Case report

Small bowel intussusception: Does being transient make it less problematic? A case report

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ABSTRACT

Introduction: Small bowel intussusception is challenging to diagnose as it does not always declare itself. There is not enough evidence in the literature regarding the management of the same. This case report investigates relevant management options to ensure appropriate and timely treatment.

Presenting case: We present a 75-year-old male with a six-week history of abdominal pain and constipation. He has a background history of hypercholesterolaemia, hypertension, asthma, and ex-smoking. He had normal inflammatory markers and an abdominal computerised tomography scan demonstrating dilated jejunal loops with an abrupt transition in the mid-abdomen caused by a short intussusception, with a lead point suggestive of a small mucosal mass. He underwent a diagnostic laparoscopy, which did not demonstrate any obstruction or mass. He had an unremarkable hospital stay and was then discharged home. He remained well on outpatient follow-up.

Conclusion: This case highlights the transient nature of some small bowel intussusception. If there are enough signs suggesting the pathological nature of presentation on imaging, surgical intervention can be sought.

1. Introduction

Transient small bowel intussusception in adults is not very common, and there is not much in the literature regarding its management [1]. It does not have a constellation of set symptoms that patients classically present with; instead, it is a diagnosis that heavily relies on imaging modalities. Although most have underlying causes, approximately 10 % of cases do not have any cause [2]. Our case report illustrates the dilemma in managing patients presenting with small bowel intussusception.

Small bowel intussusceptions are typically benign, unlike adult colonic intussusception, where cancer is the primary cause. Despite being the accepted standard of care, it is unknown if surgery is necessary in all cases of small bowel intussusceptions detected on computerised tomography (CT) scans for investigating patients presenting with abdominal pain.

This case report has been produced in keeping with the SCARE criteria [3].

2. Case

A 75-year-old male presented with six weeks of colicky abdominal pain associated with constipation. He has hypertension, hypercholesterolaemia, asthma and is an ex-smoker. He had a previous open cholecystectomy, and his last gastroscopy and colonoscopy were normal.

He has not had any previous presentations with abdominal pain. He has had multiple gastroscopies and colonoscopies in the past as part of the national bowel cancer screening program but however none of these showed any evidence of colitis, malignancy or any other concerning lesions.

The patient did not have aggravated pain, it was similar to what he was experiencing for the last 6 weeks. He had clinical signs of a partial small bowel obstruction at that stage such as not passing bowel motions, only passing flatus and being symptomatic for nausea.

He was afebrile, tachycardic and normotensive on arrival at the hospital. His abdomen was soft and tender centrally but had nil peritonism. He had normal white cell count, C-reactive protein, and lactate.

The abdominal CT scan (diagnosed by a board certified consultant

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radiologist) showed dilated jejunal loops with an abrupt transition in the mid-abdomen caused by a short intussusception. The leading edge of the intussuscepted bowel had an irregular outline, which was suspicious for a small mucosal mass of approximately 2.5 cm, acting as a lead point. Distal to the intussusception, the small bowel loops and colon were collapsed (Fig. 1A, B, C and D).

He was resuscitated with intravenous fluids, and a nasogastric tube was inserted given the evidence of dilated small bowel loops on CT and signs of a partial bowel obstruction. About 60 ml of gastric content was aspirated initially. He was given adequate analgesia and antiemetics. The decision was made to perform surgery due to the suspicion of presence of a small bowel mass on CT leading to transient intussusception along with clinical signs of a partial small bowel obstruction.

The case was commenced laparoscopically, however due to nil visualisation of the suspected mass noted on CT, a mini-laparotomy was performed. There were omental adhesions to the RUQ from a previous laparoscopic cholecystectomy. The small bowel loops were not dilated. A small bowel run was performed from Ligament of Treitz (duodeno-jejunal flexure) to terminal ileum and it was completely normal. There was no significant dilatation, masses or intussusception. There was also no evidence of Meckels diverticulum. Other intraoperative findings included diverticulosis of sigmoid colon.

There were no immediate post-operative complications. He tolerated his diet and was discharged home after two days.

A follow up was organised with his GP on discharge. Upon my conversation with the patient recently, his pain had improved since the procedure and he has been taking laxatives regularly as advised. He has had no such similar episodes of pain post operatively.

