

Postoperative Analgesia after Laparoscopic Cholecystectomy - Prospective, Randomized, Double Blind, Control Trial

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Abstract

In this prospective, randomized, double blind control trial we aim to investigate which of the most used analgesic techniques after laparoscopic cholecystectomy is the most efficient.

Methods: This study included 81 patients that were randomly distributed into 3 groups using a computer-generated random number which was enclosed in a sealed envelope: group A (control) received classic multimodal iv opioid analgesia, group B received Tap block in oblique subcostal approach (OSTAP) and group C received local anesthetic infiltration of the trocar insertion sites (LAI). The primary outcome of this trial was to evaluate the efficacy of each analgetic technique by measuring VAS pain scores. Secondary outcome included intraoperative opioid requirement and the opioid consumption in the first 24h postoperatively. Intraoperative parameters and outcome data were recorded by an anesthesiologist who was blinded to the study groups.

Results: We analyzed a total of 75 patients. For the primary outcome variable, VAS pain scores at rest were significantly reduced in OSTAP group at each time point assessed in the first 24 hours after surgery compared with LAI group and IV opioid analgesia group ($p < 0.001$). Intraoperative fentanyl consumption and 24h pethidine consumption were also significantly reduced in TAP block group compared with LAI group and IV opioid analgesia group ($p < 0.001$).

Conclusions: Our study showed that OSTAP block is a more efficient analgesia technique compared with IV opioid analgesia and with local anesthetic infiltration of trocar sites after laparoscopic cholecystectomy surgery. This trial was registered at www.clinicaltrials.gov (NCT02707250).

Key words: laparoscopic cholecystectomy, postoperative analgesia, Tap-block, local anesthetic infiltration