Early experience using an endoscopic suturing platform for bariatric interventions and treatment of surgical complications

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The OverStich[™] endoscopic suturing system allows therapeutic endoscopists to perform full-thickness sutures. This technology enables durable tissue apposition during primary and revisional bariatric interventions as well as defect closure and stent fixation. A retrospective review of our prospectively maintained database allowed us to identify all cases in which endoscopic suturing was performed in our center since December 2024. Overall, 5 endoscopic sleeve gastroplasties (ESG), 1 transoral outlet reduction (TORe) and 4 stent fixations were performed. 80% of the ESGs were performed in patients with hostile abdomens that were considered ineligible to conventional laparoscopic surgery. A total of 5-6 sutures was used per case. There were no intra-operative or post-operative complications. All bariatric cases were discharged either same-day or post-operative day 1 based on medical comorbidities. At 1month follow-up, average TWL is 11% for the ESG patients and 10% for the TORe case. Stent fixation was performed selectively in patients at high-risk for stent migration such as those with esophago-jejunal leaks post total gastrectomy or fistula-jejunostomy leaks post sleeve gastrectomy. Technical success was 100% for the stent fixation using 2 sutures per case. Clinical success was 75% with one patient experiencing stent migration after both endoscopic and even laparoscopic fixation. With appropriate training, endoscopic suturing is safe and may allow for a life-changing bariatric intervention in patients with hostile abdomens. Moreover, stent fixation in clinical scenarios with a high-risk of migration may improve patient outcomes.