

Ki-Yoon Kim MD, Franklin Tsai MD, Walter Coyle MD, Matthew Skinner MD
Department of Gastroenterology, Scripps Clinic, La Jolla, CA, USA

Introduction

Dumping syndrome is a known possible complication of Roux-en-Y gastric bypass (RYGB). Traditionally, treatment has been limited to behavioral modification, medications, and surgical reversal of RYGB or enteral nutrition. In recent years, transoral gastric outlet reduction (TORe) and lumen apposing metal stent (LAMS) placement to access the remnant stomach have emerged as a promising endoscopic alternative. In our case, we report a patient with severe dumping syndrome who had significant improvement after both TORe and LAMS placement.

Case Description

68 year old man underwent RYGB and presented with over 100 lbs weight loss, weakness, recurrent syncope, tachycardia, and persistent hypoglycemia.

Initial Sigstad's score was 27. He had tachycardia of 105, BMI of 16.6, and cachexia resulting in non-ambulatory status. Labs showed potassium 3.2, bicarbonate 36, glucose 41, total protein 4.8, albumin 2.0, and prealbumin 7. Modified glucose tolerance test was positive. Exogenous insulin use, adrenal insufficiency, and insulinoma were ruled out.

Despite behavioral modification, acarbose, and guar gum, he had persistent symptoms and became TPN dependent. He underwent TORe (**Figure 1**), which improved Sigstad's score from 27 to 10 with 10 lbs weight gain in 2 months. Incidentally, patient developed choledocholithiasis and required LAMS placement for transgastric ERCP. After successful ERCP, the LAMS was intentionally left in place to allow access of food to the remnant stomach. In 8 months, Sigstad's score improved additionally from 10 to 5 and the weight increased additionally by 11 lbs (**Figure 2**).

After both procedures, he was ambulatory, on normal diet, and able to stop TPN. BMI improved to 20.1. Labs became normal.

Images

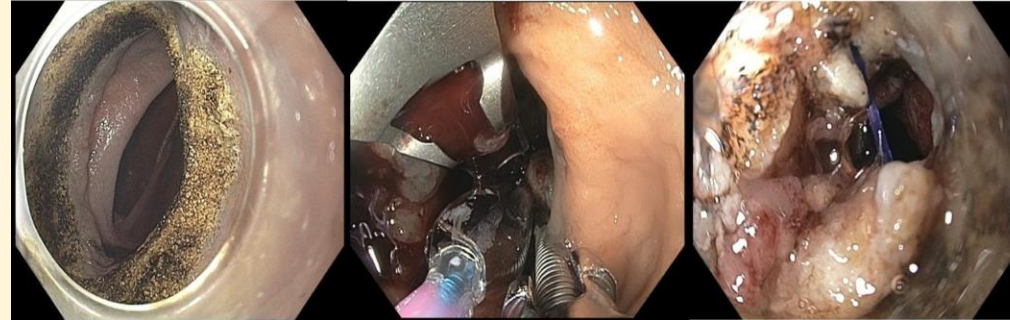


Figure 1. Endoscopic Images of Transoral Gastric Outlet Revision with APC of the gastrojejunal anastomosis followed by purse string full thickness suturing over a 10 mm CRE balloon.

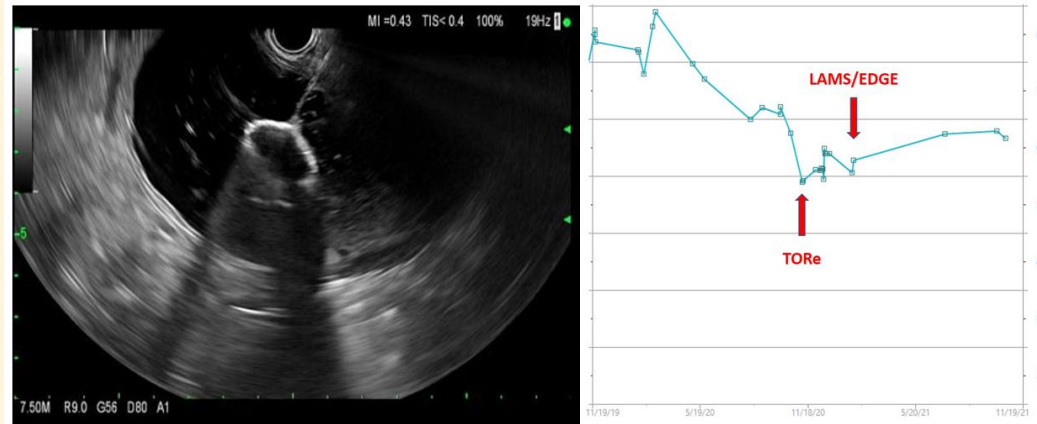


Figure 2. EUS image of demonstrating distal phalange deployment of LAMS into the remnant stomach for EUS guided transgastric ERCP (left). Weight chart demonstrating weight loss after RYGB and regain with TORe and LAMS placement (right).

Discussion

Dumping syndrome occurs as a result of rapid transit of hyperosmolar foods and carbohydrates in small intestine. This causes early and late dumping syndrome due to rapid fluid shift and hyperinsulinemic response, resulting in hypotension, tachycardia, and hypoglycemia. Sigstad's score above 7 suggests dumping syndrome. Modified glucose test confirms the diagnosis. Vargas *et al* reported 150 RYGB patients with severe dumping syndrome refractory to behavioral/medical treatment and underwent TORe. Sigstad's score improved from a mean of 17 to 2.6 (P=0.0001). The authors also consider LAMS placement to access remnant gastric stomach as another viable option and await prospective study results.

Conclusions

In conclusion, RYGB patients with severe dumping syndrome refractory to medical and behavioral therapy can be treated with TORe and LAMS placement to access the remnant stomach.

REFERENCES

1. Vargas, Eric J., et al. "Endoscopic management of dumping syndrome after Roux-en-Y gastric bypass: a large international series and proposed management strategy." *Gastrointestinal endoscopy* 92.1 (2020): 91-96.