**Name of Journal:** *World Journal of Gastroenterology*

**Manuscript NO:** 75493

**Manuscript Type:** LETTER TO THE EDITOR

**Reconstructing the puzzle of the role of therapeutic endoscopy in the management of post-bariatric surgery complications**

Argyriou K *et al*. Optimizing endoscopic management of post-BC

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**Received:** February 3, 2022

**Revised:** May 2, 2022

**Accepted:** **June 3, 2022**

**Published online:**

**Abstract**

We have recently read with interest the mini-review article "Therapeutic endoscopy for the treatment of post-bariatric surgery complications". The abovementioned article is a brief overview of the different endoscopic modalities employed in the management of bariatric surgery complications and represents an important decision support tool for clinicians to improve their current practice. Although we appreciate the endeavor of Larsen and Kozarek, based on our in-depth analysis, we came across several minor issues in this article; thus, we present our comments in this letter. In case the authors contemplate these comments in their relevant research, we believe that their contribution would be considerable for future studies.

**Key Words:** Endoscopic treatment; Bariatric surgery; Complications; Obesity; Sleeve gastrectomy; Roux-en-Y gastric bypass

Argyriou K, Parra-Blanco A. Reconstructing the puzzle of the role of therapeutic endoscopy in the management of post-bariatric surgery complications. *World J Gastroenterol* 2022; In press

**Core Tip:** Over the last decade, the incidence of bariatric surgery has substantially increased. Despite advances in surgical techniques, postoperative complications emerge and require a multidisciplinary approach. Currently, there is no standardized guideline-based algorithm for managing bariatric complications (BC); however, minimally invasive treatments are generally preferred over reoperations. Endoscopic procedures provide minimally invasive options to manage BC. However, their exact role has not been completely delineated. The article by Larsen and Kozarek successfully addressed this issue; however, we identified several limitations that require further consideration. Therefore, we would like to share our views on this interesting review.

**TO THE EDITOR**

We read with great interest the mini-review article “Therapeutic endoscopy for the treatment of post-bariatric surgery complications”[1]. In this article, Larsen and Kozarek[1] provided a concise overview of the role of endoscopy in the management of adverse events complicating the three most common types of the currently performed bariatric surgeries including Roux-en-Y gastric bypass, laparoscopic adjustable gastric band, and sleeve gastrectomy. From the extensive list of bariatric complications (BC), the authors confined their analysis only to those that are amenable to endoscopic treatment such as postoperative anastomotic strictures, leaks, fistulae, choledocholithiasis, weight regain, and band erosion. The salient highlights of this review were that the authors, by summarizing the relevant literature and incorporating their own clinical experience, were able to not only delineate the role of therapeutic endoscopy in the BC management but to also provide clinicians with practical tips that are expected to improve their daily practice. However, the most striking point of this article was that the authors holistically approached every referred complication from epidemiology to endoscopic treatment, highlighting areas that need to be further investigated. Therefore, we believe that this article has strong reference and practical value for future studies. Nonetheless, through our in-depth reading, we came across several limitations and anticipate a discussion with the authors.

First, by carefully analyzing the author’s list of BC, we noticed that the endoscopic management of post-operative gastrointestinal bleeding (GIB) was not discussed in this review. The reason behind this exclusion was not mentioned by the authors. However, we regard this omission as a limitation of this article because the endoscopic management of GIB is challenging in bariatric patients. This occurs because the altered postoperative anatomy and the time interval of the bleeding episode from the operation impose restrictions not only on the type of the endoscopic equipment that would be used to approach the site of bleeding but also on the modality that would be used to achieve hemostasis. For example, standard endoscopes may not be able to reach sites of bleeding at the biliopancreatic limb or beyond the gastro-jejunal anastomosis in patients who underwent gastric bypass, whereas thermal ablation methods may cause unfavorable outcomes such as perforation in patients with freshly stapled anastomosis[2,3]. Considering these challenges, we believe that the endoscopic management of GIB has particular importance for the clinicians involved in the management of bariatric patients, and we suggest it to be supplemented in this mini-review.

Another limitation of this article is that the authors did not make clear to the reader the way they selected the studies included in this review. Although they successfully summarized the major findings of several reference studies, by performing our own literature search, we identified several omissions. For example, in the management of bariatric leakage and fistulae, the authors did not discuss the results of the most recent meta-analysis written by Rogalski *et al*[4] on the effectiveness of self-expandable stents, clipping, and tissue sealants. As a result, the authors did not make any reference to the use of fibrin glue as an alternative modality for fistulae closure in their review[4]. Likewise, by not including in their summary of evidence two reference studies on the effectiveness and safety of bougie dilations in the management of anastomotic stenosis, the authors did not discuss all available modalities that could be used as alternative options to balloon dilations[5,6]. We believe that the abovementioned information is important for the reader to acquire a complete overview of the pleiotropic role that endoscopy can play in the management of BC and, thus, needs to be supplemented.

The final limitation of this article refers to the different endoscopic techniques that can be used by clinicians to achieve biliopancreatic access in bariatric patients who underwent gastric bypass. Based on the included studies and their own experience, the authors referred to three techniques for performing endoscopic retrograde cholangiopancreatography (ERCP) in bariatric patients, including the overtube-assisted enteroscopy technique, the lap-assisted transgastric, and the endoscopic ultrasound-directed transgastric technique, with the first technique being their first-line option for most indications. However, considering that not all centers managing bariatric patients can perform these techniques, we performed our own literature search and came across an additional option. Specifically, we found that in bariatric patients who underwent gastric bypass, the biliopancreatic access to the excluded gastrointestinal part can be also achieved through the gastrocutaneous tract created after the removal of a gastrostomy tube without the need for reoperation or special equipment. This technique is known as gastrostomy-assisted ERCP, and it is performed in 3 steps. The first step includes the endoscopic insertion of the gastrostomy tube, which stays in situ for 5–14 d until the maturation of the tract. Then, the tube is removed, and the tract is dilated with a balloon to an extent that will allow the passage of the duodenoscope. After completion of the dilation of the tract, ERCP can be repeatedly performed[7]. Given the wide availability of gastrostomy tubes, we believe that the abovementioned technique has particular value for the clinicians involved in the management of bariatric patients and should be supplemented in this review.

In summary, despite the abovementioned limitations, we believe that this article can be a valuable reference study, guiding clinicians in their daily practice. Thus, we offer our evidence-based considerations in this review to expand the value of the research basis that this article sets, leading to more comprehensive future studies.

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**Footnotes**

**Conflict-of-interest statement:** All theauthors report no relevant conflicts of interest for this article.

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**Provenance and peer review:** Invited article; Externally peer reviewed.

**Peer-review model:** Single blind

**Corresponding Author's Membership in Professional Societies:** Hellenic Society of Gastroenterology; British Society of Gastroenterology.

**Peer-review started:** February 3, 2022

**First decision:** April 10, 2022

**Article in press:**

**Specialty type:** Gastroenterology and hepatology

**Country/Territory of origin:** Greece

**Peer-review report’s scientific quality classification**

Grade A (Excellent): 0

Grade B (Very good): B

Grade C (Good): C

Grade D (Fair): 0

Grade E (Poor): 0

**P-Reviewer:** Fusaroli P, Italy; Głuszyńska P, Poland **A-Editor:** Ribeiro IB, Brazil **S-Editor:** Fan JR **L-Editor:** A **P-Editor:** Fan JR