J Minim Invasive Surg Sci.2013;**2**(1): 118-119. DOI: 10.5812/jmiss.4738

Journal of
Minimally Invasive Surgical Sciences
www.MinSurgery.com

Metabolic Changes After Laparoscopic Total Gastric Vertical Plication

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ARTICLE INFO

Article type:
Letter to Editor

Article history:
Received: 05 Mar 2012
Revised: 16 Apr 2012
Accepted: 28 Apr 2012

Keywords:
Obesity
Bariatric Surgery
Laparoscopy
Dyslepidemias
Insulin Resistance

Please cite this paper as:
Gass M, Peterli R. Metabolic Changes After Laparoscopic Total Gastric Vertical Plication. *J Minim Invasive Surg Sci*. 2013;**2**(1): 118-9. DOI: 10.5812/jmiss.4738

Dear Editor,

We read with much interest the publication by Golpaie *et al.* (1) on metabolic changes in lipid parameters and insulin resistance after laparoscopic total gastric vertical plication (LTGVP). They performed LTGVP in 15 severely obese patients and measured lipid profiles and parameters of glucose homeostasis before and six weeks postoperatively. Patients lost an average of 14.7% of total weight in the first six weeks after the operation. Interestingly, reduction of triglycerides and LDL was statistically significant after six weeks and reduction of homeostatic model assessment (HOMA) index as well. On the other hand, total cholesterol, LDL, fasting glucose, insulin levels and the quantitative insulin-sensitivity check index (QUICKI) did not change significantly.

The authors conclude, that LTGVP is an "effective therapeutic approach for obese patients because it reduces weight, insulin resistance and improves metabolic parameters". Literature about this new bariatric technique is scarce, especially long-term data is missing. It has to be mentioned that this is the first study to report metabolic changes, especially lipid profiles in patients undergoing this new bariatric surgical procedure. Although the follow-up is only six weeks, the improvement in triglyceride and LDL levels is remarkable. Concerning excessive weight loss (EWL) another study by Ramos *et al.* describes a mean EWL of 62% (45% to 77%) in nine patients 18 months after gastric plication, which is comparable to other purely restrictive procedures (2). An article by Talebpour *et al.* analyzes the course of weight loss up to 36 months postoperatively. An EWL of 60% after 24 months (50 cases), and 57% after 36 months (11 cases) is reported (3).

Nowadays, it is at least throughout Europe widely accepted, that purely restrictive methods, i.e. gastric banding procedures, often fail in the long run. Most bariatric surgeons and metabolic physicians are convinced that besides the restrictive and malabsorptive components, concomitant metabolic effects play a pivotal role for the long-time results of weight loss (4). Therefore, as the next

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DOI: 10.5812/jmiss.4738

step, we would like to encourage the authors to measure meal induced profiles of gastrointestinal peptides like ghrelin, PYY, GLP-1 and cholecystokinin for example as well as adipokines and compare the results with established bariatric procedures like gastric bypass and sleeve gastrectomy (5, 6).

Authors' Contribution

None declared.

Financial Disclosure

MG has no conflicts of interest or financial ties to disclose.

RP has received unrestricted grants from and consults for Ethicon Endosurgery GmbH, Europe.

References

1. Golpaie A, Hosseinzadeh-Attar MJ, Hoseini M, Karbaschian Z, Talebpour M. Changes in lipid profile and insulin resistance in morbidly obese patients following laparoscopic total gastric vertical plication. *J Minim Invasive Surg Sci*. 2012;**1**(1):24-9.
2. Ramos A, Galvao Neto M, Galvao M, Evangelista LF, Campos JM, Ferraz A. Laparoscopic greater curvature plication: initial results of an alternative restrictive bariatric procedure. *Obes Surg*. 2010;**20**(7):913-8.
3. Talebpour M, Amoli BS. Laparoscopic total gastric vertical plication in morbid obesity. *J Laparoendosc Adv Surg Tech A*. 2007;**17**(6):793-8.
4. Gass M, Beglinger C, Peterli R. Metabolic surgery-principles and current concepts. *Langenbecks Arch Surg*. 2011;**396**(7):949-72.
5. Peterli R, Steinert RE, Woelnerhanssen B, Peters T, Christoffel-Courtin C, Gass M, et al. Metabolic and hormonal changes after laparoscopic Roux-en-Y gastric bypass and sleeve gastrectomy: a randomized, prospective trial. *Obes Surg*. 2012;**22**(5):740-8.
6. Woelnerhanssen B, Peterli R, Steinert RE, Peters T, Borbely Y, Beglinger C. Effects of postbariatric surgery weight loss on adipokines and metabolic parameters: comparison of laparoscopic Roux-en-Y gastric bypass and laparoscopic sleeve gastrectomy--a prospective randomized trial. *Surg Obes Relat Dis*. 2011;**7**(5):561-8.