




Roux-en-Y Gastric Bypass and Heller Myotomy: One-Step Surgical Treatment of Symptomatic Achalasia in a Morbid Obese Patient

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Received: 25 January 2021 / Revised: 13 March 2021 / Accepted: 22 March 2021 / Published online: 29 April 2021
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Keywords Achalasia · Bariatric surgery · Roux-en-Y gastric bypass · Heller myotomy

Background

Achalasia is a rare disorder of esophageal motility characterized by the absence of peristalsis and incomplete lower esophageal sphincter (LES) relaxation during swallowing. It usually presents with progressive severe dysphagia and its most effective treatment is surgical disruption of the LES with a Heller myotomy (HM) [1]. Obesity is an independent risk factor for esophageal motility disorders, which may exist in >50% of morbidly obese patients [2]. However, obesity is not generally associated with achalasia and the prevalence of this disease in obese patient population varies from 0.5 to 1% [3]. Bariatric surgery currently represents the best treatment option for morbid obesity and its related diseases and laparoscopic Roux-en-Y gastric bypass (LRYGB) is the second most commonly performed procedure in the world [4]. At same time, HM has demonstrated its superiority over other treatments for achalasia [5]. However, resolution of achalasia symptoms with only laparoscopic HM, expose an obese patient to the risk for further weight gain. Even though the separated management of the two pathologies is well described, current literature lack of consistency about a simultaneous treatment [6, 7].

Methods

Here we present a rare case of a 46-year-old patient with a Body Mass Index (BMI) of 47 kg/m² and an intractable achalasia diagnosed by a high-resolution esophageal manometry (HRMi) and x-rays of upper digestive tract showing aperistalsis and dilation of the esophagus with failure of LES relaxation. Patient had already undergone two endoscopic pneumatic dilations over the 3 years prior to presentation with temporary efficacy.

Results

He underwent concomitant laparoscopic HM and LRYGB and 6 months follow-up demonstrated a reduction of BMI to 34,7 kg/m² and the remission of esophageal symptoms. (Figure 1) The patient was classified with an ASA (American Society of Anesthesiologists) score 3 and did not have any previous surgery. Operative time was of 115 minutes and no intraoperative complications were recorded. On post-operative day (POD) 3 the patients started a liquid diet; on POD 5 he was discharged. No early (<30 days) complication occurred.

