

## **CONTINUOUS WOUND INFUSION VERSUS PERIPHERAL NERVE BLOCK TECHNIQUES FOR AURICULAR RECONSTRUCTION POSTOPERATIVE PAIN MANAGEMENT**

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**Background:** The use of autologous rib graft during auricular reconstruction for microtia has the advantages of inherent biocompatibility and long-term stability. However, the associated postoperative pain is a significant concern, and effective pain control is essential. We aimed to evaluate the effects of paravertebral nerve block (PVB), erector spinae plane block (ESP), and continuous wound infusion (CWI) on postoperative outcomes.

**Materials/Methods:** Patients undergoing the first stage of reconstruction using the Nagata technique at a tertiary care academic institution, from 2016-2020, were included. All patients received a multimodal pain control regimen consisting of anesthetic blocks or placement of a CWI catheter with ropivacaine 0.5%, followed by IV or PO acetaminophen, NSAIDs and opioids. The demographic distribution, pain scores, opioid utilization as measured in morphine milligram equivalent/kg (MME/kg), and hospital length of stay (LOS) were compared for patients receiving either CWI, PVB, or ESP.

**Results:** Twenty-two patients were included: PVB (6), ESP (5), and CWI (11). The mean age was 11.6 years (SD, 2.9; range, 9-17), and 11 (50%) were female. The CWI group utilized the lowest amount of opioids when compared to PVB and ESP (0.1 vs. 1.63 vs. 0.92,  $p = .0004$ ). There was no difference in pain scores or hospital LOS among the groups.

**Conclusions:** Children receiving CWI had significantly lower opioid consumption and comparable pain and LOS as compared to ESP and PVB. More studies are needed to refine a multimodal, opioid-sparing analgesic strategy for this procedure.

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