

## Surgical images: soft tissue

### Transverse colonic intussusception

A 75-year-old man who underwent an emergent repair of a leaking inflammatory aortic aneurysm 2 years previously was seen in routine follow-up by a vascular surgeon in our hospital. At this visit, he was found to have a palpable nonpulsatile abdominal mass. He described a recent history of vague abdominal symptoms but no prior evidence of gastrointestinal bleeding. He reported no fever, chills or night sweats. Laboratory investigations demonstrated a mild anemia. An abdominal CT scan revealed a large mass within the lumen of his transverse colon and changes highly suspicious for an intussusception, with the mass as the leading edge (Fig. 1). He was referred to our service for surgical assessment, at which time, we elected to perform a semi-urgent colonoscopy. At colonoscopy, the intussusception was visualized (Fig. 2), as was

a large tumour acting as a lead point. We did not attempt colonoscopic reduction of the intussusception.

We made a diagnosis of intussusception of the transverse colon secondary to a tumorous lead point. The patient was admitted to hospital and underwent urgent laparotomy. Upon entering the abdomen, a large mass was palpable through the transverse colon. The mass comprised an intussusceptum of both transverse and ascending colon, which was seen while telescoping into the lumen of the adjacent bowel (Fig. 3). Manual reduction of the intussusception was unsuccessful. There was no evidence of liver metastasis. An extended right hemicolectomy with side-to-side primary anastomosis was performed.

Gross examination of the resected specimen revealed the intussusception

(Fig. 4) and a lobular fungating mass (Fig. 5) measuring  $12.0 \times 9.0 \times 7.0$  cm originating from the transverse colon. Histological examination identified moderately differentiated adenocarcinoma invading all layers of the bowel wall and neighbouring adipose tissue. Resection margins were clear of tumour. All 23 lymph nodes in the surgical specimen were negative for malignancy.

The patient underwent an uncomplicated postoperative course and was discharged home well. He was subsequently seen at the London Regional Cancer Centre regarding the use of adjuvant chemotherapy but opted against further treatment at that time.

Intussusception, the most common cause of intestinal obstruction in infants aged 6–18 months, is rare in adults. Only 5% of all cases of intussusception occur in



FIG. 1. CT scan of the abdomen. The arrow shows a lobulated mass in the region of the transverse colon and associated intussusception of the hepatic flexure.

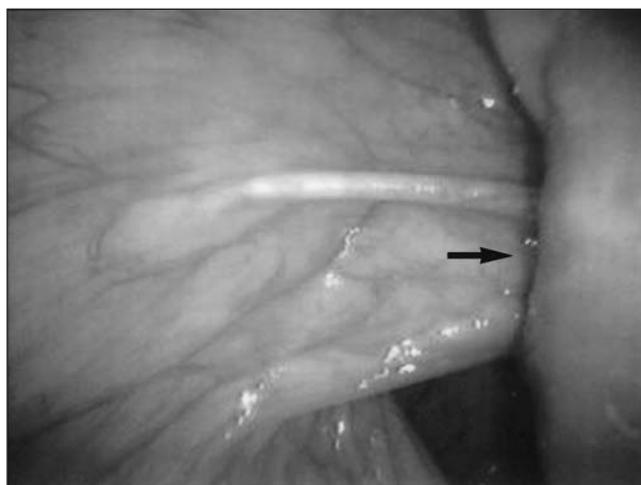


FIG. 2. Photograph taken at colonoscopy showing a proximal segment of colon telescoping into the lumen of the adjacent distal segment. The arrow shows the site of intussusception.

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FIG. 3. An in situ view of the patient's intussusception. The examiner's right index finger is seen between the overlapping layers of bowel.

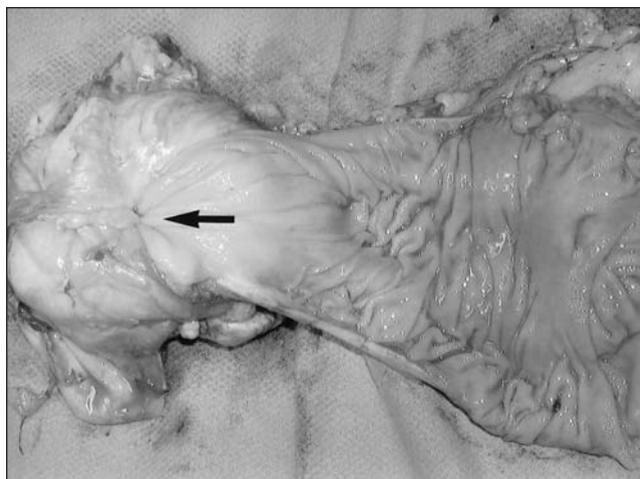


FIG. 4. Resected and unreduced bowel dissected to expose an intraluminal view of the intussusception (arrow).



FIG. 5. Reduction of the intussusception and dissection of the bowel showing the colonic adenocarcinoma.

adults, and intussusception is implicated in no more than 1% of patients with intestinal obstruction.<sup>1</sup> In the adult population, most cases are secondary to a lesion of pathological origin. Malignant neoplasms act as a lead point in approximately 50% of cases of adult intussusception.

Adults with intussusception may report atypical or nonspecific signs and symptoms of bowel obstruction that make preoperative diagnosis difficult. In cases where the clinical picture is unclear, ultrasonography and CT examination have improved our diagnostic ability.<sup>1-3</sup>

Both diagnostic modalities describe early intussusception as a target-shaped mass, with the intussusceptum encircled by the edematous intussusciptens. As the bowel thickens and becomes necrotic to produce severe obstruction, the intussuscepted mass becomes more unstructured.<sup>1,2</sup> Controversy still surrounds the current management of the condition in adults and relates to the issue of reduction versus resection. The literature would agree that, once the diagnosis of colonic intussusception is made, surgical excision is the definitive treatment, given the likelihood of malignant etiology.<sup>1-3</sup>

**Competing interests:** None declared.

#### References

1. Azar T, Berger DL. Adult intussusception. *Ann Surg* 1997;226:134-8.
2. Begos DG, Sandor A, Modlin IM. The diagnosis and management of adult intussusception. *Am J Surg* 1997;173:88-94.
3. Lorenzi M, Iroatulam AJN, Vernillo R, et al. Adult colonic intussusception caused by a malignant tumor of the transverse colon. *Am Surg* 1999;65:11-4.