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Does continuous peripheral nerve block provide superior pain control to opioids? A meta-analysis.

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Abstract

Although most randomized clinical trials conclude that the addition of continuous peripheral nerve blockade (CPNB) decreases postoperative pain and opioid-related side effects when compared with opioids, studies have included relatively small numbers of patients and the majority failed to show statistical significance during all time periods for reduced pain or side effects. We identified studies primarily by searching Ovid Medline (1966-May 21, 2004) for terms related to postoperative analgesia with CPNB and opioids. Each article from the final search was reviewed and data were extracted from tables, text, or extrapolated from figures as needed. Nineteen articles, enrolling 603 patients, met all inclusion criteria. Inclusion criteria were a clearly defined anesthetic technique (combined general/regional anesthesia, general anesthesia alone, peripheral nerve block), randomized trial, adult patient population (> or =18 yr old), CPNB (or analgesia) used postoperatively (intrapleural catheters were deemed not to be classified as a peripheral nerve catheter), and opioids administered for postoperative analgesia in groups not receiving peripheral nerve block. Perineural analgesia provided better postoperative analgesia compared with opioids ($P < 0.001$). This effect was seen for all time periods measured for both mean visual analog scale and maximum visual analog scale at 24 h ($P < 0.001$), 48 h ($P < 0.001$), and 72 h (mean visual analog scale only) ($P < 0.001$) postoperatively. Perineural catheters provided superior analgesia to opioids for all catheter locations and time periods ($P < 0.05$). Nausea/vomiting, sedation, and pruritus all occurred more commonly with opioid analgesia ($P < 0.001$). A reduction in opioid use was noted with perineural analgesia ($P < 0.001$). CPNB analgesia, regardless of catheter location, provided superior postoperative analgesia and fewer opioid-related side effects when compared with opioid analgesia.

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Links to the National Library of Medicine

- 1) For this article : <http://www.ncbi.nlm.nih.gov/pubmed/16368838>
- 2) For other articles related to continuous peripheral nerve blockade (CPNB):
<http://www.ncbi.nlm.nih.gov/pubmed?term=Continuous%20peripheral%20nerve%20block&itool=QuerySuggestion>