**Tables and graphs**

Figure 1: **Study design flow diagram**

Excluded 281 patients with incomplete data

11131 patients underwent LAGB surgery between Jan 2007 and Dec 2014

10850 LGB patients with basic clinical data

Excluded 521 patients under 18 years at time of surgery. surgery

Total eligible subjects – 10329

Of them 162 over 65 years upon surgery

10167 patients in the age group of 18-65





Quota sampling of the control group (n=166)

Quota sampling of the elderly group (n=59)

**Table 1 – Patient demographics and baseline status and comorbidities at time of surgery**

|  |
| --- |
| **Demographics** |
| **Parameter** | **Sub-parameter** | **Elderly (n=59)** | **Control (n=166)** | **P value**  |
| Gender no. (%) | Male | 14 (23.7) | 53 (31.9) | 0.237 |
| Female | 45 (76.3) | 113 (68.1) |
| Birth place no. (%) | Israel | 11 (18.6) | 103 (62.0) | **<0.001** |
| Abroad | 48 (81.4) | 63 (38.0) |
| Marital status no. (%) | Single | 1 (1.7) | 11 (6.6) | 0.131 |
| Married | 41 (69.5) | 124 (74.7) |
| Divorced | 6 (10.2) | 16 (9.6) |
| Widowed | 11 (18.6) | 15 (9.0) |
| Residency no. (%) | Urban | 48 (81.4) | 136 (81.9) | 0.854 |
| Rural | 11 (18.6) | 29 (17.5) |
| Religiousness level no. (%) | Secular | 28 (47.5) | 66 (39.8) | 0.303 |
| Religious | 31 (52.5) | 100 (60.2) |
| Education no. (%) | High school education | 30 (50.8) | 91 (54.8) | 0.742 |
| Higher education | 27 (45.8) | 74 (44.6) |
| Age: yrs.±SD | 68.07±3.17 | 46.16±14.06 | **<0.001** |
|  **Weight upon operation day** |
| BMI: kg/m2±SD | 44.21±5.99 | 43.88±5.34 | 0.691 |
| Excess Weight\*\*: kg±SD | 49.60±15.13 | 52.57±16.19 | 0.220 |
| **Comorbidities prior to operation** |
| Active/past smokers no. (%) | 25 (42.4) | 57 (34.3) | 0.284 |
| Regular physical activity engagement no. (%) | 23 (39) | 65 (39.2) | 0.981 |
| GERD or heartburns no. (%) | 19 (32.2) | 39 (23.5) | 0.189 |
| Type II DM no. (%) | 27 (45.8) | 58 (34.9) | 0.141 |
| Hypertension no. (%) | 43 (72.9) | 76 (45.8) | **<0.001** |
| Dyslipidemia no. (%) | 30 (50.8) | 73 (44.0) | 0.363 |
| OSA or night snoring no. (%) | 23 (39.0) | 60 (36.1) | 0.698 |
| Bone density disturbances no. (%) | 15 (25.4) | 9 (5.4) | **<0.001** |

\*\* Excess weight - calculated using the ideal body weight as that equivalent to BMI=25kg/m2.

**Table 2 – Complications, reoperations, and long-term anthropometrics**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Elderly (n=59)** | **Control (n=166)** | **P value** |
| **Follow-up** |
| Follow-up duration: Years± SD | 4.49±2.31 | 6.37±2.12 | **<0.001** |
| **Initial hospitalization and perioperative complications** |
| Hospitalization duration: Days ± SD | 1.37±0.79 | 1.27±0.60 | 0.304 |
| Early complications a: no. (%) | 1 (1.7) | 3 (1.8) | 0.955 |
| **Long-term complications and re-operations** |
| Overall late complications: no. (%) | 14 (23.7) | 46 (27.7) | 0.552 |
| Slippage: no. (%) | 1 (1.7) | 10 (6.0) | b |
| Band malfunction: no. (%) | 4 (6.8) | 22 (13.3) |
| Band infection: no. (%) | 3 (5.1) | 3 (1.8) |
| Port problems: no. (%) | 2 (3.4) | 0 (0.0) |
| Band intolerance: no. (%) | 3 (5.1) | 5 (3.0) |
| Reoperations: no. (%) | 8 (13.6) | 33 (19.9) | 0.280 |
| **Long-term anthropometrics** |
| BMI at interview: Kg/m2 ± SD | 32.6±6.27 | 30.72±6.04 | **0.044** |
| BMI decrease at interview c: Kg/m2 ± SD | 11.61±6.00 | 13.15±5.67 | 0.078 |
| Minimal BMI achieved: Kg/m2 ± SD | 30.68±5.59 | 27.7±5.21 | **<0.001** |
| Maximal BMI reduction c: Kg/m2 ± SD | 13.53±5.71 | 16.18±5.34 | **0.001** |
| Excess Weight loss percentage at interview d: % ± SD | 37.98±26.41 | 28.11±29.99 | **0.026** |

