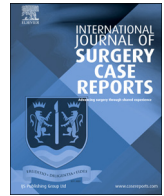




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An intestinal carcinoid causing transient jejunal intussusception in an adult—A case report

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ABSTRACT

INTRODUCTION: Transient jejunal intussusception in an adult is a rare clinical finding as reported in the English literature. The diagnosis is usually a matter of exclusion given the extremely rare nature of this medical condition.

PRESENTATION OF THE CASE: A young female presented to our hospital with abdominal pain and distention of six months duration. The episodes were intermittent in nature and resolved with conservative management. The aetiology remained obscure until a computerized tomography (CT) scan diagnosed a small bowel intussusception. Intraoperatively a small bowel tumour was identified and resected. Pathology confirmed an intestinal carcinoid of the small bowel with no evidence of metastatic disease.

DISCUSSION: Transient jejunal intussusception is a rare finding with only eight reported cases in the English literature. All previously reported cases have been ascribed to benign aetiologies and to our knowledge this is the first case of a malignancy causing transient jejunal intussusception. The management is usually conservative unless an actual cause for the intussusception can be ascertained. The diagnosis is usually one of exclusion and CT scan remains the gold standard in eliciting a diagnosis.

CONCLUSION: Transient jejunal intussusception in adults is an extremely rare pathological condition and the diagnosis is usually entertained as a matter of exclusion.

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1. Introduction

Transient jejunal intussusception in an adult is a rare finding with fewer than eight case studies in the English literature [1]. This case report is the first documented case of a malignancy causing an intermittent intussusception. While malignancy is a common aetiology in adults with small bowel intussusception, it has not been reported on in patients with transient small bowel intussusception. Given the patient's age it is also an unusual aetiology as carcinoids often present in the 6th and 7th decades of life [2].

2. Case report

A female patient in her early thirties presented to the emergency room with symptoms of abdominal pain and distention (Fig. 1). The pain was localized to her left upper quadrant with no radiation of the pain. It was sudden in onset with no aggravating or relieving factors. She had nausea but no vomiting or diarrhea. There was no history of chills and rigors or any association with food. The symptoms which were intermittent in nature had been present

for several months and she was initially diagnosed with irritable bowel syndrome (IBS). Her clinical examination revealed tympanic bowel in the upper abdomen but no obvious masses. There was no rebound or guarding and all hernia orifices were clear. Her rectal examination was normal. She was treated with conservative measures which usually brought a resolution to her symptoms. This included intravenous (IV) fluids, analgesia and nausea medication. Her past medical history was significant for two caesarean sections. There was no family history of malignancy. She did not smoke but drank occasionally. She had no known allergies. None of her biochemical investigations were conclusive for any diagnosis and her initial radiological imaging was normal. She had a colonoscopy which was normal and a subsequent abdominal ultrasound that was also reported as normal. During one of her hospital admissions she had a computerised tomography (CT) scan which showed an intussusception in the left upper quadrant (Fig. 3). The radiologist was unable to determine a cause for the small bowel intussusception. After an extensive discussion with the patient and her family which included a second surgical opinion she agreed to undergo a diagnostic laparoscopy (Figs. 5 and 6). Intra-operatively a small bowel tumour was observed in the jejunum and this was resected upon conversion to an open laparotomy (Figs. 7 and 8). We converted to an open laparotomy to examine the small bowel mesentery more closely. Her abdominal cavity examination did not reveal any metastatic disease or tumour deposits in the peritoneum

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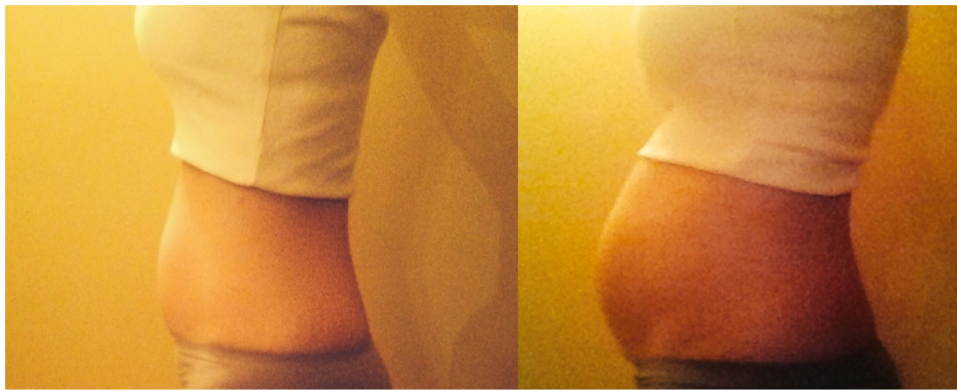


Fig. 1. A/B Patients pictures of her normal abdominal profile and abdominal distention during an episode of obstruction.

