

## البحث الرابع

### **Analgesic Efficacy of Erector Spinae Plane Block Compared with Intrathecal Morphine After Elective Cesarean Section: A Prospective Randomized Controlled Study**

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#### **Abstract**

**Background:** We aimed to assess the efficacy of ultrasound-guided bilateral erector spinae plane block (ESPB) compared to intrathecal morphine (ITM) for analgesia after elective cesarean delivery under spinal anesthesia. **Methods:** In total, 140 parturients scheduled for elective cesarean section under spinal anesthesia were randomly allocated into two equal groups. The ESPB-group received 10 mg hyperbaric bupivacaine intrathecally through spinal anesthesia, followed by an ESPB at the ninth thoracic transverse process with 20 mL of 0.5% bupivacaine immediately after the operation. The ITM-group received 10 mg hyperbaric bupivacaine with 100 mcg morphine intrathecally through spinal anesthesia, followed by a sham block at the end of the surgery. The visual analogue scale (VAS) score for pain at several postoperative time points, total opioid consumption, and time to the first analgesic request were evaluated. Statistical analysis was performed with the independent t-test and linear mixed-effects models. The Kaplan–Meier estimator and the log-rank test were used to compare the primary and secondary outcomes of the groups.

**Results:** No significant differences were observed between the groups regarding patient characteristics; in the post-operative period (0–24 hrs), VAS scores (at rest) were, on average, 0.25 units higher in the ITM group. The total tramadol consumption in the first 24 hrs was significantly higher in the ITM group than in the ESPB group ( $101.71 \pm 25.67$  mg vs  $44 \pm 16.71$  mg, respectively). The time to the first analgesic request was  $4.93 \pm 0.82$  hrs in the ITM group and  $12 \pm 2.81$  hrs in the ESPB group. Patient satisfaction did not differ significantly.



**Conclusion:** ESPB has a successful postoperative analgesic effect and may limit opioid consumption in parturients undergoing elective caesarean delivery.

**Keywords:** erector spinae plane block, intrathecal morphine, cesarean, analgesia