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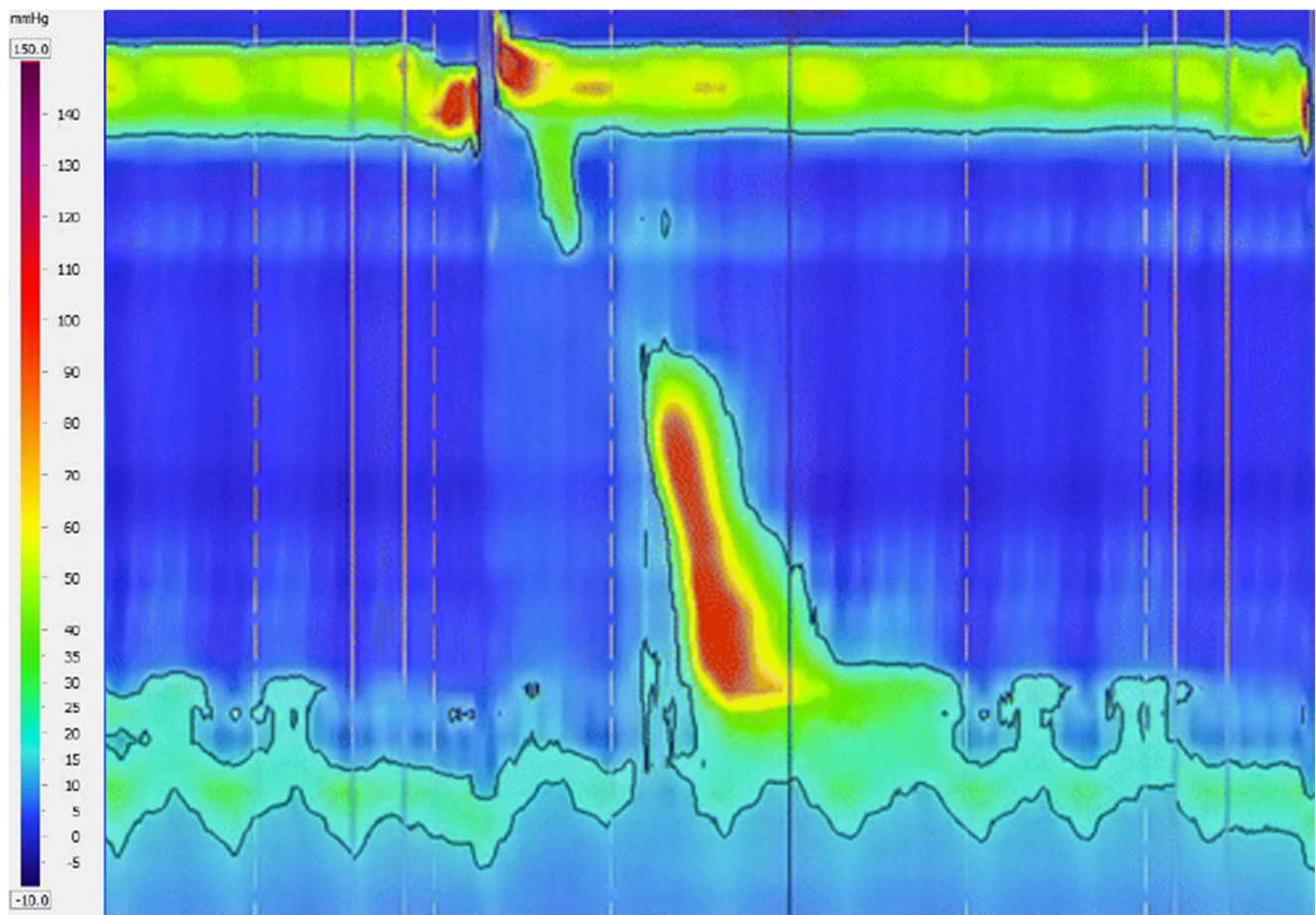


Fig. 1 Six months follow-up high-resolution esophageal manometry (HRMi)

Conclusion

With the increasing spread of obesity worldwide, the combination of these two diseases may become more frequent and our report suggests that simultaneous surgical management of achalasia and obesity with a minimally invasive approach (Heller myotomy and RYGBP) is feasible with successful results for both weight loss and esophageal dysmotility.

Supplementary Information The online version contains supplementary material available at <https://doi.org/10.1007/s11695-021-05376-z>.

Funding Open access funding provided by Università degli Studi di Napoli Federico II within the CRUI-CARE Agreement.

Declarations

Ethical approval All procedures performed in studies involving human participants were in accordance with the ethical standards of the

institutional research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed Consent Informed consent was obtained from all individual participants included in the study.

Conflict of Interest The authors declare no competing interests.

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References

1. Pandolfino JE, Kwiatek MA, Nealis T, et al. Achalasia: a new clinically relevant classification by high-resolution manometry. *Gastroenterology*. 2008;135(5):1526–33.
2. Koppman JS, Poggi L, Szomstein S, et al. Esophageal motility disorders in the morbidly obese population. *Surg Endosc*. 2007;21(5):761–4.
3. Almogy G, Anthonie GJ, Crookes PF. Achalasia in the context of morbid obesity: a rare but important association. *Obes Surg*. 2003;13(6):896–900.
4. Angrisani L, Santonicola A, Iovino P, et al. Bariatric Surgery and Endoluminal Procedures: IFSO Worldwide Survey 2014. *Obes Surg*. 2017;27(9):2279–89.
5. Oelschlager B, Chang L, Pellegrini CA. Improved outcome after extended gastric myotomy for achalasia. *Arch Surg*. 2003;138:490–5.
6. Kaufman JA, Pellegrini CA, Oelschlager BK. Laparoscopic Heller myotomy and Roux-en-Y gastric bypass: a novel operation for the obese patient with achalasia. *J Laparoendosc Adv Surg Tech A*. 2005;15(4):391–5.
7. Oh HB, Tang SW, Shabbir A. Laparoscopic Heller 's cardiomyotomy and Roux-En-Y gastric bypass for missed achalasia diagnosed after laparoscopic sleeve gastrectomy. *Surg Obes Relat Dis*. 2014;10(5):1002–4.

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