Unusual Complication: Bowel Invagination Following Total Gastrectomy

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Abstract: Bowel invagination intestinal intussusception is a rare condition in adults. In most cases, it is caused by a benign or malignant intestinal tumor. It refers to a condition in which a segment of the intestine invaginates into the lumen of its adjacent segment. The postoperative intussusception after gastrointestinal surgery is an uncommon clinical condition. Here, we report two cases of spontaneous small bowel intussusception following total gastrectomy. Intussusception is an extremely rare complication after gastric surgery; the incidence is reported to be < 0.1%. Intussusception is attributed to both mechanical factors, and functional factors due to bivagotomy. Bowel invagination must be considered in the postoperative period after gastrectomy.

Key words: Bowel invagination following surgery, Gastrectomy, Vagotomy.

1. Background

The incidence of adult intussusception is approximately 5% of all cases of intussusception, and most cases have an underlying cause, such as malignancy [1].

Jejunal intussusception after gastrectomy was first reported by Bozzi [2]. Postoperative intussusception after gastrointestinal surgery is an uncommon clinical condition with a reported incidence of less than 0.1% in patients undergoing gastric resection. Here we report two bowel (ileal § jejunal) invaginations following total gastrectomy done for gastric cancer.

2. Case Report

2.1 Case 1

A 53 years old man, with no medical or surgical history presented to our department with gastric cancer of the gaster’s body required a total gastrectomy with (Roux-en-Y esophago jejunal anastomosis). On postoperative day 15, the patient complained of vomiting and abdominal colicky pain, and a follow-up abdomino-pelvic did not subside for over 2 days. CT scan showed a jejunal intussusception. The patient then underwent exploratory laparotomy. On exploration, retrograde jejunal intussusceptions, early parieto jejunal adhesions caused the invagination (the adhesion was mild and no strictures or mass were observed that would cause retrograde peristalsis); Thus the invagination may be due to peristaltic abnormality (related to the vagotomy). The operation was conservative, provided that the bowel is viable; manual reduction after adhesions resection. The patient recovered uneventfully and was discharged on postoperative day 7 after the second operation. The patient has remained in good health.

2.2 Case 2

We report a case of a patient, 60 year old, without medical or surgical past presented to our department with gastric cancer of the lesser curvature required a total gastrectomy (Roux-en-Y esophago jejunal anastomosis). On postoperative day 7, he complained abdominal pain and obstipation, and a follow-up abdomino-pelvic ultrasound showed an ileal intussusception (Fig. 1). Preparing time to CT scan,
the patient recovered uneventfully the gas and bowel contents. CT scan was normal and was discharged on postoperative day 12 after. The patient has remained in good health and referred for adjuvant therapy.

3. Discussion

Intussusception is an extremely rare complication after gastric surgery; the incidence is reported to be < 0.1% [3]. Although most adult intussusceptions are caused by a definable structural lesion, definite anatomical or pathological causes are rarely found in cases following gastric surgery [4]. Intussusception is attributed to both mechanical factors (excessive length of afferent loop, lifting afferent loop to the stomach wall, excessively large anastomosis hole, ptosis of the gastrojejunostomy, anastomosis, postoperative adhesions, and stenosis causing reverse peristalsis) and functional factors: mainly due to vagotomy (spasm of the intestine, peristaltic abnormality, surgical stimulation, inflammation, autonomic nervous system abnormality, enteral nutrition, drug infusion, and decrease in gastric wall tension)[5]. Jejunal intussusception after total gastrectomy is rare [6]. A review of the literature revealed 18 cases of intussusception occurring after total gastrectomy with Roux-en-Y reconstruction, including the current case [5].

4. Conclusion

Adult Intussusception is a rare but challenging condition for surgeon [7]. It presents with variety of acute, intermittent symptoms, thus making its preoperative diagnosis difficult [8]. According to our study the bowel invagination should be considered as one of the possible causes of high-low-level intestinal obstruction in the postoperative period after gastrectomy.

References