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Comparison of continuous fentanyl infusion analgesia with bilateral erector spinae plane block for perioperative pain management in thoracic surgery in pediatric patients

Background. Continuous fentanyl infusion analgesia (FIA) is compared with erector spinae plane (ESP) block for the perioperative pain management in patients undergoing thoracic surgery for the quality of analgesia, incentive spirometry, ventilator duration, and intensive care unit (ICU) duration. **Materials and methods.** A total of 18 patients were enrolled, who were divided to either Group A: FIA (n = 9) or Group B: ESP block (n = 9). Visual analog scale (VAS) was recorded in both the groups during rest and cough at the various time intervals postextubation. Both the groups were also compared for incentive spirometry, ventilator, and ICU duration. Statistical analysis was performed using the independent Student's t-test. A value of $P < 0.05$ was considered statistically significant. **Results.** Comparable VAS scores were revealed at 0 h, 3 h, 6 h, and 12 h ($P > 0.05$) at rest and during cough in both the groups. Group A had a statistically significant VAS score than Group B ($P \leq 0.05$) at 24 h, 36 h, and 48 h but mean VAS in either of the Group was ≤ 4 both at rest and during cough. Incentive spirometry, ventilator, and ICU duration were comparable between the groups. **Conclusions.** ESP block is easy to perform and can serve as a promising alternative to FIA in optimal perioperative pain management in pediatric thoracic surgery.

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Ultrasound guided bilateral erector spinae plane block for acute post-surgical pain in patients after thoracic trauma

Background. The purpose was to examine the analgesic efficacy of bilateral erector spinae plane (ESP) block compared with conventional treatment for pain after thoracic trauma. **Materials and methods.** 27 patients with thoracic trauma were divided into 2 groups. Patients in group 1 (ESP block group, n = 13) received ultrasound-guided bilateral ESP block with 3 mg/kg of 0.375% ropivacaine before anesthesia induction at the T6 transverse process level. Patients in group 2 (acetaminophen and morphine group, n = 14) received acetaminophen (15 mg/kg every 6 hours — maximum 1 g) and morphine (10 mg every 8 hours) intravenously in the postoperative period. The primary study outcome was to evaluate pain at rest using an 10-point numeric rating scale (NRS). Mann — Whitney U-test was used for comparing NRS scores. **Results.** The postoperative pain level after extubation and duration of analgesia during which NRS was < 4 of 10 was compared between the groups. The median pain score at rest after extubation in group 1 was 0 of 10 until hour 6, 3 of 10 at hour 8, and 4 of 10 at hours 10 and 12 postextubation. These were significantly less in comparison with group 2 ($p = 0.0001$). Patients in group 1 had a significantly higher mean duration of analgesia (10.18 ± 0.28 hours), during which NRS was < 4 of 10, compared with group 2 (5.04 ± 0.12 hours) ($p = 0.0001$). **Conclusions.** ESP block safely provided significantly better pain relief at rest for longer duration as compared to intravenous acetaminophen and morphine.