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Analgesic Efficacy of Intravenous Naloxone for the Treatment of Postoperative Pruritus

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Objective: Pruritus may be a significant problem for parturients in the postoperative period. There are many options for the treatment of pruritus, including intravenous naloxone. However, it is not clear whether the use of intravenous (IV) naloxone may also affect analgesia or other opioid-related side effects. We have performed a systematic review to further examine this issue.

Method: This study qualified for exemption from the Johns Hopkins IRB. Systematic literature searches of the National Library of Medicine’s PubMed and EMBASE databases were conducted using terms related to postoperative use of IV naloxone. Only randomized controlled trials comparing IV naloxone used either as a continuous infusion or part of an IV PCA regimen were considered. Data on pertinent study characteristics and relevant outcomes were extracted from accepted articles. There was no restriction on language for inclusion. Meta-analysis was performed using the Review Manager 4.2.10 (The Cochrane Collaboration, 2004). A random effects model was used.

Results: The literature searches yielded 8 articles which met all inclusion criteria. There were a total of 424 subjects in the naloxone group and 376 in the saline group. We found use of naloxone was associated with a decreased risk for pruritus [odds ratio (OR): 0.41 (95% CI: 0.21, 0.79)] and postoperative nausea, but there was no difference with regard to risk of postoperative emesis [OR = 0.97 (95% CI: 0.70, 1.33)], opioid consumption [OR = 0.29 (95% CI: -3.54, 4.13)], sedation [OR = 0.82 (95% CI: 0.38, 1.74)], or urinary retention [OR = 0.44 (95% CI: 0.18, 1.04)]. Use of IV naloxone did not appear to be associated with increased VAS pain scores at 24 hours postoperatively [WMD = -0.21 (95% CI: -0.59, 0.16)].

Conclusions: Our pooled analysis examining the analgesic efficacy of IV naloxone (either as a continuous infusion or IV PCA) revealed that naloxone was associated with a decrease in pruritus and nausea without any increase in pain scores. When compare to controls, the use of IV naloxone was not associated with any changes in opioid consumption or the risk of sedation, urinary retention, or emesis. The results should be interpreted with caution and certainly further examination with larger RCT is warranted as the overall number of subjects is relatively small.