Adolescent vs Adult 30-Day Outcomes After Sleeve Gastrectomy

Ghadeer N Shnawa, MBChB; **Josélio Rodrigues de Oliveira Filho, MD**; Cornelia L Griggs, MD, MPH
Massachusetts General Hospital, Harvard Medical School, Boston, MA

BACKGROUND

•Metabolic and surgical care in adolescents presents unique challenges for health systems, clinicians, and families.

•Sleeve gastrectomy has become the predominant bariatric approach in U.S. adolescents.

•Defining short-term outcome differences after sleeve gastrectomy between adolescents and adults is increasingly important.

•We compared 30-day postoperative complications between adolescents (<20 years) and adults (≥20 years) in a recent national cohort.

METHODS

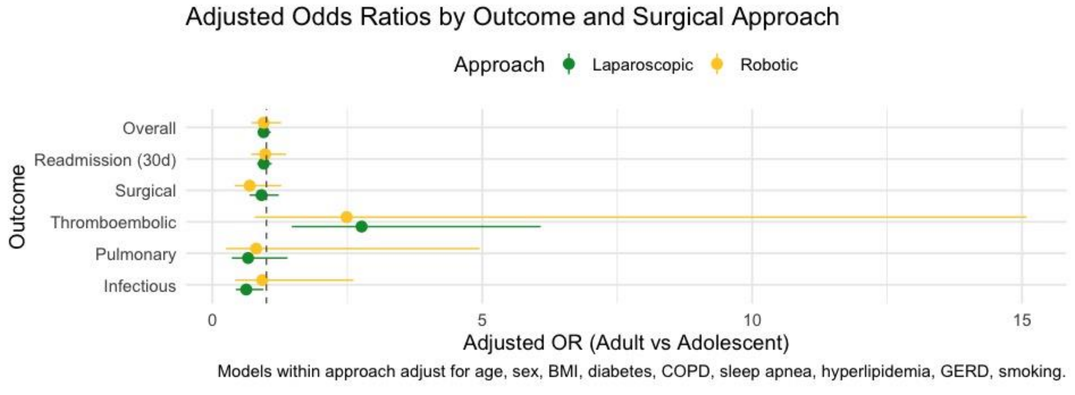
•**Data source:** MBSAQIP, 2015 to 2023.
•**Inclusion:** Primary sleeve gastrectomy cases.
•**Exposure:** Age group
  •Adolescent: <20 years
  •Adult: ≥20 years

•**Outcomes:**
  •Infectious
  •Pulmonary
  •Thromboembolic
  •Surgical
  •Readmission
  •Overall composite

•**Analysis:**
  •Covariate-adjusted logistic regression models run within surgical approach:
    •Laparoscopic
    •Robotic
  •Models adjusted for age, sex, BMI, diabetes, COPD, sleep apnea, hyperlipidemia, GERD, and smoking.

Overall short-term complications are comparable across domains for adolescents and adults undergoing SG.

Adults had higher thromboembolic risk than adolescents.



RESULTS

1,113,417 sleeve gastrectomy cases (MBSAQIP 2015–2023)

	Adolescent (<20)	Adult (≥20)
Laparoscopic	N = 8,640 (age 18.1, BMI 46.9, 74.1% F)	N = 910,870 (age 44.0, BMI 44.8, 80.4% F)
Robotic	N = 1,717 (age 18.1, BMI 47.8, 77.4% F)	N = 192,190 (age 43.6, BMI 45.2, 81.4% F)

Laparoscopic: Adjusted ORs (Adult vs Adolescent)

Outcome	Adjusted OR (95% CI)
Thromboembolic	2.76 (1.47–6.08)
Infectious	0.63 (0.43–0.95)
Readmission (30d)	0.95 (0.83–1.10)
Overall	0.95 (0.84–1.08)
Pulmonary	0.66 (0.36–1.39)
Surgical	0.91 (0.69–1.23)

Robotic: No statistically significant differences between adults and adolescents across all outcome domains

CONCLUSION

After sleeve gastrectomy, adults had higher thromboembolic risk than adolescent patients in laparoscopic procedures, with a similar but non-significant trend in robotic cases; infectious complications were lower in adults for laparoscopic cases after adjustment, and readmission and overall complications were comparable. These findings support vigilant venous thromboembolism prevention in adults, while reassuring that overall short-term outcomes are comparable for most domains.

Mass General Brigham

HARVARD UNIVERSITY