

# RESIDUAL EXCESS WEIGHT DIFFERENCE BETWEEN BMI 35-40 AND BMI OVER 40 AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY IN SEVERELY OBESE ADOLESCENTS. MIDTERM OUTCOMES



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## Background

- Severe obesity among adolescents is increasing worldwide
- Bariatric surgery is a controversial subject in this group of age
- Surgical timing is even more controversial
- Patterns of surgical weight loss could be different between patients with greater excess weight, perhaps with less promising results

## Objective

- To compare anthropometric outcomes among adolescents with BMI 35-40 and over 40, underwent laparoscopic sleeve gastrectomy (LSG)

## Subjects and Methods

- Descriptive, non-randomized, retrospective study
- Adolescent patients between 15 and 19 years
  - Body mass index (BMI) > 35 kg/mt<sup>2</sup>, with obese related comorbidities and final height
  - One year (at least) of multidisciplinary medical treatment and failure in weight loss
  - Family and patient psychological evaluation ant treatment before and after surgery
- Underwent LSG between September 2009 and September 2014
- Comparison between anthropometric outcomes among adolescents with BMI 35-40 and over 40

## Results

- 59 patients, 37 females (63%), mean age 17,3 years ± 1,4 (15-19)
- Total group: mean weight 111,4 kg ± 20,6 (80,7 – 185), mean BMI 40 ± 4 (35 – 54), residual BMI 15 ± 4,4 (9,9 – 29)

Table 1. Residual excess weight difference between BMI 35-40 and BMI over 40 after laparoscopic sleeve gastrectomy in severely obese adolescents. Baseline and follow up at 6, 12 and 24 months

	Group BMI 35 – 40 kg/mt <sup>2</sup>	Group BMI > 40 kg/mt <sup>2</sup>	p value
Total N/females (%)	36/23 (64%)	23/14 (60%)	> 0,05
Mean age years ± SD	17,4 ± 1,4 (15 – 19)	17,0 ± 1,3 (15 – 19)	> 0,05
Mean weight kg ± SD	103,6 ± 12,7 (80,7 – 124,6)	123,7 ± 24,7 (92 – 185)	< 0,001
Mean BMI kg/mt <sup>2</sup> ± SD	37,3 ± 1,4 (35 – 39,7)	44,3 ± 3,9 (40 – 54)	< 0,001
Residual excess BMI kg/mt <sup>2</sup> ± SD	12,4 ± 1,4 (9,9 – 14,8)	19,3 ± 3,9 (15,1 – 19)	< 0,001
Follow up 6 months residual excess BMI kg/mt <sup>2</sup>	2,09 ± 2,8 (-2,2 – 6,2)	9,35 ± 4,2 (4,7 – 17,1)	0,012
Follow up 12 months residual excess BMI kg/mt <sup>2</sup>	0,14 ± 2,0 (-2,6 – 3,1)	3,9 ± 2,1 (0,5 – 7,1)	0,005
Follow up 24 months residual excess BMI kg/mt <sup>2</sup>	3,08 ± 4,1 (-3,7 – 10,3)	7,5 ± 2,1 (5,5 – 10,4)	0,004

Statistical analysis STATA 13.1

## Conclusions

- Residual excess weight in the group with BMI greater than 40 is significantly higher than the group with lower BMI
- This makes us reconsider the timing of the surgical indication
- However, it is imperative to continue to follow these patients to agree on the controversy of this intervention in this age group

