CASE REPORT

Prolapsed giant sigmoid lipoma: a rare cause of adult ischaemic intussusception

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SUMMARY

Intussusception is a rare cause of obstruction in adults and has a variable, non-specific presentation. Adult intussusception is usually associated with an underlying organic pathology, such as a benign or malignant tumour which acts as the lead point. Prolapse of the lead-point mass through the anal canal is an extremely rare presentation with very few reported cases in the literature. We describe a case of a 67-year-old man who presented with rectal prolapse of a large soft tissue mass. CT of the abdomen and barium enema revealed partial intussusception of an upper sigmoid lipomatous polyp. Examination under anaesthesia was performed and the prolapse reduced. A laparoscopic sigmoid colectomy was planned. The patient subsequently re-presented clinically unwell with a recurrent necrotic prolapsing mass. Laparotomy and sigmoid colectomy was performed and the patient recovered fully. The resected mass was a 7×4.5×4.0 cm necrotic sigmoid lipoma.

BACKGROUND

Intussusception is predominantly a paediatric condition and rarely occurs in adults, accounting for between 1% and 5% of obstruction. Prolapse of an intussuscepted 'lead point', such as a tumour or lipoma is an extremely rare presentation. We report a case of a prolapsed giant sigmoid lipoma through the anal canal, with subsequent ischaemic infarction of intussuscepted sigmoid colon. This unusual presentation was a considerable diagnostic challenge and we describe here our operative management of the patient as an aid to those encountering similar presentations.

CASE PRESENTATION

A 67-year-old man presented overnight to the emergency department reporting of a short history of a soft tissue rectal prolapse following defaecation. He reported dragging retropubic and perianal discomfort with associated bleeding per rectum and increasingly difficult defaecation. He was otherwise fit and healthy with no significant surgical or medical history. Abdominal examination was unremarkable. Rectal examination revealed an atypical, 12×6×3 cm prolapsing soft tissue mass through the anus with a palpable fibrous stalk. CT and barium enema appearances are shown in [figures 1 and 2](#), respectively. [Figure 1](#) demonstrates on CT imaging intussusception of the proximal into the middle sigmoid, with evidence of large intraluminal fat tissue formation measuring approximately

Figure 1 CT scan (coronal view) showing intussuscepted sigmoid mass.

15×4 cm. [Figure 2](#) corroborates the findings of a likely fatty sigmoid colon mass.

TREATMENT

An examination under anaesthesia was performed and the mass was reduced successfully. An elective laparoscopic sigmoid colectomy was planned.

Two days postprocedure, the patient reported recurrent prolapse with further rectal bleeding, abdominal and perianal pain with absolute constipation. He was systemically unwell with evidence of further prolapse and ischaemic and necrotic sigmoid colon on repeat rectal examination and flexible sigmoidoscopy. Theatre was expedited and endoscopic per-anal resection of the necrotic tissue was attempted. The broad base and size of the lesion, which measured approximately 12×6×3 cm, prevented safe isolation of the stalk, the ischaemic appearance to the sigmoid colon and the clinical status of the patient was considered and a laparotomy and sigmoid colectomy with primary anastomosis was performed rather than the planned laparoscopic resection as this was felt to be the safest surgical intervention.

OUTCOME AND FOLLOW-UP

Histology of the specimen revealed intussuscepted colon and mesentery which was entirely devitalised and necrotic secondary to ischaemia with an

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Figure 2 Barium enema series showing intussuscepted sigmoid mass.

infarcted submucosal lipoma as the lead point (figure 3) measuring 7×4.5×4.0 cm. The patient subsequently made a complete recovery.

DISCUSSION

Intussusception is described as a ‘telescoping’ of one part of the intestine into the adjacent segment. The classic triad of abdominal pain, per rectal bleeding and a sausage-like mass in paediatric intussusception is unusual in adults. Non-specific symptoms

Figure 3 Pathology specimen of resected lipoma.

such as nausea, vomiting and abdominal pain are more likely to predominate, with the clinical course varying between acute, intermittent and chronic.¹ Adult intussusception is a rare and poorly described entity, but is thought to be responsible for between 1% and 5% of bowel obstruction in adults. It presents a significant challenge in clinical practice, and this accounts for the large rate of delayed or missed diagnoses.¹

The majority of adult cases are secondary to an underlying organic lesion which acts as the lead intussusception point. Large bowel intussusception is more likely to occur secondary to a malignant lesion acting as the lead point, whereas the small bowel is more likely to have a benign lead point.^{2 3} This clinical case is thus more unusual as the intussusception lead point was a sigmoid lipoma—a benign submucosal neoplasm found most commonly in the right hemicolon, which represents 10% of all gastrointestinal tumours.⁴ While lipomas are often asymptomatic they can cause complications such as obstruction, gastrointestinal bleeding or, very uncommonly, intussusception, as described here.⁵

The review of the literature revealed only three recent reported cases of intussuscepted lipomas presenting as rectal prolapse (table 1), with further reports in 1987, 1975 and 1970.^{9–11}

Abdominal CT has been reported to be the most sensitive radiological investigation for the preoperative diagnosis of intussusception, with the classical finding being a ‘target lesion’,

Table 1 Recent reported cases of intussuscepted lipomas presented as rectal prolapse

Author (year)	Journal	Age	Sex	Lipoma size	Site of intussusception	Management
Pezzolla (2012) ⁶	<i>G Chir</i>	37	M	10 cm	Colocolonic	Minilaparotomy and resection
Chen (2008) ⁷	<i>Cases J</i>	36	M	9 cm	Ileocolic	Subtotal colectomy
Tony (2007) ⁸	<i>Trop Gastroenterol</i>	80	F	7 cm	Colocolonic	External surgical resection

F, female; M, male.

'double ring' or 'coiled string' appearance.^{12 13} In addition, flexible endoscopy of the colon is considered an important method of evaluating subacute or chronic large bowel intussusception.¹⁴

The idiopathic nature of intussusception in children allows for air or barium enema reduction as definitive treatment. In adults, due to the high proportion of underlying structural anomalies and the high risk of malignancy, surgical intervention is considered mandatory.¹⁴ While preoperative reduction of the intussusception allows for a more limited resection, this carries the theoretical risk of perforation, dissemination of tumour cells and increased anastomotic complications.¹⁴ For these reasons, reduction prior to resection is generally advisable only in the absence of ischaemia and when the underlying lesion is known to be benign. Much of the available evidence reports successful endoscopic resection of smaller intussuscepting lipomas. In this case, the lipoma was 7×4.5×4.0 cm in size, with at least 12×6×3 cm of prolapsed tissue through the anal canal.

Learning points

- This case demonstrates the potential for unusual presentation of adult intussusception and the difficulty in achieving a clear diagnosis.
- Previous cases have demonstrated the success of endoscopic techniques in smaller lipomas, but the sheer size and necrotic appearance of the specimen in this case report would support laparotomy and resection as the safest management option.
- The limited evidence currently available recommends lipoma reduction prior to resection—in this case it was not successful and could have resulted in a delay in definitive treatment had re prolapse not occurred.

Endoscopic resection could not safely be undertaken and a laparotomy and sigmoid colectomy was the only remaining management option.

Contributors All authors were involved in the clinical care of the patient. ME and JM contributed equally to the writing of the article. FM had a supervisory and editing role.

Competing interests None.

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