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Original article

Evaluation of gastroesophageal reflux before and after sleeve gastrectomy using symptom scoring, scintigraphy, and endoscopy

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Abstract

Background: The effect of laparoscopic sleeve gastrectomy (SG) on gastroesophageal reflux disease (GERD) has been a controversial issue. There have been limited studies on this aspect and most of the published studies are retrospective. Therefore, a prospective study was designed to objectively assess the problem. The objective of this study was to assess the impact of SG on symptoms of gastroesophageal reflux using questionnaire, endoscopy, and radionuclide scintigraphy.

Methods: Thirty-two patients undergoing laparoscopic sleeve gastrectomy were assessed for gastroesophageal reflux using Carlsson Dent Questionnaire and GERD questionnaire before and after surgery at three monthly intervals. They were also subjected to upper GI endoscopy (UGIE) and radionuclide scintigraphy both pre- and postoperatively.

Results: Mean preoperative weight and body mass index were 126.5 kg and 47.8 kg/m², respectively. Mean percent excess weight loss at 12 months was 64.3 ± 18.4. Both the Carlsson Dent Score (CDS) and Severity Score (SS) exhibited a decline from 2.88 to 1.63 ($p < 0.05$) and 2.28 to 1.06 ($p < 0.05$), respectively after 12 months. Radionuclide scintigraphy revealed a significant rise of GERD from 6.25% to 78.1% in the postoperative period ($p < 0.001$). UGIE showed a rise in incidence of esophagitis from 18.8% to 25%; however, there was improvement in all patients except one in terms of reduction of severity of esophagitis.

Conclusion: Presence of GERD may not be considered as a contra-indication for sleeve gastrectomy. There is improvement of GERD as assessed by symptom questionnaires, as well as improvement in grade of esophagitis. The new onset GERD detected on scintigraphy may not be pathologic as there is a decrease in total acid production postsurgery; however, it still remains an important issue and needs long-term follow-up. (Surg Obes Relat Dis 2014;10:600–606.) © 2014 American Society for Metabolic and Bariatric Surgery. All rights reserved.

Keywords: Sleeve gastrectomy; Gastroesophageal reflux; Endoscopy; Scintigraphy

Morbidly obese patients have an increased prevalence of reflux symptoms and esophagitis [1]. The presence of gastroesophageal reflux disease (GERD) in such patients may affect the choice of weight loss procedure. Roux-en-Y

gastric bypass has been favored by some over sleeve gastrectomy (SG) in morbidly obese patients with GERD [1]. The effect of SG on GERD has been one of the points for criticism of the procedure; however, there is a paucity of prospective studies which have analyzed the problem of GERD after SG as a primary endpoint [2–7]. SG has carved its own niche as a sole weight loss procedure and has been rapidly adopted by surgeons worldwide [8–11]. Besides excellent weight loss, SG results in remarkable resolution/

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