

Case Report

Unusual presentation of idiopathic long segment small bowel intussusception in an adult — a case report

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Adult intussusception is rare. It requires high index of suspicion. Early diagnosis and management is necessary to avoid bowel ischemia and further operative complications. Small bowel intussusceptions may be difficult to diagnose preoperatively, with a consequent increase in ischaemic complications, secondary to delayed surgery. Ultrasound may prove helpful in diagnosing cases with palpable lump. Abdominal CT scan has been reported to be the most useful imaging modality in case of intussusception. Here we present a case of an adult with an intussusception involving almost entire small bowel.

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Key words : Small bowel intussusception, Ultrasound, CT scan.

Here we present a case of 26-year-old man with a long segment jejunoileal intussusception involving almost whole small bowel. The ultrasound and CT features are highlighted with due emphasis on the importance of early management.

CASE REPORT

A 26-year-old male was admitted with 3 days history of abdominal pain, lump in abdomen and bilious vomiting. On physical examination a palpable rounded lump was noted centrally.

Plain X-ray abdomen showed a central, rounded abdominal mass and provisional diagnosis of mesenteric cyst was made (Fig 1).

USG was done and classical bull's eye lesions were noted involving long segment of bowel as demonstrated (Fig 2). CT scan was done immediately after USG to look for the extent of the involved bowel segment. The CT images demonstrated an enormous small bowel intussusception, involving nearly whole of the jejunum and ileum (Figs 3,4). There was no evidence of colon involvement. Eccentric area of intussuscepted mesenteric fat and mesenteric



Fig 1 — Scout film of abdomen demonstrating a large, rounded central abdominal mass (arrows)

- Adult intussusception requires high index of suspicion.
- Though ultrasound is first line investigation, CT is of value in complex intra-abdominal masses or if there is complicated clinical picture.
- Small-bowel intussusceptions should be reduced before resection whenever possible if the underlying etiology is suspected to be idiopathic.

vessels also noted (Figs 3,4). The images showed typical target lesions in cross section.

Surgery performed thereafter confirmed CT findings. Involved small bowel segment measured about 3.5 feet starting from about 1.5 feet from duodenojejunal flexure. Then the intussusception was reduced. No pathological lead point was noted on table, though a specimen is sent for histopathology. The bowel had doubtful viability. Resection was not done and abdomen was closed. At day 7



Fig 2 — Ultrasound abdomen showing oedematous outer bowel loop (arrows) with fluid between two bowel loops (asterisk)

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Fig 3 — Axial CT image showing layers of fat trapped within the intussusceptum (arrows)

of surgery bilious leak was noted through drain. Again laparotomy was done and about 1 feet of non-viable bowel resected and re-anastomosis done. Four weeks after his admission, the patient was finally discharged from hospital. Histopathology showed ischemic bowel only. Patient progressed well after discharge.

DISCUSSION

In adults, intussusception is exceedingly rare, representing less than 5% of all intestinal obstructions. In contrast to the pediatric population, about 90% of intussusceptions in adults are associated with a pathologic lesion, or lead point, in the bowel wall. Recent studies show that 30% of small-bowel intussusceptions are caused by malignancy. The remainder of instances are caused by benign lesions (60%)¹ or are idiopathic (10%). Most colonic intussusceptions, however, are caused by malignancy (60%)².

A <3 cm doughnut-like lesion found in the left abdomen or paraumbilical region with ultrasound is suspicious for small bowel intussusception (SBI). An intussusception length >3.5cm has been reported as a sensitive and specific predictor of those SBIs that require surgical intervention, as compared to those that will resolve spontaneously^{3,4}. The diagnosis of SBI can confidently be made with CT, due to their virtual pathognomic appearance: they are seen as a complex soft tissue mass, with a target, layered, sausage-shape or reniform configuration^{5,6}. An eccentric area of fat density within the mass represents intussuscepted mesenteric fat, and the mesenteric vessels themselves may be visible within this fat layer. The superior anatomic detail of CT over ultrasound, mean that ensuing complications such as mesenteric thrombosis or small bowel volvulus may also be easily recognised. Whilst ultrasound remains the primary imaging modality used both to diagnose intussusception and for the evaluation of an abdominal mass lesion, the clinical condition of the patient (as in this case), may dictate that CT be sometimes used as a first-line investigation.

The standard treatment of intussusception in adults is surgical, without prior nonoperative attempts at reduction. Because of the high incidence of malignancy, especially in colonic intussuscep-

tions, a segmental bowel resection without prior intraoperative reduction is generally undertaken. However, an alternative approach may be useful for patients with “pediatric-type” idiopathic small-bowel intussusception². In these patients, a surgical, preferably laparoscopic, exploration may be helpful. In the absence of inflammation or ischemia, a cautious attempt at surgical reduction may be justified. The finding of a healthy small bowel with no underlying pathology will prevent the need for a bowel resection.

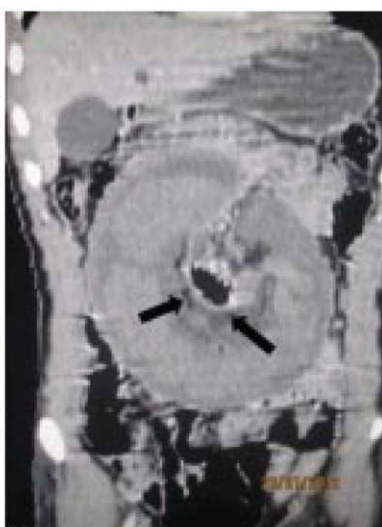


Fig 4 — Coronal reconstruction CT image showing extensive small bowel intussusception. Mesentery along with fat layers is seen clearly (arrows)

CONCLUSION

Adult intussusception is an infrequent problem. It is important to have a high index of suspicion⁷. The diagnosis of this condition can be difficult as symptoms are often non-specific. In this scenario CT may have a significant diagnostic advantage over ultrasound. In contrast to its pediatric counterpart, the treatment almost always is surgical. Reduction can be attempted in small bowel intussusception if the segment involved is viable or malignancy is not suspected.

Conflicts of interest : NIL

REFERENCES

- 1 Gayer G, Zissin R, Apter S, Papa M, Hertz M — Pictorial review: adult intussusception - a CT diagnosis. *Br J Radiol* 2002; **75**: 185-90.
- 2 Renzulli P, Candinas D — Idiopathic small-bowel intussusception in an adult. *CMAJ* 2010; **23**: 182.
- 3 Munden MM, Bruzzi JF, Coley BD, Munden RF — Sonography of pediatric small-bowel intussusception: differentiating surgical from nonsurgical cases. *AJR Am J Roentgenol* 2007; **188**: 275-9.
- 4 Lvoff N, Breiman RS, Coakley FV, Lu Y, Warren RS — Distinguishing features of self-limiting adult small-bowel intussusception identified at CT. *Radiology* 2003; **227**: 68-72.
- 5 Gupta A, Gupta S, Tandon A, Kotru M, Kumar S — Gastrointestinal stromal tumor causing ileo-ileal intussusception in an adult patient a rare presentation with review of literature. *Pan African Medical Journal* 2011; **8**: 29.
- 6 Smyth R, McCallion WA, Paterson A — Total Jejunioleal Intussusception: A Case Report and Literature review. *Ulster Med J* 2009; **78**: 10-2.
- 7 Sarma D, Prabhu R, Rodrigues G — Adult intussusception : a six-year experience at a single center. *Ann Gastroenterol* 2012; **25**: 128-32.