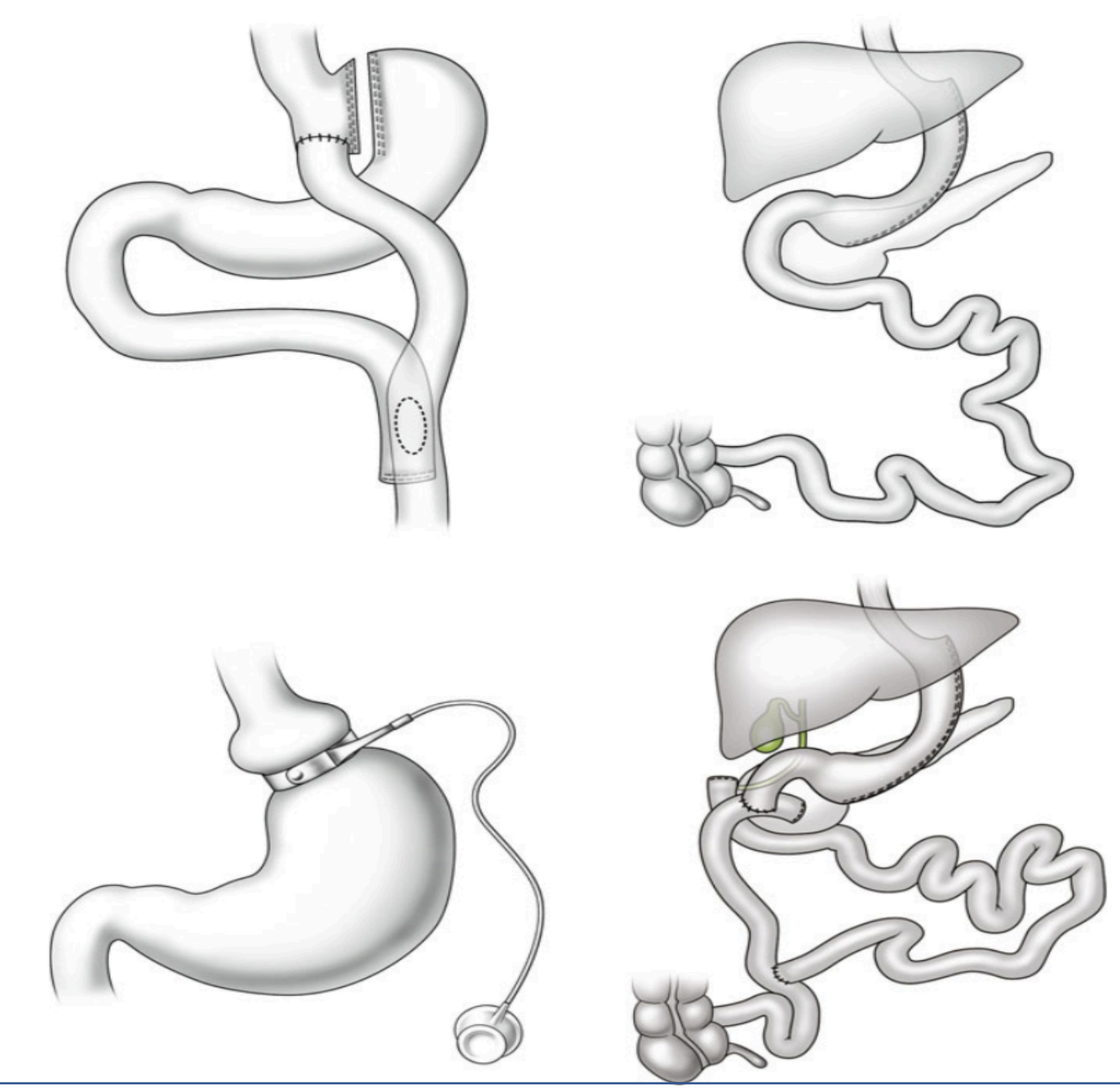


Utility of Routine Intraoperative Endoscopy in Bariatric Surgery: A Systematic Review and Meta-Analysis

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INTRODUCTION:

Various intraoperative techniques have been adopted to identify and manage intraoperative complications. The utility of routine intraoperative endoscopy (IOE) is unclear. We performed a systematic review to evaluate the role and effectiveness of intraoperative endoscopy in minimizing postoperative complications in bariatric surgeries.

KEYWORDS:

Keywords includes “bariatric surgery”, “intraoperative Endoscopy”, “leak”, “stenosis”.

METHODS:

We searched MEDLINE, EMBASE, CENTRAL, and Web of Science databases in April 2019 for studies that compared IOE versus non-IOE, and studies that described IOE for bariatric surgery. The search strategy included keywords such as “bariatric surgery”, “intraoperative Endoscopy”, “leak”, “stenosis”, and more. Primary outcome was the rate of intraoperative leak detection, postoperative leak and postoperative bleeding. Secondary outcomes were re-operative rate, operative time, and length of stay (LOS). Random effects meta-analysis was used when appropriate.

RESULTS:

11 studies (n=5,271) met the inclusion criteria (10 retrospective and 1 randomized trial). The overall mean age of the patients was 39.86 +/- 4.71 years. Females represented 84.1% of the cases. The mean preoperative body mass index was 47.2 +/- 2.4 kg/m². The overall intraoperative detection of leak was 3% (95% CI, 2%-4%, I²=81.6%). Postoperatively, leak was identified in 0.41% (N=22), while bleeding was identified in 0.2% (N=11) of the cases. Reoperation rate was 0.28% (N=15). The mean operative time was 147.85 +/- 44.81 minutes. The mean length of stay 2.42 +/- 0.57 days.

CONCLUSION:

The use of IOE may allow for detection of leak intraoperatively. However, its efficacy beyond a simple leak test or overall utility compared to no leak tests is difficult to ascertain due to the lack of comparator trials and low leak rates. Overall, there is insufficient evidence to recommend its use.