

VIDEO

Laparoscopic revision of Billroth II with Braun anastomosis into Roux-en-Y anatomy in a patient with intestinal malrotation

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Abstract

Introduction Various reconstructions of the gastro-intestinal tract have been described in the past after distal gastrectomy. Among these, a Billroth II (BII) anastomosis can be performed with the addition of the Omega entero-enterostomy that may theoretically reduce the alkaline reflux. Given the significant complications associated with this procedure such as biliary reflux, marginal ulceration, and afferent loop syndrome, a revision into a Roux-en-Y anatomy is generally recommended.

Methods and procedures A 73-year-old healthy male was referred to our foregut surgery service for treatment of severe biliary gastritis. The patient previously underwent an open distal gastrectomy with a BII reconstruction followed by a Braun-type entero-enterostomy 6 months later. His main complaint was worsening daily biliary reflux with constant regurgitations, which were non-responsive to medical treatment. The preoperative endoscopy confirmed the diagnosis of severe biliary gastritis secondary to alkaline reflux. The distance between the gastro-jejunosomy and the Braun anastomosis was also measured with a pediatric colonoscope and the length of the efferent limb was estimated to be 80 cm.

Results Identification of the afferent and efferent limb was complicated by the patient's incomplete intestinal malrotation with the angle of Treitz being present in the right hypochondrium. Intra-operative gastroscopy enabled visualization of the jejuno-jejunosomy and ensured correct interpretation of the anatomy. Subsequently, resection of the afferent limb completed the revision into a Roux-en-Y anatomy. The patient recovered well after the surgery and was discharged home on post-operative day 2. At 6 months follow-up, the patient's reflux symptoms have completely disappeared.

Conclusion BII reconstruction with or without Braun entero-enterostomy is a classic historical option following distal gastrectomy. Surgical revision of a BII into a Roux-en-Y anatomy is a good solution for severe biliary reflux and other long-term complications. Intra-operative endoscopy is a great adjunct to laparoscopic exploration in case of complex surgical procedures.

Keywords Billroth II · Roux-en y reconstruction · GERD · Biliary gastritis

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Compliance with ethical standards

Disclosures Drs. Fabio Garofalo, Omar Abouzahr, Henri Atlas, Ronald Denis, Pierre Garneau, Hai Huynh, and Radu Pescarus have no conflicts of interest or financial ties to disclose.

Informed consent For this type of study formal consent is not required.

Human and animal rights All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

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