

Achalasia after Sleeve Gastrectomy: A Surgical Challenge

Kerwin X. Cruz De La Rosa¹, Adel González Montalvo² and Albert Suárez Domínguez³

¹General Surgery Resident, University of Puerto Rico, Medical Sciences Campus, Puerto Rico

²Assistant Professor of Surgery, Laparoscopic and General Surgery, University of Puerto Rico, Medical Sciences Campus, Puerto Rico

³Professor of Surgery, University of Puerto Rico, Medical Sciences Campus, Puerto Rico

Abstract

The prevalence of achalasia in the morbid obesity population is low. However, there have been cases of patients diagnosed with both conditions, including some diagnosed with achalasia after undergoing bariatric surgery. Even though the surgical management of both conditions has been well studied separately, there is no consensus of the treatment when these conditions coexist. We describe the case of a patient with history of a Laparoscopic Sleeve Gastrectomy who was later on diagnosed with achalasia and successfully treated with Laparoscopic Heller Myotomy.

Keywords: Morbid obesity, Bariatric surgery, Sleeve gastrectomy

Introduction

Achalasia is an esophageal motility disorder characterized by absence of esophageal peristalsis and failure of the lower esophageal sphincter (LES) to relax during swallowing [1]. Prevalence of achalasia in the general population is around 10 cases per 100,000 individuals [2]. Even when studies report a higher prevalence of esophageal motility disorders in obese patients compared to cohorts with normal body mass index, achalasia and morbid obesity are two conditions that do not classically occur together [3,4]. For this reason, there are no established surgical guidelines as to the treatment for patients who present with achalasia and morbid obesity. It is well known that Laparoscopic Heller Myotomy (LHM) and partial fundoplication is the standard surgical approach for achalasia in non-obese population [5]. There is also evidence that bariatric surgery is the most effective treatment for morbid obesity; being sleeve gastrectomy and Roux-en-Y gastric bypass (RYGB) the most frequently performed bariatric operations [6]. However, there is little information regarding how to treat achalasia after bariatric surgery. Cases of achalasia treatment after RYGB have been described in literature, but there is scarce information about treating achalasia after sleeve gastrectomy.

Case Report

We present the case of a 41-year-old female patient who presented to the emergency department with chief complaint of persistent dysphagia to solids and liquids. The patient had a history of morbid obesity and had undergone Laparoscopic Sleeve Gastrectomy (LSG) in 2018, at an outside institution. She reported having dysphagia to solids and liquids since her early twenties, but had not been evaluated previously for this complaint. Our patient also reported episodes of post-prandial nausea and vomiting with associated epigastric discomfort. She also had a surgical history of abdominoplasty and bilateral breast implants performed a few months after LSG. There were no significant findings on physical exam.

Preoperatively, contrast esophagogram demonstrated a standing column of oral contrast at the distal esophagus secondary to either a tight stenosis or beaking (Figure 1). An upper endoscopy was performed and revealed a dilated esophagus. The scope was advanced into the stomach without stricture or mucosal lesions identified. On manometry, elevated resting LES pressures were reported with absent relaxation during swallowing. It also revealed esophageal body aperistalsis with esophageal pressurization, consistent with Type 2 achalasia.

After the above findings, the patient was scheduled for Laparoscopic Heller myotomy at our institution. Upon entering the abdominal cavity via laparoscopy, paraesophageal membranes and adhesions

from previous surgery were dissected. Gastroesophageal (GE) fat pad removed for better GE junction visualization, and distal mediastinal esophagus mobilized into the abdomen.

Heller myotomy was performed anteriorly, 5cm cephalad and 3cm caudal to GE junction, making sure that complete division of circular muscle fibers was done. Intraoperative endoscopy was performed to confirm adequate muscle division and no air leak. Upper GI series performed on postoperative day one showed slow esophageal emptying through smooth tapered narrowed distal esophagus and no evidence of leakage. There were no postoperative complications and the patient was discharged on postoperative day two, tolerating liquid diet. Patient has been followed for six months after surgery and no postoperative complications have been reported. During follow up, Eckardt Symptom Score (ESS) has been used for post-surgical outcome evaluation. At six months after surgery, patient has maintained stable weight, reports



Figure 1: Pre-op UGIS demonstrating tight stricture/stenosis at the gastroesophageal junction with minimal passage of contrast to gastric remnant.

***Corresponding author:** Kerwin X. Cruz De La Rosa, General Surgery Resident, University of Puerto Rico, Medical Sciences Campus, Puerto Rico, Tel: 787-618-4568; E-mail: kerwin.cruz@upr.edu

Received November 05, 2020; **Accepted** November 20, 2020; **Published** November 27, 2020

Citation: Rosa KXCL, Montalvo AG, Domínguez AS (2020) Achalasia after Sleeve Gastrectomy: A Surgical Challenge. J Obes Weight Loss Ther 10: 415.

Copyright: © 2020 Rosa KXCL, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

only occasional chestpain and dysphagia, and denies any regurgitation episodes, corresponding to ESS of 2/12.

Discussion

There have been few cases of achalasia after bariatric surgery described in the literature, where most cases have been after RYGB. Masrur et al. described the first Robotic Heller myotomy for achalasia after Laparoscopic RYGB with successful results [7]. Similarly, Boules et al. reported eight patients who underwent Heller Myotomy (HM) to treat achalasia diagnosed after RYGB. Six of the eight patients who underwent HM achieved resolution of achalasia symptoms at a mean time of 1.6 months and remained asymptomatic for the total follow-up of 36 months [8]. Casas et al. reached similar conclusions, indicating that LHM is an effective and safe therapy in patients with RYGB anatomy and achalasia [9].

