Obesity Surgery, ***16****, pp-pp*

Correspondence

Analysis of the Vertical Isolated Gastroplasty: A New Bariatric Operation

To the Editor:

We read the very interesting paper about a new bariatric operation *Vertical Isolated Gastroplasty with Gastro-enteral Bypass: Preliminary Results* by Munir Alamo Alamo, Cristián Sepúlveda Torres and Luis Zapata Perez from Chile (Obes Surg 2006; 16: 353-8).[1]

The vertical isolated gastroplasty (VIG) consists of a longitudinal gastroplasty with the gastric tube similar to that of the duodenal switch (DS) or the sleeve gastrectomy, without amputation of the remnant stomach. In this technique, a long limb of 300 cm is anastomosed to the preserved stomach and a Roux-en-Y is performed with the jejunum 40 cm distal to the ligament of Treitz, leaving 200 cm of common channel (Figure 1). The VIG is similar to the Digestive Adaptation with Intestinal Reserve operation created by the Brazilian surgeon Sérgio Santoro,[2] with the difference that Santoro resects the remnant stomach and greater omentum, and performs an enterectomy that leaves the first 40 cm of jejunum and the last 260 cm of ileum (thereby leaving 3 meters of small bowel); the digestive reconstruction creates a bipartition in the transit of digestive tract nutrients, and avoids exclusion of segments, with the intention of causing minimal to no malabsorption. Santoro created two variations of the operation (Figures 2 and 3).

The authors compare the VIG to the RYGBP in the paper most of the time.[1] The VIG is a hybrid, combined or mixed bariatric operation[3] according to the authors' comments. In reality, it has a moderate

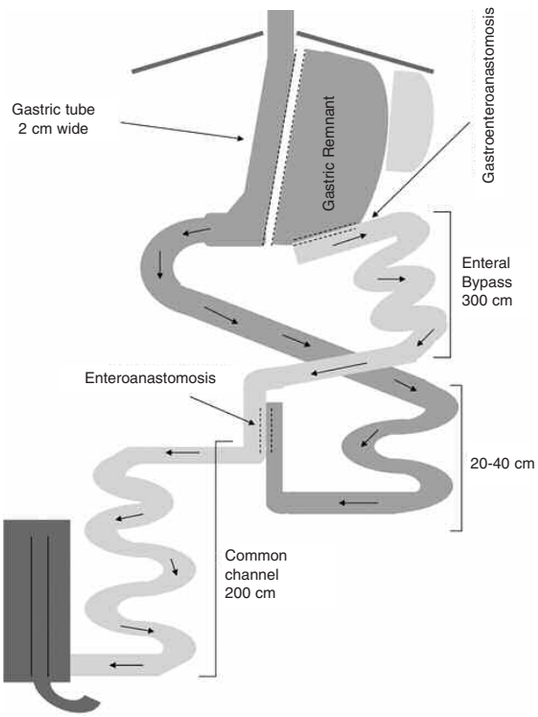

Figure 1. Vertical isolated gastroplasty (VIG) – Alamo's operation.[1]

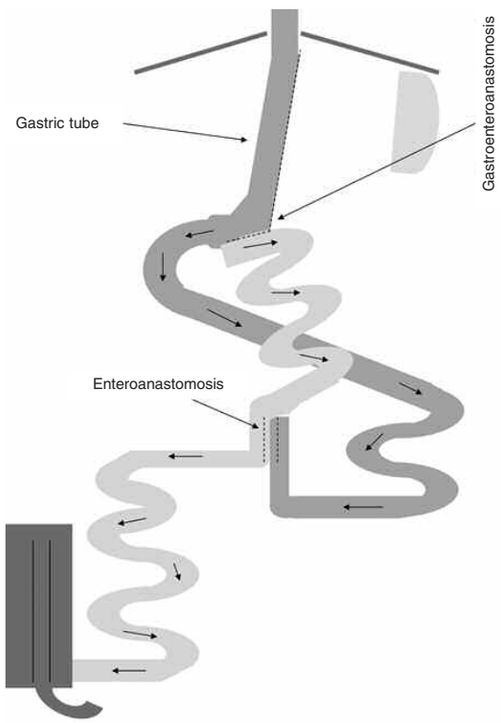

Figure 2. Digestive adaptation with in transit intestinal reserve – Santoro's operation.[2]

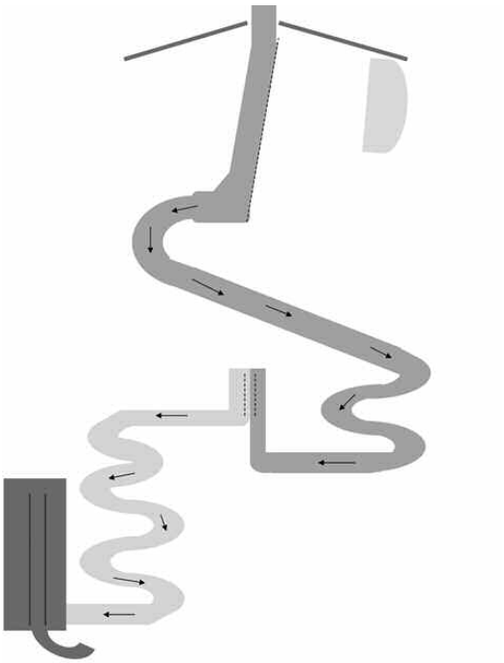

Figure 3. Digestive adaptation (gastro-omentectomy with enterectomy) – variation of Santoro's operation.[2]

