

Bariatric Arterial Embolization for Overweight Patients: A New Exploration for Ideal Patients?

Bin-Yan Zhong¹ 

Received: 15 March 2019 / Accepted: 21 March 2019 / Published online: 27 March 2019

© Springer Science+Business Media, LLC, part of Springer Nature and the Cardiovascular and Interventional Radiological Society of Europe (CIRSE) 2019

To the Editor,

We read with great interest the article by Dr. Elens and colleagues published online in *Cardiovasc Intervent Radiol* and entitled “Gastric Embolization as Treatment for Overweight Patients; Efficacy and Safety” [1]. Dr. Elens and colleagues retrospectively evaluated the efficacy and safety of left gastric artery (LGA) embolization, also named as Bariatric Arterial Embolization (BAE) for the treatment of overweight patients who weren’t candidates for bariatric surgery. They found that BAE appears to induce weight loss and appetite suppression for overweight patients.

According to Body Mass Index (BMI), overweight patients are classified as overweight (BMI between 25 and 29.9 kg/m²), obese (BMI between 30 and 34.9 kg/m²), and severely obese (BMI higher than 40 or higher than 35 along with obesity-related comorbidity). Lifestyle intervention, designed to modify eating behaviors and physical activity with minimal risk of complications and low cost, is the first option for overweight patients. Considering the higher complication occurrence rate and cost of bariatric surgery and endoscopic intervention, BAE was applied to obese and severely obese patients.

After decades of exploration, the safety and short-term efficacy of BAE for obesity have been identified. Among them, three important prospective trials were carried out in the USA (GET LEAN and BEAT Obesity trials) and China

(a Chinese trial) for severely obese and obese patients, respectively [2–4]. Nevertheless, several key issues regarding BAE raised during exploration and should be answered before this procedure becomes widely accepted treatment approach [5]. One of the issues is that the ideal candidate for BAE is unclear. The patients’ BMI in the GET LEAN and BEAT Obesity trials was no less than 40 kg/m², and it was no less than 30 kg/m² for patients included in the Chinese trial. These three trials demonstrated a similar range of weight loss, with the highest decrease level in Chinese trial. The results of these three trials suggest that BAE may be more effective in treating obese, but not severely or morbidly obese patients. Nevertheless, no exploration was carried out regarding BAE for overweight patient. This interesting study carried out by Dr. Elens and colleagues was the first attempt to evaluate the efficacy and safety of BAE for overweight population. This study identified a new potentially ideal population to receive BAE. Further prospective trials are warranted to identify it in a more convincing way.

Compliance with Ethical Standards

Conflict of interest The authors declared that they have no conflict of interest.

References

1. Elens S, Roger T, Elens M, et al. Gastric embolization as treatment for overweight patients; efficacy and safety. *Cardiovasc Interv Radiol*. 2019;42(4):513–9.
2. Syed MI, Morar K, Shaikh A, et al. Gastric artery embolization trial for the lessening of appetite nonsurgically (GET LEAN): six-month preliminary data. *J Vasc Interv Radiol*. 2016;27(10):1502–8.

✉ Bin-Yan Zhong
byzhongir@sina.com

¹ Department of Interventional Radiology, The First Affiliated Hospital of Soochow University, 188 Shizi St, Suzhou 215006, China

3. Weiss CR, Akinwande O, Paudel K, et al. Clinical safety of bariatric arterial embolization: preliminary results of the BEAT obesity trial. *Radiology*. 2017;283(2):598–608.
4. Bai ZB, Qin YL, Deng G, Zhao GF, Zhong BY, Teng GJ. Bariatric embolization of the left gastric arteries for the treatment of obesity: 9-month data in 5 patients. *Obes Surg*. 2018;28(4):907–15.
5. Zhong BY, Abiola G, Weiss CR. Bariatric arterial embolization for obesity: a review of early clinical evidence. *Cardiovasc Interv Radiol*. 2018;41(11):1639–47.

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.