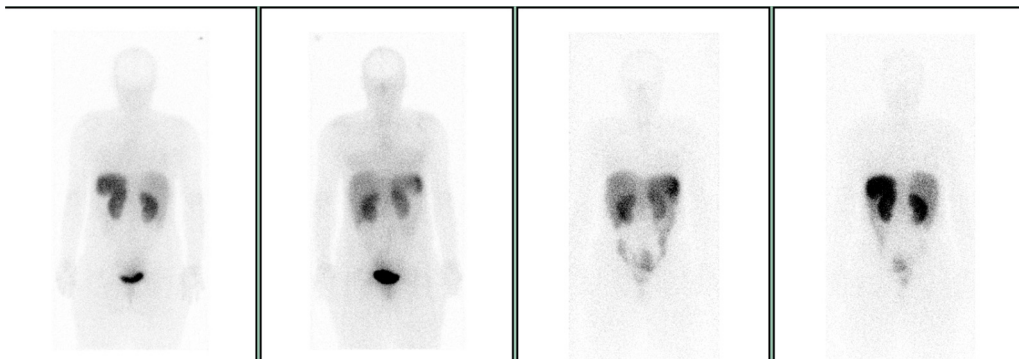


Fig. 9. Octreotide scan post laparotomy showing normal uptake by the kidneys and liver with excretion through the bladder.

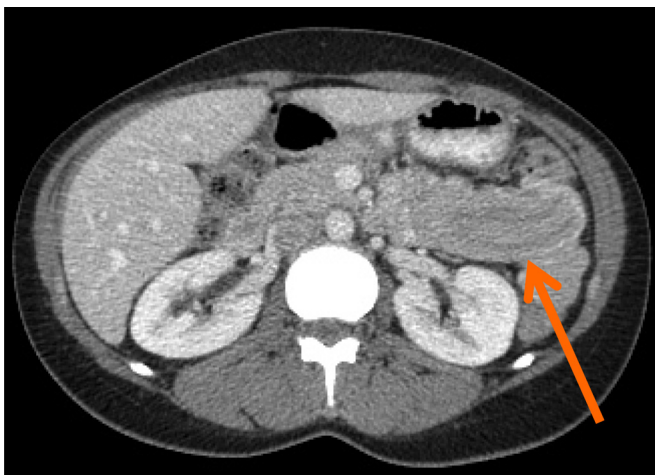


Fig. 2. CT scan axial view with the intussusception (orange arrow).

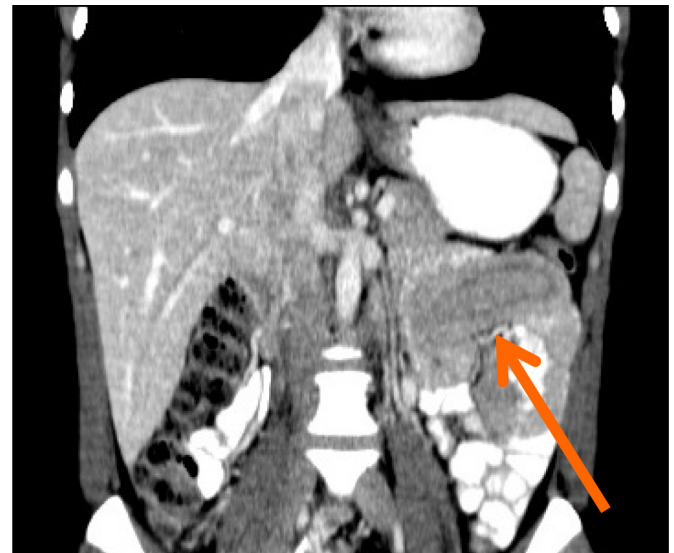


Fig. 3. CT scan coronal view with the intussusception (orange arrow) in the left upper quadrant.

or mesentery. Her recovery was uneventful and she was discharged home after a few days. Pathology revealed a well differentiated neuroendocrine carcinoid tumour, grade G1. The surgical margins were tumour free. There were no lymphatic tumour deposits in the mesenteric tissue. The patient was subsequently presented to the interdisciplinary tumour board who recommended an octreotide scan to exclude metastatic disease. The octreotide scan was normal (Fig. 9) and she was not offered any adjuvant chemotherapy. Her follow-up has been uneventful and she has had no further episodes of abdominal pain or distention over the past two years (Fig. 2).

3. Discussion

Adult intussusception is a rare occurrence with most of the aetiology being ascribed to malignancy [3,4]. Sixty percent of large bowel and thirty percent of small bowel intussusceptions have a malignant tumour as the lead point [5,6]. The small bowel tumours are equally divided between primary tumours and metastatic disease [5]. Transient small bowel intussusception is extremely rare with eight recorded cases in the English literature to date [7]. None



Fig. 4. CT scan sagittal view showing the "target sign" (orange arrow).