1. Perioperative complications including intraabdominal bleeding, infection, bowel obstruction.
2. Statistical difference could not be calculated due to low prevalence.
3. Compared to time of surgery.
4. Excess weight loss percentage - calculated using the ideal body weight as that equivalent to BMI=25kg/m2.

$$EWL\%=\frac{Weight\_{before}-Weight\_{interview}}{EBW}=\frac{Weight\_{before}-Weight\_{interview}}{\left(BMI\_{before}-25\right)\*height^{2}}$$

Figure 2

\*p=0.31p=0.28 **p<0.01** **p=0.03** **p<0.01** **p<0.01** p=0.83

\*p=0.66p=0.27 **p<0.01** **p=0.02** **p<0.01** **p<0.01** p=0.55

\* **p=0.01** p=0.19 p=0.15 p=0.07 p=0.09 **p=0.01** p=0.74

**Table 3 – Post-op comorbidities change**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Parameter** | **Sub-parameter** | **Elderly**No. (%) | **Control**No. (%) | **P value**  |
| **Type 2 DM** | **Worsening\*** | 0 (0.0) | 3 (1.8) | 0.919 |
| **No change\*\*** | 39 (66.1) | 111 (66.9) |
| **Improvement** | 13 (22.0) | 19 (11.4) |
| **Cured** | 7 (11.9) | 33 (19.9) |
| **Hypertension** | **Worsening\*** | 0 (0.0) | 7 (4.2) | 0.091 |
| **No change\*\*** | 31 (52.5) | 107 (64.5) |
| **Improvement** | 21 (35.6) | 20 (12.0) |
| **Cured** | 7 (11.9) | 32 (19.3) |
| **Dyslipidemia** | **Worsening\*** | 1 (1.7) | 6 (3.6) | 0.656 |
| **No change\*\*** | 41 (69.5) | 108 (65.1) |
| **Improvement** | 8 (13.6) | 12 (7.2) |
| **Cured** | 9 (15.3) | 40 (24.1) |
| **OSA or night snoring** | **Worsening\*** | 4 (6.8) | 6 (3.6) | 0.368 |
| **No change\*\*** | 40 (67.8) | 112 (67.5) |
| **Improvement** | 4 (6.8) | 7 (4.2) |
| **Cured** | 11 (18.6) | 41 (24.7) |
| **Bone Density disorders** | **Worsening\*** | 4 (6.8) | 4 (2.4) | 0.136 |
| **No change\*\*** | 48 (81.4) | 160 (96.4) |
| **Improvement** | 5 (8.5) | 0 (0.0) |
| **Cured** | 2 (3.4) | 2 (1.2) |

**\*either haven’t suffered from the disease before operation and were diagnosed during follow-up, or suffered from worsening of a pre-existing condition during follow-up period. Worsening defined as initiation of medicinal treatment in case which was treated conservatively or augmentation of prescribed medicinal treatment, according to the patient’s medical record and answers during end of follow-up interview.**

**\*\*either haven’t suffered from the disease both before and after operation or suffered from the disease prior to operation and severity remained unchanged following operation.**

