

Additional analgesia after ambulatory unilateral laparoscopic inguinal hernia repair with transversus abdominis plane (TAP) block: A randomized double-blind controlled trial

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Background and aims: The transversus abdominis plane (TAP) block is a peripheral block that allows sensory blockade of the lower abdominal wall by introducing local anaesthetic into the neuro-fascial plane between the internal oblique and transversus abdominis muscles (Rafi, 2001; McDonnell et al., 2007). The present study evaluated the additional analgesic effect of TAP block as component of multimodal analgesia in patients undergoing unilateral laparoscopic hernia repair in an ambulatory setting.

Methods: One hundred adult patients were randomized to receive standard care (S-group), including paracetamol and non-steroidal anti-inflammatory drugs ($n = 50$) or to undergo unilateral TAP block in addition to standard care (TAP-group) ($n = 50$). All patients received a general anaesthesia, with in the TAP-group unilateral TAP block using 20 ml of levobupivacaine 0.25% was associated. The visual analogue pain score (VAS) of each patient was regularly assessed from arrival in the post-anaesthesia care unit until discharge, as well as 24 h postoperatively. Other outcomes assessed were analgesic consumption and patient satisfaction.

Results: The TAP-group showed no significant difference in VAS during the first 7 h postoperatively compared with the S-group. Supplemental opioid consumption was also similar in both groups (3.6 ± 2.27 vs. 3.98 ± 2.56). Postoperatively analgesic consumption before discharge was significantly lower in the TAP-group (9 vs. 2 patients, $p = 0.025$). After 24 h, we noted lower VAS scores in the TAP-group (14.58 ± 12.66 vs. 18.9 ± 14.5) but this was not statistically significant.

Conclusions: The TAP block significantly reduced the need of post-operative analgesic consumption before discharge. It holds considerable promise as a part of a multimodal analgesia strategy after an elective laparoscopic unilateral hernia repair.

References

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