Jejunojejunal intussusception: an unusual case of postoperative intestinal obstruction

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ABSTRACT

Intussusception is a rare cause for postoperative intestinal obstruction. We report a case of intussusception in the early postoperative period following resection of proximal jejunum and end to end anastomosis. Computed tomography showed jejunal intussusception, which was confirmed on exploration. The anastomotic site was acting as the lead point, which was resected after reduction and reanastomosed in a single layer. The patient had uneventful recovery. Very few similar cases are reported in the literature and all the reported cases are following free jejunal transfer for pharyngo-oesophageal reconstruction.

KEYWORDS

Intestinal obstruction – Jejunojejunal intussusception – End-to-end anastomosis

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Introduction

Intussusception is a rare cause for intestinal obstruction. It constitutes only 1–5% of adult intestinal obstructions.¹ Intussusception occurring in the early postoperative period is a rare entity in adults. It is seldom suspected, and the majority are managed conservatively as adhesive obstruction without extensive imaging. Most of the postoperative jejunal intussusceptions reported follow gastrectomy, Roux-en-Y gastric bypass and other Roux-en-Y reconstructions.^{2–5} Postoperative jejunal intussusception following end-to-end anastomosis is extremely rare and it is limited to case reports and small case series in the literature.^{6–9} All the intussusceptions of similar kind are reported following free jejunal transfer and two layered jejunojejunal anastomosis for pharyngo-oesophageal reconstruction.^{6–9}

Case history

A 49-year-old woman with multiple neurofibromatosis underwent laparotomy for left adrenal pheochromocytoma and jejunal gastrointestinal stromal tumour [GIST] after adequate preparation. The small GIST was resected and a two-layer end-to-end anastomosis was performed about 20 cm distal to duodenojejunal flexure followed by left adrenalectomy. The intraoperative and early postoperative periods were uneventful. The patient tolerated orals initially but developed few episodes of bilious vomiting on fifth day. On resuming orals, the patient had recurrence of symptoms and failed to improve with conservative measures. Ryle's tube continued to drain more than one litre. Oral gastrograffin

study showed failure of flow of contrast beyond first part of duodenum and contrast computed tomography performed showed jejunojejunal intussusception (Fig 1). Patient underwent re-exploration and found to have intussusception involving about 20 cm of jejunum reaching up to duodenojejunal flexure. The previous anastomotic site was acting as the lead point (Fig 2). The intussusceptum was reduced, the previous anastomotic site was resected and reanastomosed in single layer with interrupted 3-0 Vicryl sutures. A nasojejunal tube (Freka tube) was inserted across the anastomosis for early feeding. The patient had an uneventful recovery, resumed nasojejunal feeds on second day and oral feeds on the fourth postoperative day. She was discharged on eighth postoperative day. No recurrence of symptoms were noted in the follow-up period.

Discussion

Intussusception in the postoperative period is an extremely rare entity that is seldom suspected and is difficult to diagnose without detailed imaging. Majority of intussusceptions in the postoperative period occur following gastrectomy and Roux-en-Y gastric bypass.^{1–5} Jejunojejunal intussusception following end-to-end anastomosis is extremely rare and limited to small case series and case reports.^{6–9} We could identify only 12 cases in the literature. All the published cases identified were following free jejunal transfer for pharyngo-oesophageal reconstruction. Omura *et al.*⁶ reported four cases of intussusception following free jejunal transfer. All the patients in this series were initially managed conservatively as adhesive obstruction. Intussusception was

Figure 1 Computed tomography axial and coronal sections showing jejunojejunal intussusception

Figure 2 Intraoperative photographs showing jejunojejunal intussusception, anastomotic suture line visible after reduction

diagnosed preoperatively in only one but confirmed at surgery in all four.⁶ Urayama *et al.*⁷ reported four cases of jejunal intussusception in a series of 54 cases of free jejunal transfer.⁷ Matsumoto *et al.*⁸ reported two cases of jejunojejunal intussusception following free jejunal transfer in 218 patients with an incidence of 0.9%.⁸ Kawasaki *et al.*⁹ and Flynn *et al.*¹⁰ also reported similar cases. All the reported cases occurred following end-to-end anastomosis in two layers (the Albert-Lembert method). The proposed mechanism for developing intussusception were high motility and relatively large enteric diameter of the proximal small intestine.⁸ The most popular technique of two-layered bowel

anastomosis causes a thicker suture line and transient oedema may also contribute to the pathogenesis.⁸ In our case, the location of jejunal resection was like free jejunal transfer and the anastomosis performed was similar. The patient was managed by resection and single-layer anastomosis, as described by previous authors.

Conclusion

Anastomotic site intussusception is an extremely rare complication following resection of proximal jejunum. The probable predisposing factors are abnormal motility in proximity

to duodenojejunal flexure, larger diameter and two-layer Albert–Lembert type anastomosis. Single-layer or side-to-side anastomosis is probably safer to prevent this potential rare complication. We feel that one should be aware of this potential complication of a commonly performed technique of anastomosis.

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