Surgical treatment of morbidly obese patient with Achalasia

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Received 2011.11.27 Accepted 2011.12.

Abstract

Combination of morbid obesity and achalasia (AC) is extremely rare. Patients with AC usually are complaining of regurgitation, dysphagia to solids and liquids and weight loss. This is a disorder manifested by lacking of motility of the esophagus and failure of relaxation of the lower esophageal sphincter (LES). This is a presentation of a morbidly obese 32 year old patient diagnosed with AC at age nineteen. She was not experiencing significant symptoms before planned DS because of recent Botox injection and dilatation. A few months after an uneventful surgery patient developed dysphagia, nausea and vomiting after any oral intake and underwent open transthoracic Heller esophagus-myotomy (EM) surgery.

Keywords: Morbid obesity; achalasia; transthoracic Heller; esophagus-myotomy; Duodenal switch

Introduction

Achalasia (AC) is a rare esophageal motility disorder combined with a lack of relaxation of the lower esophageal sphincter (LES). Medical treatment of AC with calcium channel blockers is unsuccessful and endoscopic procedures like dilatation or Botox injections are usually short lasting and have to be repeated. The only successful treatment for achalasia is esophago myotomy (EM) combined with concomitant anti-reflux procedure. This procedure can be done by laparoscopy or open through abdomen or by thoracic approach. Morbid obesity in patients with AC is very unusual. There are only a few articles written about concomitant surgical treatment of obesity and achalasia. Laparoscopic EM combined with roux-
en-y gastric bypass (RNY-GBP) [1, 2] and two cases of open DS combined EM [3]. In Duodenal Switch (DS) cases patients did not have typical symptoms of AC before surgery like for example dysphasia but had been diagnosed by routine pre-operative upper GI study and three of them had manometric confirmation. In this case presentation patient with typical symptoms of AC for many years treated by dilatations and Botox injection underwent open DS. Few months later when she developed severe dysphasia underwent open transthoracic Heller EM.

Case Presentation

A 32 year-old morbidly obese female BMI-41.32, had been seen and qualified for an open DS (ODS) procedure. Pre-operative diagnosis additionally to AC were hyperlipidemia, arthritis, lower back pain syndrome and gastro-esophageal reflux. Because of severe dysphagia patient underwent multiple dilatations in the past and recent Botox injections weeks proceeding scheduled operation. Before surgery she was almost symptoms free. In March 2005 she underwent an uneventful ODS with appendectomy and cholecystectomy. Patient was released from the hospital on the third day following surgery. Two months after primary surgery in June 2005, patient developed severe dysphagia to solids and liquids. In July of 2005 she underwent open transthoracic Heller EM. This approach has been chosen by the patient and a very experienced thoracic surgeon from the University of Michigan. Transthoracic approach has been chosen to avoid more difficult abdominal access to avoid multiple heavy adhesions and potential injury to nearby organs. Since that time the patient was doing very well. Her BMI-21 normalized between fifteen and eighteen months following surgery. She experienced no problems with dysphasia or regurgitation. Hyperlipidemia, arthritis and lower back pain had been cured. This patient had been followed for two and a half years. During this time BMI-21.25 and 105.88 of %excess weight loss (% EWL). Careful monitoring of patient’s nutritional status, vitamin levels and bone density was conducted during this time.

Table # 1 is presents the progress of weight loss, BMI and % EWL.

| Table 1 |
|-----------------|---------|---------|---------|---------|
| Time            | 0       | 3 months| 6 months| 12 ms   |
| Weight          | 122 kg  | 93 kg   | 75.8 kg | 64.8 kg |
| BMI             | 41.32   | 31.37   | 25.55   | 21.73   |
| % EWL           | 52.41   | 83.06   | 102.74  | 105.88  |

Discussion

Treatment of the morbidly obese patient with AC theoretically should concentrate on adding malabsorptive component to already existing restrictive component of AC. Theoretically in this situation malabsorptive part of DS should provide good results. What was very interesting according to the patient’s statement after DS (but before Heller EM) she was not seeing any significant difference in amount of food she was eating before and after surgery despite the Gastric Sleeve. Patients with AC discontinue eating not secondary to stomach dilatation but esophageal distention and regurgitation. In my opinion, the Gastric Sleeve (restrictive component) of DS should still be done because eventually these patients will require a Heller EM and then the restrictive component will matter. Another question is raised about the best bariatric procedure for this type of patient. RNY-GBP is a restrictive procedure by itself;
whether adding another restriction below existing one should make a big difference is questionable knowing that this patient very often lives on liquid high calorie diet.

Two articles about simultaneous laparoscopic Heller EM and RNY-GBP have been published. Kaufman [2,3] in August 2005 a 25 year-old woman, BMI-58 lost 45 kg. to BMI-42 and still remained morbidly obese. Follow up for this patient lasted only 12 months and no further information about this patient weight lost progress had been published. O’Rourke [4] was regarding a 60 year-old woman BMI-52 with follow up for only six months. This patient lost 45 kg in one year were available before RYN-GBP and EM and another 23 kg after a surgery. No further information about patient weight loss and final BMI and AC were available.

It has been proven that after Adjustable band placement there was a significant increase of LES resting pressure and at this same time relaxation of LES decreased very often to pathologic range. Additionally barium study showed significant dilation of the esophagus in 27% - 60% of the patient/ years after band placement. Significant dilatation represents severe motility disorder which additionally would aggravate existing problems with patient’s AC. Another very important aspect of RNY-GBP is issue of gastrojejunal stenosis and marginal ulcerations which very often leads to stenosis. Stomal stenosis is the most common complication after RNY-GBP ranging from 3.1 – 14.4% and this unfortunate situation may significantly increase symptoms of dysphagia. Gastric Sleeve operation performed during DS does not disturb physiology of the stomach, the LES is intact, and vagal nerves are not transected, pylorus and atrium are preserved and emptying of the sleeve is much faster than normal size stomach. Because of the above mentioned reasons and significant malabsorptive component of DS I would consider DS to be the most suitable operation for obese patients with AC.

Performing simultaneous EM with a bariatric surgery seems to be the most logical approach but in this case DS performed on asymptomatic patient followed by Heller EM added later when patient became symptomatic worked for this patient very well. Weight loss and alleviation of AC symptoms with this approach were very successful. Whether concomitant Heller EM would be more beneficial requires further investigation and longer follow up.

References

2. O’Rourke R. Simultaneous surgical management of achalasia and morbid. Obesity Surgery 2007; April

Disclosures: The author has no commercial associations that might be a conflict of interest in relation to this article.

Cover letter
This article was not previously published, presented or is not being submitted for publishing elsewhere. I claim no commercial associations that might be in a conflict of interest in relation to this article.