Endoluminal Treatment of Diabetes: Update

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Obesity is an ongoing health-care problem worldwide and very difficult to be controlled by current medical treatment, including diet, drug therapy and behavioralmodification. Gastrointestinal surgery, such as bariatric surgery, is the most powerful ammunition for obesity treatment. There are also strong evidences that bariatric surgeries can improve and induce remission in most of the obesity-related T2DM. In Asia, the number of bariatric surgeries has increased more than 4 times in the past 5 years. However, despite the effectiveness of bariatric surgery with minimal morbidity at this minimally invasive surgery era, less than 1% of patient with morbid obesity will seek for surgery. There is a need of an even less invasive and effective treatment for this chronic disease.

In the past, endoscopic therapy of morbid obesity is limited in managing complications after bariatric surgery such as endoscopic dilatation ofstrictures and stenting of anastomosis leakage site. In recent years, parallel to the development of NOTES, endoscopic technology has significantly evolved to a new level and many complicated procedure can now be performed using various endoscopic/NOTES platform. In the past, complex problems like weight regain with dilatation of gastric pouch and GJ stoma after gastric bypass required revision surgery to trim down size of remant stomach and gastrojejunostomy stoma but now it can be managed with endoscopicstoma reduction.

Moreover, with more understanding of the pathophysiology change after bariatric surgery, new treatment options are evolving over the last decade. These procedures try to mimic the physiological change after surgery, but at the same time reduce the operative risk associated with bariatric surgery. Endoscopic procedure such as endoscopic gastroplasty and intragastric balloon can reduce gastric capacity, which induce weight lossl. Recent development of endoscopic intraluminal liner (EndoBarrier) mimic duodenal-jejunal bypass had shown promising results in weight reduction and alternation of post-prandial gut hormone (GLP-1, insulin) which improve glycemic control in T2DM patients. However, like many other non-surgical weight loss methods, the main problem of endoscopic therapy is the durability of its efficacy and we need more time to decide on its future application.