degree of restriction and a minimal degree of malabsorption, the gastric tube is larger than the one in the RYGBP and there is no other restrictive factor such as a gastric ring or a calibrated anastomosis. The operation has a malabsorptive feature which is the common channel of 200 cm and an enteral bypass of 300 cm; this is not malabsorptive as in the BPD of Scopinaor or the DS. The common channel in the BPD is 50 cm and in the DS is 75-100 cm,[4,5] and in these predominantly malabsorptive operations, the biliopancreatic secretions are mixed with the ingested food in the lower ileum. In the VIG operation, the gastric and biliopancreatic juices are in contact with the ingested food since the duodenum; if we measure the bowel where the food will pass, there is ~25 cm of duodenum plus 40 cm of jejunum and a common channel of 200 cm, which is ~270 cm of bowel capable of absorption. This may cause insufficient weight loss in heavier individuals. In longer follow-up, this can lead to weight regain in the VIG. The enteral bypass communicates the bypassed stomach and its secretions with the alimentary tract, avoiding a blind stomach. One option to sustain the weight loss is to place a ring in the upper part of the gastric tube.

This VIG has the following good characteristics: 1) Preserves the duodenum allowing iron absorption, avoiding anemia; 2) Compared to the RYGBP and BPD, the gastroenteroanastomosis of the VIG is easier because it is performed low in the bypassed stomach, without much traction on the bowel mesentery in the morbidly obese; 3) There is no dumping and diarrhea with this technique; 4) The duodenum and papilla are accessible endoscopically; 5) It is a reversible operation because there is no resection; 6) It likely does not have an ulcerogenic predisposition in the gastroenteroanastomosis because the vagus branches of the bypassed stomach are sectioned; 7) There is no prosthesis like in the ringed RYGBP[6] and gastric banding, avoiding such complications as migration, slippage, perforation and rejection. 8) As the pouch is larger, it provides a better sensation while the patient is eating, probably causing less psychological complications related to food restriction; 9) Because the gastric fundus, the site of the main localization of ghrelin-producing cells, is excluded by the sleeve gastroplasty, plasma ghrelin levels are expected to decrease following surgery helping in the weight loss process,[7] and glucagon-like peptide 1 (GLP-1) and polypeptide YY (PYY) response to food ingestion are probably significantly enhanced as shown by Santoro,[2] this is the endocrine explanation for the weight loss; and 10) There is no narrow anastomosis that could lead to stenosis, vomiting and obstruction.

The disadvantages of the VIG are: 1) More staples are needed to perform the gastric division (up to 7 firings) which increase costs (another option would be a staplerless VIG[8]); 2) There is a longer stapled area which can develop such complications as dehiscence, fistulas and bleeding; 3) The bypassed stomach may develop ulcers, cancer and/or bleeding without a possibility for access (this can be solved if a gastrostomy with a marker is performed as in the Fobi RYGBP[7]); 4) Gastro-gastric fistula may occur; 5) The sleeve gastroplasty and the long segment of bowel capable of absorption may cause weight regain in longer follow-up; 6) Bacterial growth can occur in the enteral bypass leading to infections.

We suggest that Dr. Alamo close the mesenteric gap in the laparoscopic technique to avoid internal hernias. If he continues the operation, like Santoro the potential problems with the bypassed stomach and the enteral bypass would be eliminated.

The follow-up is only 1 year. Dr. Alamo is commencing a comparative study between the VIG and RYGBP, which will be important for future analysis.

João Eduardo Marques Tavares de Menezes Ettinger, MD[1,2]; Euler Azaro, MD, PhD[1,2]; Carlos Augusto Bastos Mello, MD[2]; Edvaldo Fahel, MD, PhD[1,2]

[1]Bariatric Surgery Division, Hospital São Rafael and Hospital Cidade, and [2]Department of Surgery Escola Bahiana de Medicina e Saúde Pública, Salvador, Bahia, Brazil

References

1. Alamo MA, Sepulveda Torres C, Zapata Perez L. Vertical banded gastroplasty with gastro-enteral bypass: preliminary results: Obes Surg 2006; 16: 353-8.
2. Santoro S, Velhote MCP, Malzoni CE et al. Digestive adaptation with intestinal reserve: A new surgical proposal for morbid obesity. Rev Bras Videocir 2004; 2: 130-8. Available at: www.sobracil.org.br (Paper in English).
3. Baltasar A, Bou R, Cipagauta LA et al. "Hybrid" bariatric surgery: bilio-pancreatic diversion and duodenal switch – preliminary experience. Obes Surg 1995; 5: 419-23.
4. Marceau P, Biron S, Bourque R et al. Biliopancreatic diversion with a new type of gastrectomy. Obes Surg 1993; 3: 29-35.
5. Hess DS, Hess DW. The biliopancreatic diversion with the duodenal switch: results beyond 10 years. Obes Surg 2005; 15: 408-16.
6. Fobi MAL, Lee H, Felahy B et al. Choosing an operation for weight control, and the transected, banded gastric bypass. Obes Surg 2005; 15: 114-21.
7. Langer FB, Reza Hoda MA, Bohdjalian A. Sleeve gastrectomy and gastric banding: effects on plasma ghrelin levels. Obes Surg 2005; 15: 1024-9.
8. Ettinger JEMT, Ramos AC, Azaro E et al. Staplerless laparoscopic gastric bypass: a new option in bariatric surgery. Obes Surg 2006; 16: 638-45.