Perioperative Pain Management in Orthopaedic Surgery

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Perioperative pain management should now be an integral part of all in-patient and out-patient orthopaedic surgical procedures. In addition to planning the surgical approach, equipment, and implants needed for a successful surgical outcome, the orthopaedic surgeon should now also be involved with and help plan the perioperative pain management strategies. Patient outcome and satisfaction data, especially pain relief after surgical procedures, will soon be required to be reported to the U.S. Centers for Medicare and Medicaid Services (CMS) using the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey scores,¹ and lower scores may eventually negatively affect hospital reimbursement. Multimodal pain protocols are now considered “state of the art” for all surgical procedures, with a major goal being the reduction in the amount of opioid medications required for the postoperative orthopaedic patient. This goal should be carefully considered, as The Joint Commission recently issued a Sentinel Event Alert on the complications and safe use of opioids in hospital settings.² The alert included suggestions for actions regarding hospital processes, technology, education, and standardized tools that can be used to screen patients for risk factors associated with oversedation and respiratory depression. This alert also recommended the use of modalities, non-opioid medication and nerve blocks to decrease the incidence of opioid-related adverse reactions. The second section of this outline introduces the use of intravenous acetaminophen for perioperative pain protocols for a wide variety of orthopaedic procedures. Although this medication has been routinely used for almost 10 years in Great Britain, it has only been available for use in the United States since January 2011. Many orthopaedic surgeons may not be familiar with the mechanism of action and the unique pharmacokinetics of this medication when given intravenously. There are major differences in serum and cerebrospinal fluid levels when this medication is given orally and intravenously. The elderly patients with multiple comorbidities and hip fractures seem to be an ideal group to utilize non-opioid medications both pre- and postoperatively. Pain management seems particularly crucial after total knee arthroplasty, as late residual unexplained pain may be related to less than optimal postoperative pain management. Obviously there may many multimodal pain strategies that may be employed for these patients. The orthopaedic surgical team should consider a re-evaluation of their present pain management protocols to increase patient satisfaction and decrease the amount of opioid medication given perioperatively.

References


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