**Table 4 – Overall patient satisfaction from the procedure, comparison between groups**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Question** | **Patient response** | **Elderly**No. (%) | **Control**No. (%) | **P value** |
| **Fulfilled expectations** | **Not at all** | 2 (3.4) | 11 (6.6) | 0.847 |
| **To a small extent** | 2 (3.4) | 1 (0.6) |
| **To a medium extent** | 7 (11.9) | 20 (12.0) |
| **To a great extent** | 15 (25.4) | 37 (22.3) |
| **Fully** | 33 (55.9) | 97 (58.4) |
| **Satisfaction from procedure** | **Not at all** | 3 (5.1) | 14 (8.4) | 0.678 |
| **To a small extent** | 1 (1.7) | 2 (1.2) |
| **To a medium extent** | 10 (16.9) | 12 (7.2) |
| **To a great extent** | 11 (18.6) | 39 (23.5) |
| **Completely satisfied** | 34 (57.6) | 99 (59.6) |
| **Suffer from pain related to the procedure** | **Not at all** | 39 (66.1) | 106 (63.9) | 0.620 |
| **To a small extent** | 13 (22.0) | 28 (16.9) |
| **To a medium extent** | 2 (3.4) | 15 (9.0) |
| **To a great extent** | 2 (3.4) | 14 (8.4) |
| **Severe, constantly** | 3 (5.1) | 3 (1.8) |
| **Have physical limitations** | **Not at all** | 42 (71.2) | 149 (89.8) | **0.001** |
| **To a small extent** | 7 (11.9) | 8 (4.8) |
| **To a medium extent** | 1 (1.7) | 4 (2.4) |
| **To a great extent** | 9 (15.3) | 3 (1.8) |
| **Restricted in all activities** | 0 (0.0) | 2 (1.2) |
| **Regret undergoing the procedure.** | **Not at all** | 55 (93.2) | 145 (87.3) | 0.201 |
| **To a small extent** | 2 (3.4) | 6 (3.6) |
| **To a medium extent** | 1 (1.7) | 4 (2.4) |
| **To a great extent** | 0 (0.0) | 1 (0.6) |
| **Whole heartedly regrets** | 1 (1.7) | 10 (6.0) |
| **Would undergo LAGB again** | **no** | 11 (18.6) | 29 (17.5) | 0.854 |
| **yes** | 48 (81.4) | 136 (81.9) |

**Table 5.1 – patients' BAROS scores**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **BAROS** | **Score** | **All patients**No. (%) | **Elderly**No. (%) | **Control**No. (%) | **P value** |
| **Failure** | **≤1** | 24 (10.7) | 7 (11.9) | 17 (10.2) | 0.157 |
| **Fair** | **>1 to 3** | 35 (15.6) | 11 (18.6) | 24 (14.5) |
| **Good** | **>3 to 5** | 74 (32.9) | 21 (35.6) | 53 (31.9) |
| **Very good** | **>5 to 7** | 61 (27.1) | 11 (18.6) | 50 (30.1) |
| **Excellent** | **>7 to 9** | 26 (11.6) | 6 (10.2) | 20 (12.0) |
| **sum** |  | 220 (97.8) | 56 (94.9) | 164 (98.8) |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **BAROS subsection** | **Elderly**score ± SD | **Control**score ± SD | **P value** |
| **Percentage of excess body weight loss** | 1.66±0.92 | 1.98±0.93 | **0.024** |
| **Medical conditions** | 1.36±1.20 | 1.36±1.30 | 0.998 |
| **Quality of life** | 1.36±0.88 | 1.43±0.96 | 0.663 |
| **BAROS without complications** | 4.40±2.17 | 4.76±2.17 | 0.289 |
| **BAROS mean scores including complications (Total BAROS)** | 4.03±2.40 | 4.42±2.45 | 0.302 |

**Table 5.2 – Mean BAROS subsections scores**

**Table 5.3 – Mean BAROS quality of life scores according to the Moorehead-Ardelt (M-A) Quality of Life Questionnaire**

|  |  |  |  |
| --- | --- | --- | --- |
| **M-A QOL parameters** | **Elderly** | **Control** | **P value** |
| score ± SD | score ± SD |
| **Self esteem** | 0.67±0.46 | 0.60±0.46 | 0.336 |
| **Enjoyment of physical activities** | 0.35±0.21 | 0.34±0.23 | 0.844 |
| **Satisfactory social contacts** | 0.11±0.20 | 0.15±0.23 | 0.321 |
| **Ability to work** | 0.18±0.23 | 0.17±0.23 | 0.786 |
| **Pleasure of sex** | 0.04±0.18 | 0.16±0.24 | **<0.001** |

**Table 6: Odds ratio for bariatric surgery failure\* for all participants at time of interview - multivariate logistic regression model**

|  |  |  |
| --- | --- | --- |
| **Variable** | **OR****(95% CI)** | **P value**  |
| Age upon surgery (1- older than 65) | 1.13(0.33-3.8) | .846 |
| Gender (1- male) | 2.94(0.88-9.79) | .079 |
| Period of follow-up with band (in years) | 0.91(0.72-1.14) | 0.403 |
| Would the patient undergo the operation again (1- yes) | 0.04(0.01-0.12) | **<0.001** |

\* Failure in this model was defined by a score of <1 in total BAROS score