While most of the cases in literature report patients treated for achalasia after bariatric surgery, Ramos et al. suggested that morbidly obese patients with achalasia, should be treated for both diseases during a single surgery [10]. Fisichella and colleagues suggested a concomitant LHM and laparoscopic RYGB as an approach that can provide excellent relief of symptoms and adequate control of reflux while promoting weight loss in obese patients with achalasia [11]. In contrast, Crafts et al. concluded that patients who undergo surgical intervention for achalasia before having bariatric surgery tend to have better outcomes compared to those where achalasia is treated after bariatric surgery [12].

There have been only two cases reported in the literature of patients treated surgically for achalasia diagnosed after undergoing LSG, which were addressed in the systematic review of Crafts et al. One of the patients was treated with LHM and conversion to RYGB, with initial improvement of dysphagia that later recurred, and gradual weight loss of 17.5 kg in 6 months [12,13]. The second case involved a patient treated with LHM alone, but never achieved clinical remission postoperatively and was later diagnosed with gastric stenosis requiring endoscopic dilation [12]. In the latter, it is difficult to evaluate the outcome of LHM, given the presence of an additional pathology (gastric stenosis), which could have been responsible for the patient's initial clinical presentation and symptoms.

Our patient's follow up included evaluation of symptoms six months after surgery using Eckardt Symptoms Score (ESS). ESS is widely used in both clinical and research settings as a gold standard for measuring achalasia symptom severity [14]. It consists of a self-report scale evaluating weight loss, dysphagia, chest pain and regurgitation, in which patient grades each item from 0 to 3 according to frequency. A patient is considered to be in clinical remission if he/she is assigned to be a stage 0-I or having less than three points out of twelve [15].

To our knowledge, this would be the first case described in the literature of a patient who achieved clinical remission after undergoing LHM to treat achalasia diagnosed after LSG.

However, our patient's history of dysphagia prior to bariatric surgery raises the suspicion of nondiagnosed achalasia prior LSG. This case highlights the importance of esophageal testing before bariatric procedures in patients with esophageal dysmotility symptoms.

Also, despite our patient having remained on clinical remission after 6 months of intervention, further comparative studies need to be performed before establishing clear guidelines to manage patients diagnosed with achalasia after bariatric surgery.

Conclusion

We present a case of a patient diagnosed with achalasia after LSG, who was successfully treated with LHM. Despite there being no consensus regarding the gold standard to treat achalasia after bariatric surgery, LHM seems to be a reasonable surgical option to treat achalasia after LSG. In selected patients, LHM can lead to resolution of dysphagia without adding other well known complications associated with RYGB.

References

1. Koshy SS, Nostrant TT (1997) Pathophysiology and endoscopic/balloon treatment of esophageal motility disorders. *Surgical Clinics of North America* 77: 971-992.
2. Sadowski D, Ackah F, Jiang B, Svenson L (2010) Achalasia: Incidence, prevalence and survival. A population-based study. *Neurogastroenterology and Motility* 22: 256-261.
3. Jaffin BW, Knoeflmacher P, Greenstein R (1999) High prevalence of asymptomatic esophageal motility disorders among morbidly obese patients. *Obes Surg* 9: 390-395.
4. Oviedo RJ, Sofiak CW, Dixon BM (2016) Achalasia: A case report on its effect during surgical decision making for laparoscopic sleeve gastrectomy in the young morbidly obese patient. *Int J Surg Case Rep* 26: 4-6.
5. Casas M, Schlottmann F, Herbella F, Buxhoeveden R, Patti M (2019) Esophageal achalasia after Roux-en-Y gastric bypass for morbid obesity. *Updates Surg* 71: 631-635.
6. Kissler H, Settmacher U (2013) Bariatric surgery to treat obesity. *Seminars in nephrology* 33: 75-89.
7. Masrur M, Gonzalez L, Giulianotti P (2016) Robotic hellermyotomy for achalasia after laparoscopic Roux-en-Y gastric bypass. A case report & review of literature. *Surgery for Obesity and Related Diseases* 12: 1755-1757.
8. Boules M, Corcelles R, Zelisko A, Batayyah E, Froylich D, et al. (2016) Achalasia after bariatric surgery. *Journal of Laparoendoscopic & Advanced Surgical Techniques* 26: 428-432.
9. Casas M, Schlottmann F, Herbella F, Buxhoeveden R, Patti M (2019) Esophageal achalasia after Roux-en-Y gastric bypass for morbid obesity. *Updates in Surgery* 71: 631-635.
10. Ramos A, Murakami A, Lanzarini E, Neto M, Galvão M (2008) Achalasia and laparoscopic gastric bypass. *Surgery for Obesity and Related Diseases* 5: 132-134.
11. Fisichella P, Orthopoulos G, Holmstrom A, Patti M (2015) The surgical management of achalasia in the morbid obese patient. *Journal of Gastrointestinal Surgery* 19: 1139-1143.
12. Crafts T, Lyo V, Rajdev P, Wood S (2020) Treatment of achalasia in the bariatric surgery population: a systematic review and single-institution experience. *Surgical Endoscopy*.
13. Oh HB, Tang SW, Shabbir A (2014) Laparoscopic Heller's cardiomyotomy & Roux-En-Y gastric bypass for missed achalasia diagnosed after laparoscopic sleeve gastrectomy. *Surgery for Obesity and Related Diseases* 10: 1002-1004.
14. Taft TH, Carlson DA, Triggs J, Craft J, Starkey K, et al. (2018) Evaluating the reliability and construct validity of the Eckardt symptom score as a measure of achalasia severity. *Neurogastroenterology and Motility* 30: e13287.
15. Eckardt VF, Aigherr C, Bernhard G (1992) Predictors of outcome in patients with achalasia treated by pneumatic dilation. *Gastroenterology* 103: 1732-1738.