His most recent gastroscopy and colonoscopy were normal. Given he has been asymptomatic on discharge, a plan was made to perform a MR Enterography if he does become symptomatic in the future.

3. Discussion

Intussusception occurs when a segment of the intestine invaginates into an adjacent connecting segment of the bowel lumen, thereby obstructing the bowel [4]. It is more common in children than in adults [4]. However, in adults, about 30% of small bowel intussusceptions are said to be caused by tumours, while 10% are idiopathic [4].

Patients with intussusception usually present with intermittent
abdominal pain, nausea, vomiting, melena, constipation, and sometimes fevers and weight loss [5]. Transient intussusceptions can be even harder to diagnose based on symptoms as patients can be asymptomatic or have non-specific signs and symptoms [5].

Radiological tools can be of use to aid in the diagnosis of intussusception [5]. These include x-rays, ultrasound and CT scans of the abdomen [5]. CT scans are probably the most useful of the three, with a diagnostic yield of about 78% and information on the possible underlying cause [5]. CT is the imaging modality of choice for the diagnosis of intussusception for various reasons. The typical “target sign” is looked for on a CT (Fig. 1C) [5]. CTs also give us more details about the intussusception for various reasons. The typical diagnostic yield of about 78% and information on the possible under-lying cause [5]. CT is the imaging modality of choice for the diagnosis of intussusception or have non-specific signs and symptoms [5]. It also gives information regarding the extent and involvement of intestinal segments [6]. CT also helps identify differences between intussusceptions with a lead point and those without one [6]. Furthermore, CTs can show us features of bowel wall ischaemia and perforation which can help determine management of the patient [6].

Transient small bowel intussusceptions are very rare, and there is not much literature about the same. Although our patient underwent an operation due to suspicion of an intramural mass, there is evidence in the literature that transient intussusception can be managed conservatively [5]. However, if there are signs of a pathological lead point, obstruction or bleeding, an exploratory laparotomy should be performed, just as in the case of our presented patient [4].

Given the increasing dependence on imaging in order to make a patient diagnosis and thus the increased usage of CT scans and other imaging modalities, asymptomatic and idiopathic intussusception might be picked up more than usual [7]. Care was taken in our case to ensure that our patient was not a part of being a ‘Victim of modern imaging technology (VOMIT)’ i.e someone who undergoes multiple investigations which are mostly unnecessary [8].

The literature suggests that transient intussusception can be managed conservatively with bowel rest, IV fluids, blood tests and follow up radiological studies in order to monitor and ensure the intussusception has resolved [7]. Alternatively, pill cam endoscopy can be offered as long as there is no suspicion of a small bowel obstruction. Conservative management of intussusception can be undertaken as long as there are no signs of a bowel obstruction, GI bleeding or suspicious association with a pathological entity; in which case surgical intervention should be considered [7]. In the case of our patient, surgical intervention was sought given the suspicion of a pathological lead point, i.e the presence of a small bowel mass on CT.

There are no formal guidelines suggesting surgical resection in cases of transient intussusception; however, progress imaging would be recommended to monitor the resolution of the intussusception [9]. Alternative imaging methods such as MR enterography, capsule endoscopy and small bowel follow-through can be considered [10].

In conclusion, transient intussusception can be challenging to identify and treat appropriately. Surgery should be considered if there are clinical signs of obstruction coupled with CT findings of small bowel dilatation, particularly in the presence of a lead point. However, they can also be conservatively managed if there is no emergent cause identified. This can be done with the help of progress imaging and close follow-up.

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There were no sponsors for this case report.

Ethical approval

This study has been exempted from ethical approval by our institution.

Consent

Written informed consent was obtained from the patient for publication of this case report and accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal on request.

Author contribution

Dr. Sarada Ganesan and Dr. Marie Shella De Robles were involved in the writing of this case report.

Registration of research studies

This case report is not a “First in Man” and therefore does not require any registration.

Guarantor

Dr. Sarada Ganesan and Dr. Marie Shella De Robles.

Declaration of competing interest

There are no conflicts of interest in the creation of this case report as declared by the authors.

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