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/m², 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

<table>
<thead>
<tr>
<th></th>
<th>Group BMI 35 – 40 kg/m²</th>
<th>Group BMI &gt; 40 kg/m²</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total N/females (%)</td>
<td>36/23 (64%)</td>
<td>23/14 (60%)</td>
<td>&gt; 0,05</td>
</tr>
<tr>
<td>Mean age years ± SD</td>
<td>17,4 ± 1,4 (15 – 19)</td>
<td>17,0 ± 1,3 (15 – 19)</td>
<td>&gt; 0,05</td>
</tr>
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<td>Mean weight kg ± SD</td>
<td>103,6 ± 12,7 (80,7 – 124,6)</td>
<td>123,7 ± 24,7 (92 – 185)</td>
<td>&lt; 0,001</td>
</tr>
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<td>Mean BMI kg/m² ± SD</td>
<td>37,3 ± 1,4 (35 – 39,7)</td>
<td>44,3 ± 3,9 (40 – 54)</td>
<td>&lt; 0,001</td>
</tr>
<tr>
<td>Residual excess BMI kg/m² ± SD</td>
<td>12,4 ± 1,4 (9,9 – 14,8)</td>
<td>19,3 ± 3,9 (15,1 – 19)</td>
<td>&lt; 0,001</td>
</tr>
<tr>
<td>Follow up 6 months residual excess BMI kg/m²</td>
<td>2,09 ± 2,6 (-2,2 – 6,2)</td>
<td>9,35 ± 4,2 (4,7 – 17,1)</td>
<td>0,012</td>
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<td>Follow up 12 months residual excess BMI kg/m²</td>
<td>0,14 ± 2,0 (-2,6 – 3,1)</td>
<td>3,9 ± 2,1 (0,5 – 7,1)</td>
<td>0,005</td>
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<tr>
<td>Follow up 24 months residual excess BMI kg/m²</td>
<td>3,08 ± 4,1 (-3,7 – 10,3)</td>
<td>7,5 ± 2,1 (5,5 – 10,4)</td>
<td>0,004</td>
</tr>
</tbody>
</table>

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