstruction. *Surgery of the Alimentary Tract*. 4th ed. Philadelphia: WB Saunders; 1996. p. 375–416.
9. Steinberg ML, Nisenbaum HL, Horii SC, Salhany KE. Post-cesarean section pain secondary to intussuscepting colonic adenocarcinoma. *Ultrasound Obstet Gynecol Off J Int Soc Ultrasound Obstet Gynecol*, 1997;10(5):362–5.
10. Balik AA, Ozturk G, Aydinli B, et al. Intussusception in adults. *Acta Chir Belg*, 2006;106(4):409–12.