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Caecal tumor biopsy with a rigid sigmoidoscope – Ileorectal intussusception



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ABSTRACT

INTRODUCTION: Ileorectal intussusception is a rare condition in adults in which the distal ileum, caecum, variable lengths of ascending and transverse colon, and associated mesentery invaginate into the rectum. **PRESENTATION OF CASE:** We present the case of a 56 year old man who presented to our hospital for investigation of vague symptoms including small volumes of bright red rectal bleeding and colicky abdominal pain. He was found on CT scanning to have an extensive ileorectal intussusception and extensive liver metastasis. An emergency laparotomy was performed due to the concern of bowel ischaemia. No evidence of bowel ischaemia was found. The intussusceptum was carefully reduced and an extended right hemicolectomy with a primary anastomosis was performed. The patient recovered well and was discharged home six days post operatively.

DISCUSSION: Intussusceptions are rare in the adult population. They may not present with the classical triad of crampy abdominal pain, vomiting, and bloody stools and radiological imaging plays a key role in diagnosis. Intussusception in adults is usually secondary to malignancy and operative management needs to take into account the risk of upstaging the disease. In the face of pre-existing metastasis, preserving bowel length should be considered; however, there is no high level evidence to guide decision-making. **CONCLUSION:** Intussusception is a diagnosis that needs to be considered in the adult population. Diagnosis largely depends on radiological imaging, especially CT scanning. The operative management is variable and should be determined on a case by case basis.

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1. Introduction

Ileorectal intussusception is a rare condition in adults in which the distal ileum, caecum, variable lengths of ascending and transverse colon, and associated mesentery invaginate into the rectum. Case reports on this rare condition in the adult population are limited [1–4].

2. Presentation of case

We present the case of a 56-year-old man who presented to our hospital for investigation of rectal bleeding. The patient was an otherwise healthy male who had experienced two days of bright red rectal bleeding and colicky abdominal pain. On further questioning, he described an unintentional weight loss of 5 kg, anorexia, borborygmi, and altered bowel habit over a three-month period. Abdominal examination revealed a soft but slightly dis-

tended abdomen with a palpable mass in the right upper quadrant. A digital rectal exam demonstrated a mass in the rectum and rigid sigmoidoscopy revealed a large tumour in the rectum.

The patient had work up for a suspected rectal carcinoma with a staging CT scan. The CT revealed an extensive ileorectal intussusception (Fig. 1 red arrows). The intussusceptum consisted of distal ileum, caecum, ascending, and proximal transverse colon. The splenic flexure, descending colon, sigmoid colon, and rectum acted as the intussusciptens. There was extensive involvement of the ileocolic mesentery in the intussusception. A large soft tissue mass was demonstrated in the rectum and thought to represent the lead point (Fig. 2b arrow). Also noted were extensive liver lesions, which were suspicious for colorectal metastases (Fig. 1 blue arrows). The CT revealed signs concerning for possible ischaemia in the distal portion of the intussusceptum (Fig. 2a arrow) and a decision was made to immediately proceed to exploratory laparotomy.

A large caecal tumour, chronically intussuscepted into the rectum, was discovered during the laparotomy (Fig. 3). The colon at the hepatic flexure was completely mobile due to a long mesentery and lack of posterior peritoneal attachment. There was no evidence of bowel ischaemia. A decision was made to carefully reduce the intussusceptum and avoid a total colectomy given the extent of the intussusception. The caecal mass was carefully milked back from

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Fig. 1. Coronal CT image demonstrating an extensive ileorectal intussusception containing the distal ileum, caecum, ascending, proximal transverse colon, and involvement of the ileo-colic mesentery (red arrows). Also seen in the CT image are extensive liver metastasis (blue arrows).

the rectum to the transverse colon and an extended right hemicolectomy with a primary anastomosis was performed. Histology of the tumour revealed a mucinous caecal adenocarcinoma with clear surgical margins (Dukes Stage D AJPP stage pT3 N1a M1). The final histology was consistent with the mass originally biopsied with a rigid sigmoidoscope. The patient recovered well and was discharged home six days post operatively. The patient was considered for adjuvant chemotherapy and possible down staging of the liver metastasis before possible resection in a subsequent multidisciplinary meeting.

3. Discussion

Intussusception in adults is a rare diagnosis, accounting for only 5% of intussusception cases [5]. When cases occur in adults, they are generally secondary to a pathological solid lesion creating the lead point although cases of diverticulum, including Meckel's diverticulum, have been reported in the literature [6]. Adult intussusception is a difficult diagnosis to make since it may not present with the classical triad of crampy abdominal pain, vomiting and bloody stools. Adults can have a wide variety of symptoms such as abdominal pain, haematochezia, abdominal mass, altered bowel habits, and bowel obstruction [7]. Due to the varied clinical presentations, radiological imaging plays a key role in diagnosis. CT scanning of the abdomen is the most sensitive radiological



Fig. 3. Resected right colon demonstrating the caecal tumour (incised) which served as the pathological lead point for the extensive ileorectal intussusception.

investigation for adult intussusception and can be useful in establishing a diagnosis, locating a causative lesion and planning the operative strategy [5,8]. Due to the high rate of malignant cause of adult intussusception, laparotomy and bowel resection without preoperative reduction is the advocated management strategy and intraoperative reduction is often discouraged for fear of tumour rupture and potentially upstaging the cancer. However, no high level evidence is available to provide an answer to this question and the topic is debated [9–11].

What is unique in this case is the extent of the intussusception; there have only been a few case reports of adult ileo-rectal or ileo-anal intussusception [1–4]. The failure in the embryologic development of the mesenteries of the ascending and descending colon to blend with the posterior abdominal wall peritoneum by the process of zygosis contributes to this rare phenomenon. The colon is thus straighter and allows the intussusceptum to migrate large distances freely without obstruction.

4. Conclusion

Intussusceptions are a rare diagnosis in the adult population. Presentations are varied and radiological imaging plays a key role in diagnosis. In cases with extensive ileorectal or ileoanal intussusception, a balance needs to be reached between extensive resection that increases the morbidity of the procedure versus the risk of upstaging the malignancy. The decision to reduce the intussusception ultimately requires the application of surgical judgement specific to each patient. In our patient, the intussusception was reduced due to pre-existing distal metastasis.



Fig. 2. (a) Transverse CT image demonstrating thickening of the colon wall suggestive of ischaemia of the distal intussusceptum (arrow). (b) Sagittal CT image demonstrating the extent of the distal intussusceptum with suggestion of a solid lesion as the lead point (arrow). (c) Coronal CT image demonstrating the distal intussusceptum in the rectum (arrow).

Conflicts of interest

None of the authors have any conflicts of interest to declare.

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Ethical approval

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Author contribution

Dr. Robertson – article conception, image creation, literature review, writing the article and editing the article.

Dr. Due – article conception, writing the article and editing the article.

Dr. Shimokawa – image creation, writing the article and editing the article.

Dr. Yeow – writing the article and editing the article.

Consent

Written informed consent was obtained from the patient prior to the writing of the case report.

Guarantor

Dr. Robertson will act as the guarantor for this article.

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