

Temporary dumping syndrome after gastric peroral endoscopic myotomy: should we control the glycemia?

Gastric peroral endoscopic myotomy (G-POEM) is a new endoscopic technique that involves cutting the pyloric sphincter, with minimal invasiveness compared with the surgical approach [1–3]. The technique can be used to treat post esophagectomy gastric outlet obstruction [4]. Here, we report the case of post esophagectomy outlet obstruction treated with G-POEM but complicated by multiple episodes of post-procedure hypoglycemia.

The patient had undergone esophagectomy in 2004 for the treatment of squamous cell carcinoma and liver transplantation in 2009. He was referred 4 months ago for dysphagia, vomiting, and gastric sensation of heaviness. To minimize his symptoms, he had progressively reduced his food intake and, consequently, had lost 10 kg in weight. Parenteral nutrition was introduced. The patient was diagnosed with post esophagectomy gastric outlet obstruction and G-POEM was planned.

The patient experienced hypoglycemia during parenteral nutrition 3 days before G-POEM. A normal diet was started, with dietary supplements, and parenteral nutrition was stopped 2 days before the procedure. After the nutritional status had improved, G-POEM was performed (▶ Fig. 1). An incision was made in the antrum and a 4 cm tunnel was created. A 2 cm cut in the circular muscle of the antrum was made, followed by cutting of the pylorus muscle

On the day after the procedure and during the subsequent 2 days, the patient experienced hypoglycemia three times, with glucose levels of 3.9, 4.1, and 2.1 mmol/L, respectively, and accompanied by symptoms of tachycardia, unease, and sweating; these episodes followed the intake of a sugary snack in the afternoon. Glycemic balance was apparent, with normal insulin and C-peptide levels. After discussion with an endocrinologist, a dumping syndrome was diagnosed [5]. No specific treatment was required, and the patient

was educated on the need to take complex carbohydrate snacks rather than sugary snacks.

After discharge, the patient was monitored and only two new hypoglycemia episodes occurred (Day 7 and Day 20). These early evaluations showed that G-POEM was effective for the initial resolution of symptoms, with no further dysphagia, gastric heaviness, or vomiting experienced.

G-POEM is a new effective option for the treatment of gastric obstruction, but glycemia should be monitored to ensure early detection of dumping syndrome in the days following the procedure. This syndrome can be controlled easily by educating the patient on ways to reduce glucose spikes.

Endoscopy_UCTN_Code_CPL_1AJ_2AI

Competing interests: None

Typhaine Louazon¹, Jérôme Rivory¹, Sabine Roman^{2,3}, François Mion², Thierry Ponchon^{1,3}, Mathieu Pioche^{1,3}

¹ Department of Endoscopy and Gastroenterology, Edouard Herriot Hospital, Lyon, France

² Digestive Physiology, Hospices Civils de Lyon and Lyon I University, Lyon, France

³ INSERM U1032, LabTau, Lyon, France



Fig. 1 Gastric peroral endoscopic myotomy procedure. **a** Endoscopic view of the pylorus before the myotomy. **b** Mucosal incision. **c** Submucosal tunneling. **d** View of the pylorus muscle in the tunnel. **e** Myotomy using a HookKnife. **f** View of the final myotomy.

References

- 1 Chung H, Dallemagne B, Perretta S et al. Endoscopic pyloromyotomy for postesophagectomy gastric outlet obstruction. *Endoscopy* 2014; 46 (Suppl. 01): E345–346
- 2 Gonzalez J-M, Vanbiervliet G, Vitton V et al. First European human gastric peroral endoscopic myotomy, for treatment of refractory gastroparesis. *Endoscopy* 2015; 47 (Suppl. 01): E135–136
- 3 Khashab MA, Stein E, Clarke JO et al. Gastric peroral endoscopic myotomy for refractory gastroparesis: first human endoscopic pyloromyotomy (with video). *Gastrointest Endosc* 2013; 78: 764–768
- 4 Chaves DM, de Moura EGH, Mestieri LHM et al. Endoscopic pyloromyotomy via a gastric submucosal tunnel dissection for the treatment of gastroparesis after surgical vagal lesion. *Gastrointest Endosc* 2014; 80: 164
- 5 Malik S, Mitchell JE, Steffen K et al. Recognition and management of hyperinsulinemic hypoglycemia after bariatric surgery. *Obes Res Clin Pract* 2015. DOI: 10.1016/j.orcp.2015.07.003

Bibliography

DOI <http://dx.doi.org/10.1055/s-0041-111027>
Endoscopy 2016; 48: E10–E11
© Georg Thieme Verlag KG
Stuttgart · New York
ISSN 0013-726X

Corresponding author

Mathieu Pioche, MD

Endoscopy unit – Digestive Disease Department
Pavillon L – Edouard Herriot Hospital
69437 Lyon CEDEX
France
Fax: +33-4-72110147
mathieu.pioche@chu-lyon.fr