

Suprazygomatic Maxillary Nerve Block Reduces Postoperative Inpatient Opioid Requirement in Patients Undergoing Palatoplasty

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Purpose

- Identify the association between the suprazygomatic maxillary nerve block and **postoperative inpatient opioid requirement** following cleft palate repair

Methods

- Design:** Retrospective cohort study
- Inclusion:** Patients with isolated cleft palate or cleft lip and palate undergoing palatoplasty (2006–2025)
- Outcome measure:** Opioid use measured in morphine milligram equivalents (MME) in the first 8 hours after surgery
- Analysis:** Multivariate regression adjusting for age, sex, Veau class, and surgical approach ($p < 0.05$ considered significant)

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FIGURE 1 Injection Technique for Suprazygomatic Maxillary Nerve Block Using 0.5% Bupivacaine

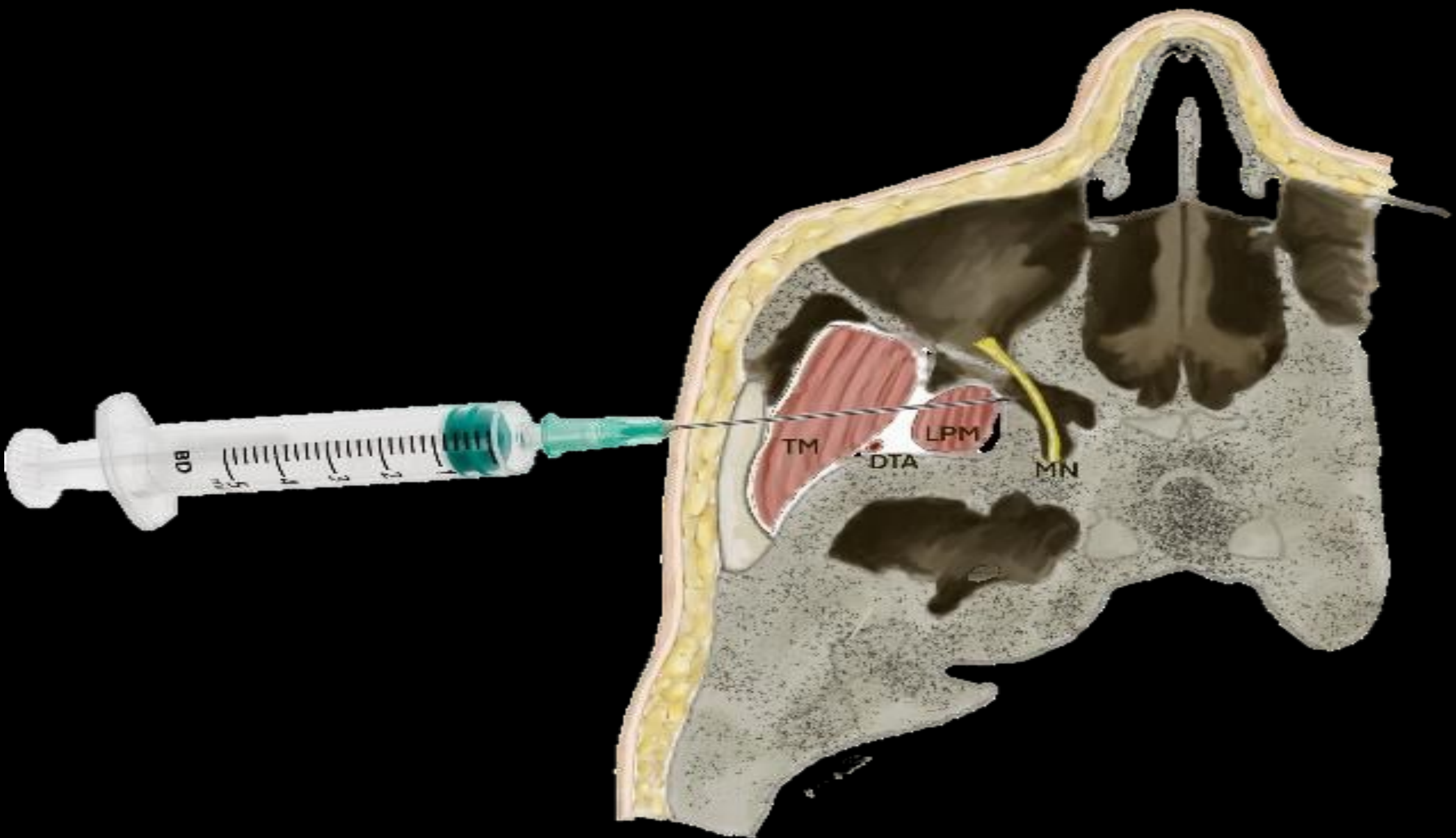


TABLE 1 Multivariate Regression Analysis for Opioid Requirement in the First Eight Hours After Palatoplasty

Variable	Odds Ratio (OR)	P-value
Nerve Block	0.54 (0.34-0.87)	0.011*
Age	1.21 (1.10-1.34)	<0.001*
Sex (ref: male)	1.59 (0.98-2.59)	0.059
Veau Class	0.80 (0.62-1.04)	0.093
Technique (ref: straight line repair)	0.73 (0.41-1.02)	0.06

Results

- Cohort:** 470 patients total; 235 nerve block vs. 235 control
- Operative details:** No difference in operative time (1.8 vs. 1.6 hours, $p=0.35$) or length of stay (1.6 vs. 1.4 days, $p=0.18$)
- Opioid use (0–8 hrs):** Lower in nerve block group (3.67 vs. 4.45 MME, $p=0.006$)
- Regression analysis:** Nerve block independently associated with reduced opioid use (OR 0.54, 95% CI 0.34–0.87, $p=0.011$); no block-related complications observed

Conclusion

- The suprazygomatic maxillary nerve block **reduces early postoperative opioid requirements** in cleft palate repair
- May support reduced inpatient analgesia and has potential for expanded outpatient pain control strategies