

Intraoperative Nerve Blocks Fail to Improve Quality of Recovery after Tissue Expander Breast Reconstruction: A Prospective, Double-Blinded, Randomized, Placebo-Controlled Clinical Trial

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Background: The authors' study represents the first level I evidence to assess whether intraoperative nerve blocks improve the quality of recovery from immediate tissue expander/implant breast reconstruction.

Methods: A prospective, randomized, double-blinded, placebo-controlled clinical trial was conducted in which patients undergoing immediate tissue expander/implant breast reconstruction were randomized to either (1) intraoperative intercostal and pectoral nerve blocks with 0.25% bupivacaine with 1:200,000 epinephrine and 4 mg of dexamethasone or (2) sham nerve blocks with normal saline. The 40-item Quality of Recovery score, pain score, and opioid use in the postoperative period were compared statistically between groups. Power analysis ensured 80 percent power to detect a 10-point (clinically significant) difference in the 40-item Quality of Recovery score.

Results: Forty-seven patients were enrolled. Age, body mass index, laterality, mastectomy type, and lymph node dissection were similar between groups. There were no statistical differences in quality of recovery, pain burden as measured by visual analogue scale, opioid consumption, antiemetic use, or length of hospital stay between groups at 24 hours after surgery. Mean global 40-item Quality of Recovery scores were 169 (range, 155 to 182) for the treatment arm and 165 (range, 143 to 179) for the placebo arm ($p = 0.36$), indicating a high quality of recovery in both groups.

Conclusion: Although intraoperative nerve blocks can be a safe adjunct to a comprehensive postsurgical recovery regimen, the authors' results indicate no effect on overall quality of recovery from tissue expander/implant breast reconstruction. (*Plast. Reconstr. Surg.* 141: 590, 2018.)

CLINICAL QUESTION/LEVEL OF EVIDENCE: Therapeutic, I.

Women undergoing breast reconstruction have been shown to have a significantly higher level of acute postoperative pain and postoperative narcotic requirement compared

with women who undergo mastectomy alone without reconstruction.^{1,2} The intensity of pain in the immediate postoperative period has been implicated as an important factor predisposing

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