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# The Safety of GLP1 Receptor Agonist Usage in Mohs Micrographic Surgery Patients

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*To the Editor,*

Glucagon-like peptide-1 receptor agonists (GLP1-RAs) are widely prescribed for type 2 diabetes and, more recently, for obesity management.[2] With their expanding use, questions have emerged regarding perioperative safety. Delayed wound healing, fat necrosis, and tissue fragility have been described in breast reconstruction, and nausea and vomiting are well-documented perioperative effects.[1,2] To our knowledge, no large-scale study has evaluated postoperative outcomes in dermatologic surgery among patients using GLP1-RAs.

We conducted a retrospective cohort study using TriNetX, a federated health record network including over 130 million patients from more than 70 U.S. healthcare organizations. Adult patients undergoing Mohs micrographic surgery (MMS) between 2015 and 2025 were identified using CPT codes. Two cohorts were generated: patients with ≥6 months of continuous GLP1-RA use prior to surgery, and patients with no history of GLP1-RA prescriptions. Six months of exposure was chosen based on existing literature suggesting that this threshold reflects peak GLP1-RA effects.[3]

One-to-one propensity score matching was used to balance cohorts by age, sex, race, BMI, diabetes status, cardiovascular risk factors, and immunosuppressive medication use. After matching, each cohort included 4,912 patients. Postoperative outcomes were identified within 60 days of MMS using ICD-

**TABLE 1.**

**Outcomes Within 60 Days of Mohs Micrographic Surgery in Patients With and Without GLP1-RA Use**

| Outcome | GLP n (%) | Controls n(%) | Odds Ratio (95% CI) | *P*-value |
|---|---|---|---|---|
| Cellulitis | 78 (1.59%) | 71 (1.45%) | 1.100 (0.796–1.521) | 0.563 |
| Infections of skin/SQ tissue | 161 (3.28%) | 141 (2.87%) | 1.147 (0.911–1.443) | 0.242 |
| Disruption of wound | 35 (0.71%) | 38 (0.77%) | 0.920 (0.581–1.459) | 0.725 |
| Hemorrhage | 16 (0.33%) | 13 (0.26%) | 1.232 (0.592–2.563) | 0.577 |
| Muscle weakness | 29 (0.59%) | 17 (0.35%) | 1.710 (0.938–3.116) | 0.076 |
| Disturbances of skin sensation* | 80 (1.63%) | 48 (0.98%) | 1.678 (1.170–2.405) | 0.004 |
| Rash | 36 (0.73%) | 40 (0.81%) | 0.899 (0.572–1.413) | 0.645 |
| Swelling/mass/lump | 38 (0.77%) | 40 (0.81%) | 0.950 (0.608–1.483) | 0.820 |
| Hypertrophic scar | 21 (0.43%) | 24 (0.49%) | 0.874 (0.486–1.573) | 0.654 |
| Procedure-related infection | 37 (0.75%) | 31 (0.63%) | 1.195 (0.740–1.929) | 0.465 |
| Mohs additional stage | 2,109 (42.93%) | 2,169 (44.15%) | 0.952 (0.879–1.031) | 0.222 |
| Nausea/vomiting* | 117 (2.38%) | 75 (1.53%) | 1.574 (1.174–2.109) | 0.002 |

Statistical significance is designated as $P<.05$; all statistically significant values are designated with *. CI, confidence interval; GLP1-RA, glucagon-like peptide-1 receptor agonist; Intraop, intraoperative; No., number; SQ, subcutaneous.

10 codes for clinical complications and CPT codes consistent with prior administrative data studies.[4] Odds ratios (ORs) with 95% confidence intervals (CIs) were calculated using TriNetX analytics.

The matched cohorts were similar across key clinical and demographic variables. The mean age was 68.5 years (±9.2) in the GLP1-RA group and 68.6 years (±9.6) in the control group. The majority were male (61.4% vs 62.5%) and White (94.9% vs 96.0%). Rates of obesity were also similar between groups, with 66.2% of GLP1-RA users and 65.9% of controls having BMI >30. Diabetes mellitus was present in 87.6% of GLP1-RA users and 87.5% of controls. Other comorbidities such as nicotine dependence (12.7% vs 12.2%), hypothyroidism (23.6% vs 23.7%), and use of anticoagulants (53.0% vs 53.3%) or immunosuppressive medications were well matched, with all standardized differences <0.05.

Within 60 days of Mohs micrographic surgery, GLP1-RA users were more likely than controls to experience disturbances of skin sensation (1.63% vs 0.98%; OR 1.68, 95%CI 1.17–2.41; *P*=.004). Postoperative nausea and vomiting, a known adverse effect of GLP1-RA therapy, was also more common (2.38% vs 1.53%; OR 1.57; 95% CI 1.17–2.11; *P*=.002). No significant differences were observed for cellulitis, infections of skin and subcutaneous tissue, wound disruption, hemorrhage, rash, swelling, hypertrophic scar formation, or the need for additional stages or blocks during MMS (all *P*>0.05). Rare complications including pigmentary changes, gangrene, skin graft complications, intraoperative or postoperative hemorrhage, hematoma, and seroma each occurred in ≤0.4% of patients and did not differ significantly between groups. Rates of intralesional injection and procedure-related infection were also comparable.

The observed increase in postoperative sensory disturbance may indicate subtle perioperative effects of GLP1-RAs, though the clinical significance remains unclear. GLP1-RAs have been reported to influence peripheral nerve signaling in other contexts, such as diabetic neuropathy, through combined metabolic and anti-inflammatory mechanisms.[5] Whether these effects underlie the sensory findings after dermatologic surgery is unknown and warrants further study. The increased incidence of nausea and vomiting, a well-recognized effect of GLP1-RA therapy, provides internal validity and supports the accuracy of outcome detection. These findings support the continued use of GLP1-RAs in dermatologic surgery, while highlighting the need for further studies exploring formulation-specific risks, perioperative symptom management, and potential sensory effects.

## DISCLOSURES

The authors have no conflicts of interest to disclose.

**Data Availability Statement:** Data is available through the online dataset: https://live.trinetx.com/

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