

Randomized Controlled Trial of Ultrasound Guided Bilateral Intermediate Cervical Plexus Block in Thyroid Surgery

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Abstract : Introduction: Thyroidectomies are extensive surgeries involving a significant degree of tissue handling and dissection and are associated with considerable postoperative pain. Regional anaesthesia techniques have emerged as possible inexpensive and safe alternatives to opioids in the management of pain after thyroidectomy. The front of the neck is innervated by branches from the cervical plexus, and hence, several approaches for superficial and deep cervical plexus block (CPB) have been described to provide postoperative analgesia after neck surgery. However, very few studies have explored the analgesic efficacy of intermediate CPB for thyroid surgery. In this study, we have evaluated the effects of ultrasound-guided bilateral intermediate CPB on perioperative opioid consumption in patients undergoing thyroidectomy under general anaesthesia. Methods: In this prospective randomized controlled study, fifty ASA grade I-II adult patients undergoing thyroidectomy were randomly divided into two groups: the study group received ultrasound-guided bilateral intermediate CPB with 10 ml 0.5% ropivacaine on each side, while the control group received the same block with 10 ml normal saline on each side just after induction of anaesthesia. Anaesthesia was induced with propofol, fentanyl, and vecuronium and maintained with propofol infusion titrated to maintain the BIS between 40 and 60. During the postoperative period, rescue analgesia was provided with PCA fentanyl, and the pain scores, total fentanyl consumption, and incidence of nausea and vomiting during 24 hours were recorded, and overall patient satisfaction was assessed. Results: The groups were well-matched with respect to age, gender, BMI, and duration of surgery. The difference in intraoperative propofol and fentanyl consumption was not statistically significant between groups. However, the intraoperative haemodynamic parameters were better maintained in the study group than in the control group. The postoperative pain scores, as measured by VAS at rest and during movement, were lower, and the total fentanyl consumption during 24 hours was significantly less in the study group as compared to the control group. Patients in the study group reported better satisfaction scores than those in the control group. No adverse effects of ultrasound-guided intermediate CPB block were reported. Conclusion: We concluded that ultrasound-guided intermediate cervical plexus block is a safe and effective method for providing perioperative analgesia during thyroid surgery.

Keywords : thyroidectomy, cervical plexus block, pain relief, opioid consumption

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