Reimagining Pain Management: SZM Nerve Block in Pediatric Adenotonsillectomy

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Dear Editor! With approximately 289,000 procedures performed in 2010 alone, adenotonsillectomy is one of the most common surgeries among the pediatric patient population (1). Despite its reputation for favorable perioperative outcomes, a substantial body of research indicates that adenotonsillectomy is also one of the most painful pediatric surgeries (2). The current insufficient and potentially unsafe treatment options for managing postoperative pain after adenotonsillectomy compel patients to resort to high doses of opioids, posing long-term adverse effects. In this critical context, suprazygomatic maxillary (SZM) nerve block, an intricate anesthetic technique, emerges as a promising solution.

An SZM nerve block is a regional anesthesia technique predominantly employed to provide analgesia for surgeries involving the midface, such as procedures on the maxillary sinus, upper lip, and upper teeth. This anesthetic nerve block targets the maxillary nerve (V2), which is the second branch of the trigeminal nerve (cranial nerve V).

A recently published randomized clinical trial in JAMA Otolaryngology-Head & Neck Surgery evaluated the SZM nerve block for patients undergoing adenotonsillectomy. This first-of-its kind, groundbreaking trial demonstrated that SZM block was effective in minimizing postoperative pain and significantly reducing postoperative opioid consumption (3). Furthermore, the SZM nerve block also had a higher opioid-free postanesthesia care unit (PACU) stay compared with placebo, reflecting its efficacious impact on postoperative opioid utilization (3). These findings are corroborated by a case report by Smith et al., which showed clinically meaningful analgesic benefit from SZM nerve block for adenoidectomy and tonsillectomy, as the patient did not require any postoperative opioid drugs (4).

Opioids remain a major part of postoperative pain management for pediatric patients after adenotonsillectomy. However, the black box warning and contraindication statements from the US Food and Drug Administration stress that opioids are known to result in serious postoperative consequences, including respiratory depression and even death (5). The SZM nerve block offers a highly effective and safe alternative for managing postoperative pain in these patients. To fully establish if the SZM nerve block is the silver bullet for opioid-free postoperative pain management, more clinical trials with larger patient populations are required. Adopting this technique could address the urgent need for safer pain management methods in pediatric surgery, as well as improve recovery outcomes and patient safety.

Keywords: adenotonsillectomy, suprazygomatic maxillary nerve block, opioids, analgesia

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