



Fayoum University  
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جامعة الفيوم  
كلية الطب  
قسم التخدير

## البحث الخامس

- عنوان البحث باللغة الانجليزية:

**The Efficacy of Erector Spinae Plane Block Compared with Intrathecal Morphine in Postoperative Analgesia in Lumbar Spine Surgery Patients: A Double-Blind Prospective Comparative Study.**

- نوع البحث :

بحث مشترك منشور مشتق من رساله ماجستير د ضحي حمد مصري ولم يسبق تقييمه .

المشرفين علي البحث حسب الترتيب:

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- مكان و تاريخ النشر:

-Pain Physician. 2023; 26:149-159.

ملخص البحث باللغة الانجليزية:

**Background:**

Severe postoperative pain is experienced by most of spine surgery patients. Erector spinae plane block (ESPB) is a successful method for postoperative analgesia with minor complications. Intrathecal morphine (ITM) demonstrates high efficacy for analgesia up to 24 hours after surgery. The ESPB and ITM for postoperative analgesia in lumbar spine surgeries have never been compared in prior studies.

**Objectives:**

This study aimed to compare the effectiveness of ESPB and ITM in postoperative analgesia after lumbar spine surgeries.

**Methods:**

On 82 adults, a prospective randomized double-blinded interventional trial was performed, with 41 patients in each group. In the ESPB group, a 0.25 % bupivacaine injection was used to execute bilateral ultrasound-guided ESPB. In the morphine group, an injection of 0.3 mg morphine intrathecally was done. The Visual analog scale (VAS) was recorded as the primary outcome. The time to the first analgesic request, intra and postoperative opioid consumption, hemodynamics, sedation score, and complications were also recorded as secondary outcomes.

**Setting:**

This study was performed at Al Fayoum University Hospitals after being confirmed by the local institutional ethical committee (80) with approval number (M520) and retrospectively registered at clinical trial.gov number (NCT05123092).

**Results:**

**Postoperative VAS scores were significantly lower in the intrathecal group throughout the postoperative period until 48 hours in all recorded study time points ( $p < 0.001$ ). Time to the first rescue analgesia and doses of postoperative analgesic requirement were significant, with a p-value of 0.000. Significant differences were found in the postoperative oxygen saturation up to 24 hours ( $p$ -value  $< 0.001$ ) and the sedation score up to 6 hours ( $p < 0.01$ ). A higher incidence of complications was recorded in the ITM group ( $p = 0.000$ ).**

**Conclusion: We concluded that 0.3 mg morphine injected intrathecally in the ITM group patients provides more potent analgesia up to 48 hours postoperatively than the ESPB group patients regarding VAS score, durations, and doses of analgesic requirements.**