Effect of Dexmedetomidine Added to Modified Pectoral Block on Postoperative Pain and Stress Response in Patient Undergoing Modified Radical Mastectomy

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Abstract:

Background: The most common surgical procedure for breast cancer is the modified radical mastectomy (MRM), but it is associated with significant postoperative pain. Regional anesthesia can reduce the stress response associated with surgical trauma. Objectives: Our aim is to explore the efficacy of 1 μg/kg dexmedetomedine added to an ultrasound (US)-modified pectoral (Pecs) block on postoperative pain and stress response in patients undergoing MRM. Study Design: A randomized, double-blind, prospective study. Setting: An academic medical center. Methods: Sixty patients with American Society of Anesthesiologists (ASA) physical status I–II (18–60 years old and weighing 50–90 kg) scheduled for MRM were enrolled and randomly assigned into 2 groups (30 in each) to receive a preoperative US Pecs block with 30 mL of 0.25% bupivacaine only (group 1, bupivacaine group [GB]) or 30 mL of 0.25% bupivacaine plus 1 μg/kg dexmedetomidine (group II, dexmedetomidine group [GD]). The patients were followed-up 48 hours postoperatively for vital signs (heart rate [HR], noninvasive blood pressure [NIBP], respiratory rate [RR], and oxygen saturation [Sao2]), visual analog scale (VAS) scores, time to first request of rescue analgesia, total morphine consumption, and side effects. Serum levels of cortisol and prolactin were assessed at baseline and at 1 and 24 hours postoperatively. Results: A significant reduction in the intraoperative HR, systolic blood pressure (SBP), and diastolic blood pressure (DBP) starting at 30 minutes until 120 minutes in the GD group compared to the GB group (P

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