

CANDY CANE SYNDROME WITH OR WITHOUT CONCOMITANT HIATAL HERNIA AFTER ROUX-EN-Y GASTRIC BYPASS: A HIDDEN ENEMY PROMOVING POSTOPERATIVE SYMPTOMS

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INTRODUCTION

Candy Cane Syndrome (CCS) is a rare complication of Laparoscopic Roux-en-Y Gastric Bypass (LRYGB). It occurs due to redundancy in the blind loop at the gastro-jejunal anastomosis. The study aims to describe CCS with or without concomitant hiatal hernia (HH).

METHODS

A case series study was conducted in a center between 2010 and 2022 and included patients with esophagogastric symptoms after LRYGB, specifically related to the long blind jejunal end loop. Clinical questionnaires, radiological evaluations (Figures 1 and 2), esophagogastroduodenoscopy (Figure 3), manometric studies, and 24-hour pH monitoring were used to diagnose it.



Figure 1. Abdominal transit with oral contrast. The contrast is in the redundant blind jejunal loop and the pouch gastric with hiatal hernia.

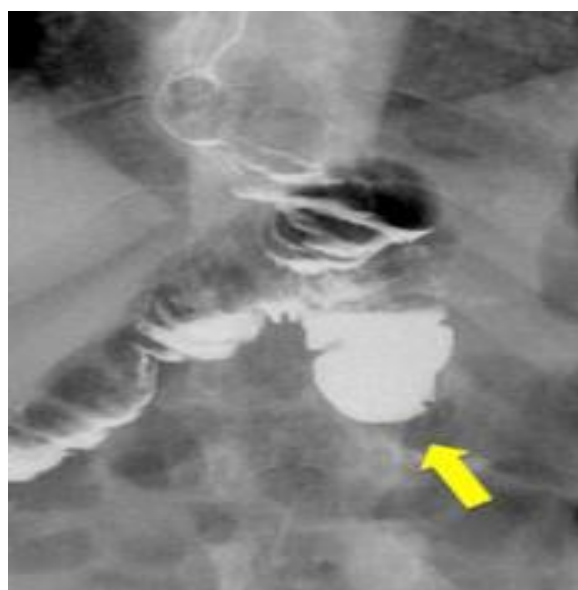


Figure 2. Abdominal transit with oral contrast. The yellow arrow shows the redundant blind jejunal loop partially contrasted.



Figure 3. Esophagogastroduodenoscopy. A. The yellow arrow shows a large redundant blind jejunal loop. B. Alimentary loop. C. U-turn vision.

RESULTS

Twenty-one patients were included, primarily female, with a mean of 49±11 years. Nineteen patients underwent primary LRYGB, and two were converted to this technique after gastric sleeve surgery. The mean time from LRYGB to symptom onset was 7.4 years. Pain, reflux symptoms (regurgitation and heartburn), and vomiting were the most frequent, with no differences between patients with or without HH (p<0.05). Gastrointestinal endoscopy revealed HH (47.6%), Barrett's esophagus (14.3%), esophagitis (33.3%), and anastomotic ulcer (4.8%). Radiological studies showed a large blind jejunal loop (≥5cm) in 71.43% and a sizeable gastric pouch (>5cm) in 57.14%. Patients with the largest blind jejunal loops experienced persistent vomiting, and one had blind jejunal loop torsion, causing dysphagia. No significant relationship was found between gastric pouch size and symptoms. Medical treatment failed in all patients to control symptoms, leading to revisional surgery, which involved resection of the elongated blind jejunal loop (Figure 4), removal of the redundant gastric pouch, and hiatal hernia repair, resulting in symptom resolution in most patients.

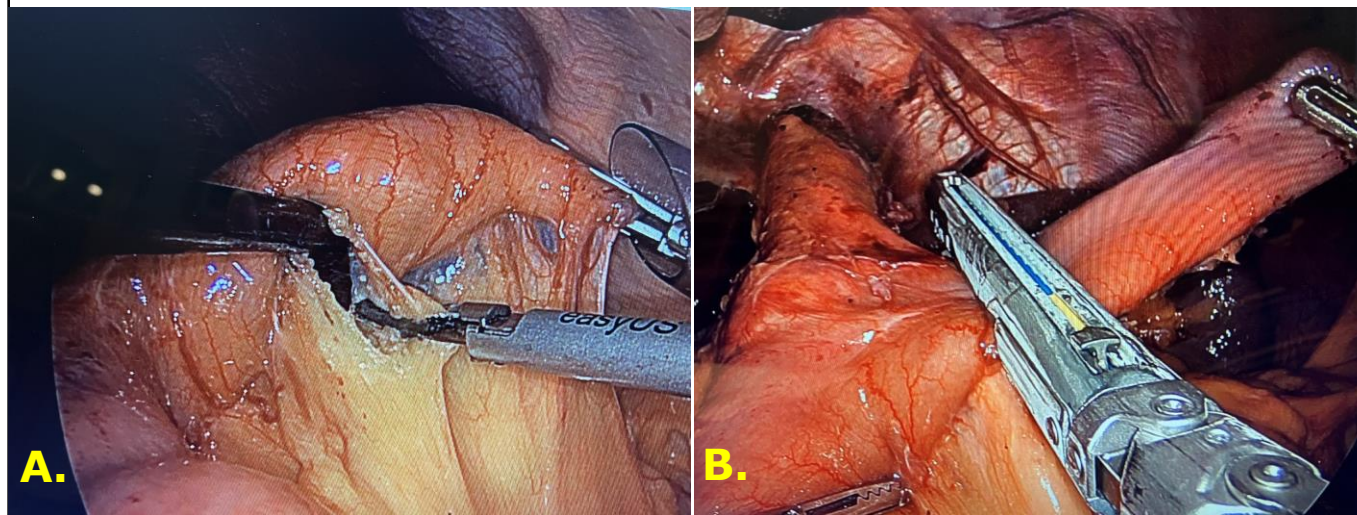


Figure 4. Esophagogastroduodenoscopy. A. The yellow arrow shows a large redundant blind jejunal loop. B. Alimentary loop. C. U-turn vision.

CONCLUSION

CCS can lead to gastrointestinal symptoms following LRYGB. In combination with HH, it presents similar clinical features. Radiological and endoscopic examinations are crucial for diagnosing and selecting surgical interventions