Block

Also known as block anesthesia, conduction anesthesia differs from general anesthesia in that it affects a specific part of the body and that patients may remain awake during the procedure. Conduction anesthesia is a comprehensive term which encompasses a variety of local and regional anesthetic techniques. While there is a spectrum of complexity between simple local anesthetic infiltration and major regional blocks, such as the 'central neuraxial blocks' (spinal and epidural), the terms local anesthesia, regional anesthesia, and conduction anesthesia are often all used interchangeably.

see Selective nerve root block injection

The transversus abdominis plane (TAP) block is commonly used in surgical practice for postoperative analgesia in abdominal surgery. However, numerous studies have demonstrated that TAP block is also suitable for intraoperative anesthesia of peritoneal dialysis catheter (PDC) insertion, although its efficacy and safety are still controversial. Local anesthetic infiltration (LAI) is currently the most general anesthesia strategy for PDC insertion. Consequently, we conducted this systematic review and meta-analysis to identify which anesthesia strategy is better between TAP block and LAI.

Methods: A systematic and comprehensive search was conducted on 5 databases, retrieving published and registered randomized controlled trials as of March 10, 2022, comparing the anesthesia effects of TAP block and LAI. The primary outcomes are the visual analogue scale (VAS) pain score of patients at various time points in the surgery. The secondary outcomes are the VAS pain score at rest at 2 and 24 hours postoperatively, intraoperative rescue anesthesia, general anesthesia switching rate, and PD-related complications.

Results: There were 9 trials with 432 patients identified. TAP block was more effective than LAI at reducing intraoperative and postoperative VAS pain scores in patients. Compared to LAI, TAP block significantly reduces the dosage of anesthetics used to rescue anesthesia during surgery, the general anesthesia switching rate, and the incidence of postoperative PD-related complications in patients.

The systematic review and meta-analysis proved that TAP block could be used as the primary anesthetic technique for PDC insertion, with superior anesthetic effects to LAI [1].

1)
Qi Q, Zhou Z, Qiao Y, Ren T, Yang B. Transversus abdominis plane block versus local anesthetic infiltration for anesthetic effect in peritoneal dialysis catheter insertion: A systematic review and meta-analysis. Medicine (Baltimore). 2023 Aug 4;102(31):e34517. doi: 10.1097/MD.0000000000034517. PMID: 37543799; PMCID: PMC10403017.