

Impact of Preoperative Glucagon-like peptide-1 Receptor Agonists on Postoperative Outcomes Following Sinus Surgery

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Introduction / Background

GLP-1 receptor agonists (GLP-1 RAs) are increasingly used for obesity management, but their impact on outcomes following sinus surgery remains poorly characterized.

Objective / Purpose

Evaluate the association between preoperative GLP-1 RA use and postoperative outcomes after sinus surgery in adults with CRSwNP and obesity.

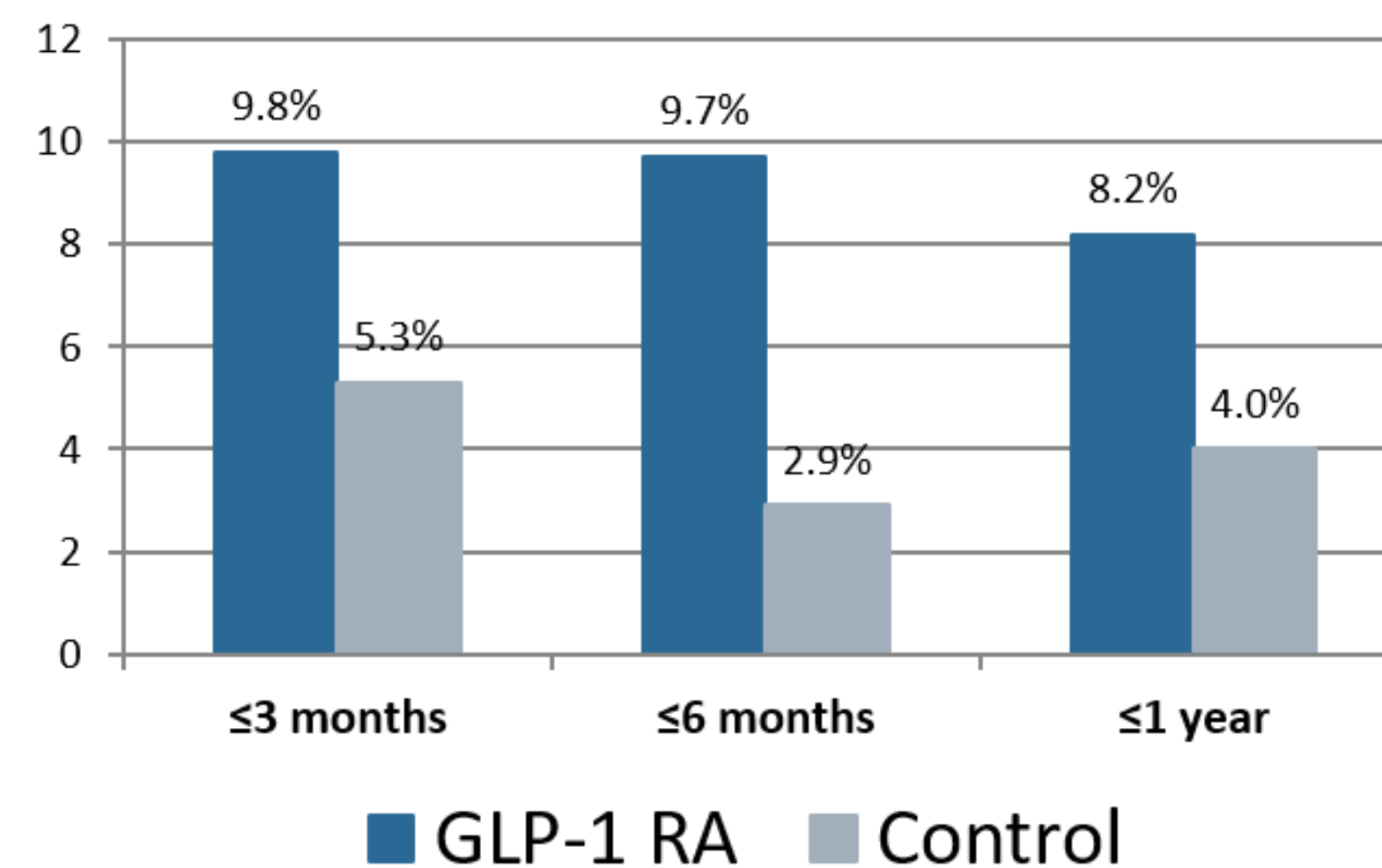
Methods

Design	Multicenter retrospective cohort
Data	TriNetX; 44 U.S. healthcare organizations
Population	Adults ≥18 years with CRSwNP, obesity (BMI ≥30 kg/m ²), and sinus surgery
Exposure	GLP-1 RA use within 3 months, 6 months, or 1 year preoperatively
Matching	Propensity score matching for asthma and allergic rhinitis
Follow-up	Postoperative outcomes assessed up to 2 years

Results

PRIMARY RESULT: POSTOPERATIVE EPISTAXIS

GLP-1 RA exposure was associated with increased epistaxis across all evaluated preoperative exposure windows.



Underlying event counts

Exposure	GLP-1 RA	Control
≤3 mo	25/255 (9.8%)	14/264 (5.3%)
≤6 mo	36/373 (9.7%)	11/382 (2.9%)
≤1 yr	41/497 (8.2%)	20/499 (4.0%)

≤3 months **RR 1.85**
95% CI 1.01–3.48

≤6 months **RR 3.35**
95% CI 1.73–6.49

≤1 year **RR 2.06**
95% CI 1.22–3.46

Secondary Findings

CONTROL OF NASAL HEMORRHAGE
RR 2.21
22/533 vs <10/535
95% CI 1.06–4.62

BIOLOGIC THERAPY ≤3 MO
RR 2.13
11.8% vs 5.5%
95% CI 1.15–3.93

NO INCREASED RISK OBSERVED

- ✓ CSF leak
- ✓ Anosmia
- ✓ Orbital injury
- ✓ Revision sinus surgery

Conclusion

Preoperative GLP-1 RA use was associated with increased postoperative epistaxis, while major surgical complications and revision surgery were not increased.

Interpretation

- The association with epistaxis was observed across three overlapping exposure definitions.
- Increased control of nasal hemorrhage supports a postoperative bleeding signal.
- These retrospective associations do not establish causality; mechanisms and perioperative implications require further study.



Title Text/Name of Presentation

Presenter's Name, Additional Names
Department of
at The University of Texas Medical Branch (UTMB), Galveston, Texas

Introduction

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Photo or Graphic

References

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