

Cost-effectiveness and outcomes of robot-assisted vs laparoscopic bariatric procedures in super obese patients: a propensity score matching analysis from a high-volume center

RESULTS

Overall Patients	Total	Laparoscopic group	Robot-assisted group	p-value
Number of patients	80	40	40	
Mean BMI ($\pm$ SD), kg/m ²	55.4 $\pm$ 4.9	55.7 $\pm$ 5.3	55.1 $\pm$ 4.6	0.542
Mean operative time ($\pm$ SD) , min	152.7 $\pm$ 65.1	107.1 $\pm$ 38.2	198.3 $\pm$ 66.1	0.001
Intraoperative complications (yes/no)	0	0	0	1
Postoperative total complications (yes/no)	5 (6.2%) / 75 (93.8%)	1(2.5%) / 39 (97.5%)	4(10%) / 36 (90%)	0.166
Postoperative minor complications (yes/no)	2 (2.5%) / 78 (97.5%)	0	2 (5%) / 38 (95%)	0.154
Postoperative major complications (yes/no)	3 (3.7%) / 77 (96.3%)	1(2.5%) / 39 (97.5%)	2 (5%) / 38 (95%)	0.558
Post-operative ICU (yes/no)	4 (5%) / 76 (95%)	0	4(10%) / 36 (90%)	0.041
Median post-operative hospital stay (IQR) , days	3 (2 – 4)	3 (3 – 4)	3 (2 – 4)	0.469
Readmissions (yes/no)	0	0	0	1
Mean Overall cost ($\pm$ SD), euros	6155.3 $\pm$ 2768.3	3507.9 $\pm$ 910.9	8116.3 $\pm$ 1888.7	0.001

BMI >60	SSO L-SADI-S group	SSO R-SADI-S group	p-value
Number of patients	7	7	
Male/Female	4 (57.1%)/ 3 (42.9%)	3 (42.9%) / 4 (57.1%)	0.606
Mean BMI ($\pm$ SD), kg/m ²	64.6 $\pm$ 3.1	62.9 $\pm$ 2.9	0.267
Preoperative Comorbidity (yes/no)	6 (85.7%) / 1 (14.3%)	5 (71.4%) / 2 (28.6%)	0.393
Mean operative time ($\pm$ SD), min	152.6 $\pm$ 26.2	172.7 $\pm$ 24.1	0.107
Post-operative ICU (yes/no)	1 (14.3%)/6 (85.7%)	0	0.317
Median post-operative hospital stay (IQR), days	3 (2 – 4)	2 (2 – 4)	0.374
Mean overall cost ($\pm$ SD), euros	3710.6 $\pm$ 770.3	7632.9 $\pm$ 1412.8	0.001

CONCLUSIONS

In our experience, robot-assisted and laparoscopic approach to bariatric surgery are comparable in terms of postoperative complications in SO and SSO patients. Nevertheless, despite the higher costs, robotic surgery may add a noteworthy value for the treatment of challenging patients, especially in an economically sustainable model.

METHODS

