

## EVALUATION OF VISCERAL FAT LOSS AFTER BARIATRIC SURGERY BY ABDOMINAL ULTRASONOGRAPHY

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**Background:** Clinical evaluation of visceral fat is limited because of the lack of reliable and low-cost methods and ultrasonography has a good reproducibility and accuracy comparing with the computed tomography. The purpose of this study was to evaluate the amount and loss of visceral and subcutaneous fat before and after 6 months of Roux-en-Y gastroplasty bypass.

**Methods:** 17 patients were submitted to the abdominal ultrasound (AU). Weight and biochemical exams (glucose-G, total cholesterol-TC, HDL, LDL, triglycerides-TG, uric acid-UA and insulin-I- levels) were performed 1 month before and 6 months after surgery. Two ultrasonographic measurements were taken of subcutaneous fat (SF), distance between the skin and external face of retro-abdominal muscle and of visceral fat (VF), distance between the internal face of retro-abdominal muscle and the anterior wall of the aorta.

**Result:** From 17 patients, 13 were women (76.5%). The means of age and BMI before the surgery were  $44 \pm 11.7$  years and  $40.7 \pm 4.2$  Kg/m<sup>2</sup>. The SF measure was  $6.5 \pm 1.7$ cm before surgery and, after 6 months, about  $4.3 \pm 1.4$ cm ( $p=0,0003$ ). Similarly, visceral fat loss was statistically significant after surgery, with  $8.9 \pm 2.6$ cm before and  $4.6 \pm 1.7$ cm after ( $p < 0,05$ ). The percentage of Excess Weight Loss (%EWL) mean was  $52.5 \pm 11.6\%$ . It was found higher loss of VF in comparison with SF after 6 months ( $p=0,0006$ ) and there was no correlation between %EWL and VF loss. It was found, also, reduction of G, TG and I levels after surgery.

**Conclusion:** In this study, after 6 months, all patients had VF measurements below 8 cm. This value is considered a threshold for cardiovascular risk. Moreover, it was found a higher loss of VF comparing with SF and also a reduction in G, TG and I levels. The ultrasonograph method has been a great method to identify patients with adverse metabolic profile.