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Comparison of Side Effects with Extended Release Epidural Morphine and Other Analgesic Modalities

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Introduction

Opioids are the mainstay of post-operative pain management and may produce side effects that impact patient recovery. Use of Extended Release Epidural Morphine (EREM) has been shown to result in significantly less incidence of severe side effects and in lower anxiety scores than other modes of postoperative pain management. The purpose of this prospective, open-label, single-arm study was to compare the incidence and severity of side effects of EREM and other post-operative analgesic regimens.

Methods

This was a prospective, IRB-approved analysis of 286 randomly selected patients receiving total hip (THA) or total knee (TKA) arthroplasty between January 2007 and July 2007. 129 patients received lower than recommended doses of EREM (n=129) receiving one of the following analgesic regimens: patient controlled epidural (PCEA) with fentanyl, intravenous (IV) morphine and fentanyl PCA, including epidural femoral nerve block with fentanyl, retro sacral block (RSB), or epidural catheter with IV and fentanyl PCA. The incidence of spinal side effects on post-operative day (POD) 0, 1, 2 were recorded. Nausea/ vomiting and pain were identified by the administration of rescue medication. The incidence of side effects was reported until the first dose of side effect medication was noted. Statistical analysis of the EREM and other medication arms were performed on an average time to first dose of treatment between groups of analgesic modalities.

Results

See Tables 1 and 2

Discussion

All analgesic modalities produced peak side effects on day zero while side effects were recorded over the next 24 hours. The occurrence of side effects was reported on POD 0, 1, 2, and the incidence of side effects may appear higher than expected. Although EREM caused more side effects than other modalities, it had a smaller profile in the IT morphine with fentanyl PCA group. The majority of patients responded to a single rescue dose for nausea/vomiting or pain. No patient required respiratory depression requiring an opioid analgesic. ANOVA analysis showed no statistical significance in the time to rescue between the analgesic groups. Overall, THA had higher incidence of side effects than TKA.

Conclusion

Analgésic efficacy must be considered when evaluating side effects. Other studies have demonstrated superior analgesic efficacy with EREM. With EREM may have a higher side effect profile than other treatments, the impact may be minimal compared to the benefits of better analgesia and a reduction in the use of other invasive modalities. Overall, the side effects of EREM responded to in a rescue dose, supporting minimal patient discomfort and use of healthcare resources.

References