

Lateral Quadratus Lumborum Block versus Transversus Abdominis Plane Block in Laparoscopic Surgery: A Randomized Controlled Study

Abstract:

Background

Although post operative pain after laparoscopy is lesser than in open operative techniques, the abdomen stiffness from the pneumoperitoneum (achieved as a step of the laparoscopic approach) and operative treatments may cause severe postoperative pain that will affect the patient satisfaction and the outcome of the surgery.

objectives:

After laparoscopic abdominal surgery, we aim to evaluate the analgesic efficiency of US-directed bilateral transversus abdominis plane block (TAPB) and quadratus lumborum block (QLB).

Setting:

This study was performed at Al Fayoum University Hospital after being confirmed by the local institutional ethical committee (#80) with approval number M421 and retrospectively registered at clinicaltrials.gov number (NCT04553991)

Methods:

50 patients aged 18–60 years listed for elective laparoscopic abdomen operation were registered in this study. Cases were randomly allocated into two similar groups: TAPB and QLB groups. The first outcome was the growing morphine consumption on the 1st day postoperatively. The second outcome involved VAS score, Time to first analgesic request, and any postoperative complications.

Results:

The median cumulative morphine consumptions on the 1st day were high significantly in the TAPB group than in the QLB group (6 mg vs. 3 mg , p value ≤ 0.0001). The QLB group showed an increase in the median of the time to the first analgesic request in comparison with the TAPB group (17 hours vs. 8 hours , $p \leq 0.001$). In addition, on the 1st day, the mean VAS scoring at rest was lower in the QLB group.

Conclusions:

In comparison to the TAPB, the QL block delivers more successful pain relief, has an extended period of analgesic actions, extends interval to the 1st analgesic necessity, is accompanied with lesser morphine consumptions, and may be utilized in multimodal analgesia and opioid-sparing regimens after that laparoscopic operation.