Fig. 7. Exteriorisation of the tumour for resection (orange arrow).

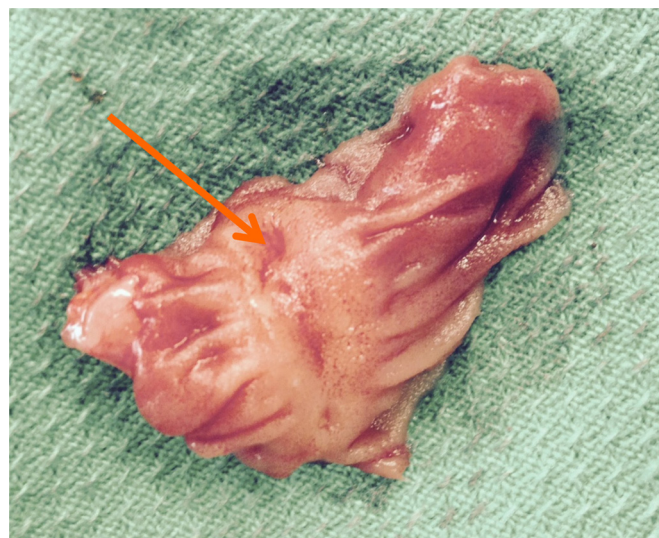


Fig. 8. Resected specimen with the circumscribed tumour (orange arrow).

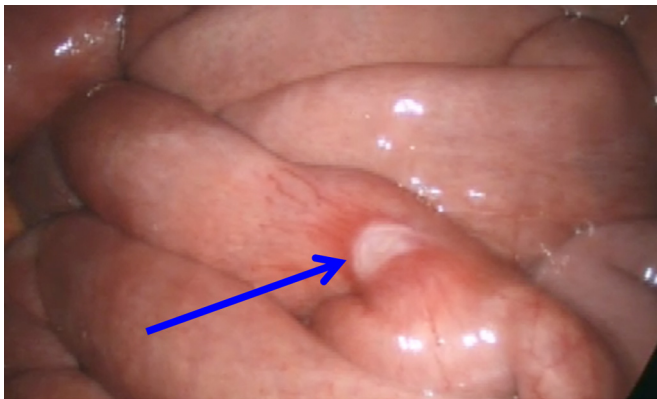


Fig. 5. Carcinoid tumour of the jejunum (blue arrow).



Fig. 6. Intraoperative identification of the jejunal carcinoid during diagnostic laparoscopy.

of the reported cases have presented with a malignancy as the lead point and to our knowledge this is the first recorded case of a malignancy of the small bowel presenting as a transient intussusception. Transient intussusception has not been well reported in the literature and its pathophysiology is poorly understood. In adults with intussusception the tumour acts as a lead point for the bowel invagination while in transient intussusception the theory is that of an abnormal peristalsis due to a temporary dysrhythmic contraction [1]. The reason for the spontaneous resolution of the dysrhythmia remains nebulous. CT scan remains the gold standard to obtaining a diagnosis and its functionality is further enhanced by its ability to elucidate a cause as well [8]. The classical "target sign" on sagittal views is pathognomonic of the diagnosis of an intussusception and in an adult warrants a diagnostic laparoscopy (Fig4). Treatment is usually conservative in the absence of a known pathology especially if the symptoms are transient in nature without further clinical sequelae. The patient has remained asymptomatic since her surgical resection. She did not present with any clinical symptoms of the carcinoid which leads us to believe that this was a non functional tumour. She was also in an inappropriate age group as the tumour often presents in the 6th and 7th decades of life [2]. The negative octreotide scan ruled out the presence of metastatic disease. A further mystery in this case is why the pathology did not cause a complete intussusception and obstruction as is usually the case with malignant small bowel tumours. The patient

presented to the emergency room a few times in the preceding six months with documented obstruction but settled each time with conservative management. She also had episodes at home that settled after a few hours without any treatment (Fig. 1). The diagnostic laparoscopy and resection was performed electively and the patient did not have an intestinal obstruction at the time of surgery.

4. Conclusion

Transient jejunal intussusception is an extremely rare pathological condition and the diagnosis remains elusive. It is usually a diagnosis of exclusion of other pathologies. CT scan remains the gold standard for diagnosis while diagnostic laparoscopy is an important tool in distinguishing transient intussusception from persistent intussusception by excluding a pathological process such as a tumour. Surgery is undertaken only in the presence of pathology while most of the cases can be managed conservatively. This case report has been reported in line with the SCARE criteria [9].

Competing interests

The authors declare that they have no competing or non-competing interests.

Consent

Written informed consent was obtained from the patient for publication of this case report and any accompanying images. A copy of the written consent is available for review by the author.

Author's contributions

Yagan Pillay [YP]: Wrote the article including a literature search and collected the data and photos. He agrees to be responsible for all aspects of the work.

Authors Information

None.

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None.

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