Laparoscopic Roux-en-Y gastric bypass short
term outcomes in an adolescent population

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METHOD (cont.)
▪ The pre-operative workup of all the adolescent patients included a minimum of two surgical consultations, a dietician review, psychological testing, and obesity assessment by a paediatrician. Informed consent was obtained from the patient and parents/guardian.
▪ Fifty-one patients underwent a fully stapled laparoscopic Roux-en-Y gastric bypass. Retrospectively collected data including co-morbidities (Fig 1) was analysed to evaluate short term outcomes.

BACKGROUND
▪ In a world where the prevalence of obesity among adolescents is growing this operation is increasingly being performed in this specific group of patients.
▪ In the United States alone paediatric obesity has increased significantly in the last 30 years. From 1976 to 2008, the proportion of obesity has increased from 5.0% to 18.1%.

AIM
▪ The aim of this study is to determine the short term efficacy and safety of RYGB in adolescents

<table>
<thead>
<tr>
<th>Comorbidities</th>
<th>Female (n/33)</th>
<th>Male (n/8)</th>
<th>Total (n/41)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diabetes mellitus</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Hypertension</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Dyspnoea</td>
<td>20</td>
<td>6</td>
<td>26</td>
</tr>
<tr>
<td>Arthralgia</td>
<td>20</td>
<td>2</td>
<td>22</td>
</tr>
<tr>
<td>Back pain</td>
<td>22</td>
<td>3</td>
<td>25</td>
</tr>
<tr>
<td>Hypercholesterolemia</td>
<td>9</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Reflux</td>
<td>13</td>
<td>1</td>
<td>14</td>
</tr>
<tr>
<td>Psychological burden</td>
<td>28</td>
<td>6</td>
<td>34</td>
</tr>
</tbody>
</table>

Figure 1: Co-morbidities

METHOD
▪ More than 1000 RYGB are performed each year at our Bariatric centre at AZ Sint-Jan AV Bruges.
▪ Between June 2005 and October 2014 RYGB was performed in 51 patients younger than 18 years, with a BMI of at least 30.
METHOD (cont.)

- Data was gathered from follow-up consultations and telephone surveys. From the 51 adolescents, 10 patients (19.6%) were lost to follow up. These patients were excluded from the study.

CONCLUSION

- Our study in 41 obese adolescents presented good short term results in terms of weight loss and low morbidity similar to the adult population.
- Comorbidities improve and positive psychological changes occur with sustained weight loss. Emphasis must be placed on longer term complications such as vitamin and mineral deficiencies requiring close follow-up.
- Prospective randomised studies on the long term efficacy and safety of RYGB in adolescents are needed to define clear indications for weight-loss surgery in this population.

RESULTS

- 8 males and 33 females (M:F ratio of 1:4.1)
- Mean age was 16.0 years. Age distribution is presented in Fig 2.
- Mean pre-operative weight and height were 111.8 kg (82.4-150.5) and 167.4 cm (142.5-187.0). Mean pre-operative BMI was 39.7 kg/m² (30.3-55.7).
- 4 patients (9.8%) previously had laparoscopic gastric banding and a RYGB was indicated for weight regain/band intolerance.
- There were no peri-operative complications.
- Mean hospital stay was 2.7 days (range 3-4).
- There were no short term complications reported.

The mean %WL was 11.57%, 24.11% and 31.71% at 6 weeks, 6 months and 1 year respectively (Fig 3 below).