

AB051. Laparoscopic versus ultrasound-guided transversus abdominis plane block in laparoscopic colorectal surgery—a systematic review and meta-analysis

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Background: A multimodal approach to peri-operative analgesia represents a cornerstone of enhanced recovery programmes in minimally invasive colorectal surgery. Transversus abdominis plane (TAP) block is an emerging anaesthetic technique that may reduce postoperative opioid analgesic requirements. It can be performed laparoscopically or percutaneously. We performed a systematic review and meta-analysis to compare the effectiveness of laparoscopic versus ultrasound-guided TAP block in laparoscopic colorectal surgery

Methods: PubMed, EMBASE and Cochrane databases were searched for relevant articles from inception until November 2019. All studies that compared laparoscopic (LTB) versus

ultrasound-guided (UTB) TAP blocks in laparoscopic colorectal resections were included. The primary outcome measure was narcotic consumption at 24 hours postoperatively, while secondary outcomes included pain scores, operative time, postoperative nausea and vomiting (PONV) and complication rates. Random effects models were used to calculate pooled effect size estimates

Results: Three randomised controlled trials and one retrospective study were included capturing 309 patients. On random effects analysis, there were no significant differences in narcotic consumption between LTB and UTB (mean difference -8.12 mg, 95% CI: -22.13 to 5.89 , $P=0.26$). LTB was associated with significantly lower pain scores (mean difference -0.49 , 95% CI: -0.96 to -0.02 , $P=0.04$). There were no differences in operative time (Mean difference -6.67 min, 95% CI: -29.4 to 16.06 , $P=0.57$), PONV (OR = 0.97 , 95% CI: 0.36 to 2.65 , $P=0.96$) or complication (OR = 1.30 , 95% CI: 0.64 to 2.64 , $P=0.47$) rates.

Conclusions: LTB is associated with significantly less pain at 24 hours postoperatively but similar narcotic usage, PONV, operative time and complication rates, compared to UTB.

Keywords: Analgesia; block; laparoscopic; transversus; ultrasound

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