



Feeding Jéjunostomy and Intestinal Intussusception: About a Case

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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Case Study

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ABSTRACT

Jejunostomy is an important adjunct procedure in surgery that facilitates early enteral feeding and maintains a satisfying nutritional intake in undernourished patients. However, it is associated with complications especially bowel obstruction by intussusception that is an exceptional surgical emergency in adults. We report the case of a patient who underwent a partial gastrectomy for antrum adenocarcinoma with insertion of a feeding jejunostomy. Postoperative courses were marked by intestinal intussusception on jejunostomy tube. Clinical and biological contribution to diagnosis was nonspecific. The abdominal CT scan examination evoked the diagnosis by showing a small bowel occlusion in upstream of "target" picture around the feeding tube. Surgical treatment was the resection of the intestine, remaking the foot of the loop, wide washing and drainage. By this case, we aim to bring clinical, biological, radiological and therapeutic specificities of this rare complication.

Keywords: Feeding jejunostomy; intestinal intussusceptions « target » picture; intestinal resection.

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1. INTRODUCTION

Feeding jejunostomy is an important adjunct in surgery. It allows undernourished patients, who cannot early resume oral diet, covering their caloric requirements after a major surgery reducing postoperative morbidity and mortality [1]. However, it can cause a rare and redoubtable complications especially intestinal obstruction by intussusception [2]. These complications call into question the usefulness of its use which must be carefully considered. We report the case of a patient who underwent a partial gastrectomy with insertion of a feeding jejunostomy which was complicated by intestinal intussusception.

2. CASE REPORT

A 66-years-old patient referred to our department for the management of a gastric adenocarcinoma discovered following melena. A subtotal gastrectomy with Roux-en-Y reconstruction was performed. In view of the altered nutritional status of the patient, it was decided to perform a witzel jejunostomy for early feeding. The postoperative courses were marked on the 10th day by sudden abdominal pain, vomiting and total cessation of the flatus and the stool associated with severe clinical infectious syndrome. Clinical examination found abdominal distension without a palpable mass. Laboratory tests showed a hyper leukocytosis at 22000 and a CRP at 170. Abdominal computed tomography scan with gastrografine opacification by the jejunostomy tube revealed small bowel distension upstream of a "target" picture around

the tube on axial cuts (Fig. 1) associated with a moderate abundance peritoneal effusion. The diagnosis of peritonitis on jejunostomy tube intussusception was evoked.

An emergency laparotomy was done, on exploration it was an obstruction on acute jejuno jejunal intussusception complicated by peritonitis due to anastomosis leakage upstream at the foot of the Y loop (Fig. 2).

The patient underwent a resection of intussusception, a remaking of the anastomosis at the foot of the loop with abundant washing and drainage. He died on the first day of the recovery by septic complications of the peritonitis.

3. DISCUSSION

Jejunostomy is a surgically inserted tube in the lumen of the proximal jejunum in order to administer enteral nutrition. It is usually indicated in patients during a major surgery of the digestive tract in whom a complicated post operative recovery is expected, those with a prolonged fasting period or those who will subsequently need chemotherapy or radiotherapy [3]. Laparotomic techniques used for jejunostomy includes indirect (Witzel) direct (Fontan), needle catheter technique and definitive jejunostomy. However, laparoscopic and endoscopic techniques are also used [4]. The most common complications of a feeding jejunostomy include mechanical, infectious, gastrointestinal and metabolic complications [5].

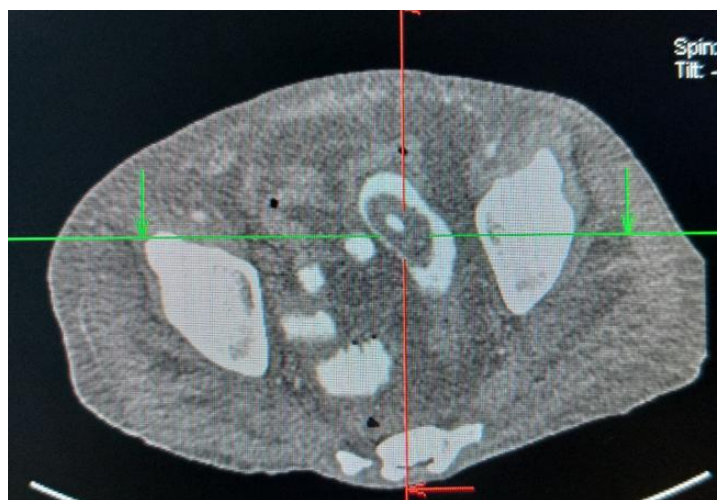


Fig. 1. Abdominal CT showing picture



Fig. 2. Operative view of intussusception on a jejunostomy tube

Intestine Intussusception is an exceptional surgical emergency in adults [6]. Most often, it is secondary to an organic etiology (90% of cases) and the primary origin is rarely implicated in adulthood [7]. In the literature, intestinal invagination on a jejunostomy tube is rarely reported with an incidence of 1% and represents only 5% of the etiologies of intestinal obstruction [8].

The exact mechanism of this rare complication is not clear. Many theories suggest that the lead point of the intussusception could be the tip of the tube or the inflammatory reaction induced by its presence that causes the hypertrophy of intestinal mucosa. Also retrograde peristalsis of the jejunum, during vomiting or forced feeding with pump infusion by the tube, has been proposed [9].

Intussusception is often misdiagnosed in adults. Indeed, its clinical presentation is polymorphic and non-specific. However, spontaneous abdominal pain or while using the feeding tube, vomiting, nausea, total cessation of the flatus and the stool and the presence of a palpable abdominal mass are the signs most often found [10]. For our patient, pain and vomiting were the main symptoms and the clinical examination found abdominal distension without a palpable mass suggesting first an occlusive syndrome.

Radiologically, abdominal computed tomography is the most sensitive examination to confirm the diagnosis. It confirms the intussusception by showing the 'target' sign, finds signs of occlusion, and evaluates the viability of the digestive loops.

Ultrasound can make the diagnosis in adults despite its limitations such as obesity and intestinal distension. In our case, abdominal CT with gastrografine opacification showed a small bowel obstruction upstream of a 'target' picture around the jejunostomy tube on axial cuts associated with a moderate abundance peritoneal effusion.

There is no established treatment strategy and it should be discussed for each case. However, surgical resection is considered the mainstay of management in adults [11]. simple reduction remains reserved for idiopathic forms or to avoid large resections. In our case, we chose the bowel resection with remaking of the foot of the loop, abundant washing and wide drainage.

Finally, the prevention of these complications is based on rules for the good functioning of enteral nutrition by jejunostomy and includes the following elements: enteral feeding should only be started after resumption of transit, the lateral holes of the probe should be multiplied to decrease the pressure, the flow should be initiated at a rate of 10-20 ml/h and finally the jejunum should be widely sutured [12].

5. CONCLUSION

Intussusception remains a very rare complication and therefore most often not firstly evoked in patients with a jejunostomy tube. However, the occurrence of clinical signs, even non-specific, must imperatively bring out this complication for an early diagnosis and consequently a better management.

CONSENT

As per international standard or university standard, patient's written consent has been collected and preserved by the author(s).

ETHICAL APPROVAL

As per international standard or university standard written ethical approval has been collected and preserved by the author(s).

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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