

A randomised comparative study on the post operative analgesic efficacy between ultrasound guided and laparoscopy assisted Transverse Abdominis Plane block in laparoscopic surgeries

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Introduction

Laparoscopic intervention, known for its low mortality, minimal morbidity, fast recovery, excellent cosmetic results, and minimal postoperative pain, has become prominent in surgery over the past two decades. Relieving postoperative pain and enabling quick physical activity resumption are crucial. Guided TAP blocks has become essential because of its safety profile, ease of performance, and effectiveness of pain control in a multimodal pain management approach with increased patient satisfaction. This study aims to compare the effectiveness of laparoscopic guided TAP block over USG guided block in patients undergoing laparoscopic surgeries.

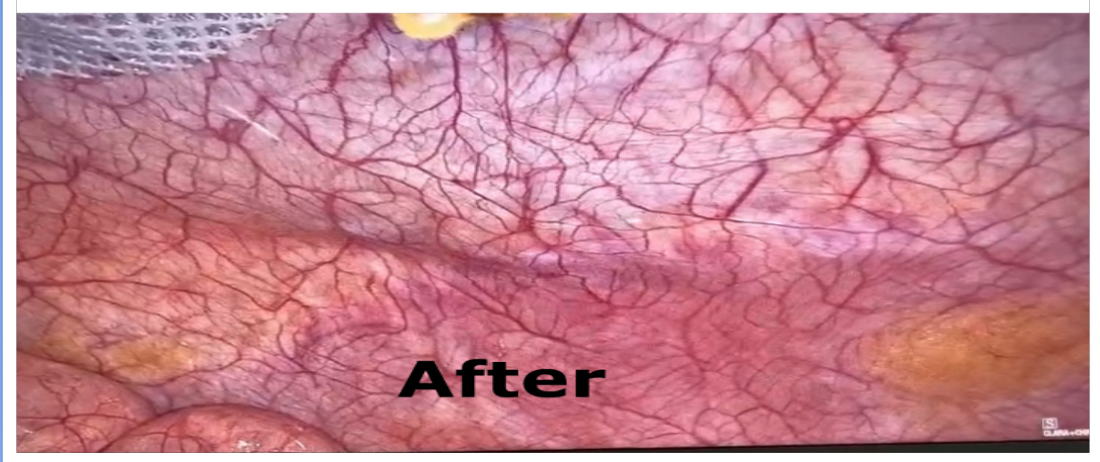
Materials and Methods

Type of study: Randomised prospective study included 100 patients (18-65 years, ASA I-III) undergoing laparoscopic surgery. **Group I-** TAP block under USG guidance (USG-TAP) - n=50 **Group II-** Laparoscopic-guided TAP block (LAP-TAP) - n=50

Methods: 10ml of 2% lignocaine and 0.5% bupivacaine mixture was injected on each side under USG imaging in the transverse abdominis plane in the mid axillary line between the lower coastal margin and iliac crest. An additional injection was done in the sub coastal region when upper abdominal ports were used before extubation.

The same mixture was injected under laparoscopic vision at the junction of lateral border of rectus abdominis and transverse abdominis to visualise a bulge below the fascial plane.

Postoperative pain was assessed using VAS(Visual Analog Scale). VAS, Side effects (nausea, vomiting) and analgesic administration recorded at 0, 30 minutes, 1, 2, 6, 12, and 24 hours post operatively.



Discussion

- There was no difference found between the 2 groups in respect of the analgesic effect.
- Analgesic consumption was found to be decreased in both the block groups
- The changes in the VAS scores of the groups over time were statistically different ($p < 0.05$)
- According to the findings of this study, which examined the analgesic effects of TAP block applied using the two techniques the analgesic efficacy of both techniques was comparable in the post operative period.

Conclusion

- The analgesic efficacy of USG-TAP and LAP-TAP blocks was found to be similar.
- LAP-TAP block was found to be a simpler procedure compared to ultrasound guided TAP block.
- The results of this study showed that it can be an alternative to the more common USG-TAP block.
- It can be performed as an alternative by the operating surgeon himself in setups where ultrasound or trained anesthesia personnel are not available.