PAIN MANAGEMENT NEEDS OF THE PATIENTS UNDERGOING POSTERIOR CERVICAL SPINAL DECOMPRESSION AND FUSION: IV PCA, CR OPIOID, AND ADJUVANT INITIATION RATES

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INTRODUCTION / AIM

Patients undergoing posterior cervical spine fusion surgery commonly experience substantial postoperative pain causing significant morbidity. In addition to soft tissue dissection, intraoperative muscle retraction leads to para spinal muscle spasms, which contribute to severe pain and slow postoperative recovery. There is a paucity of literature on the pain management needs of the posterior cervical spine population. The use of multimodal analgesia is standard practice of the Acute Pain Service (APS) at Toronto Western Hospital. The objective of this study is to describe the post-operative pain management practices of the APS at our tertiary academic hospital in the posterior cervical spine population. In particular, we sought to highlight the percentage of patients who required initiation of intravenous patient controlled analgesia (IV PCA), controlled release (CR) opiates, as well as adjuvants for postoperative muscle spasms or neuropathy.

METHODS

A retrospective chart audit of 250 consecutive patients was used to examine the frequency of initiation of IV PCA, CR opiates, and adjuvants. For the purposes of our study, opioid tolerance was defined as the regular daily administration of 30mg morphine or greater.

RESULTS

75% of patients who underwent posterior cervical spine surgery were opiate naïve. IV PCA was initiated in 84% of posterior cervical patients. Of these, 69% required IV PCA for 24 hours or less; 25% for up to 48 hours; 5% for up to 72 hours; and 1% required IV PCA up to 96 hours. 29% of patients required initiation of CR opiates. Gabapentin (n=46; 18%) was the most frequently ordered neuropathic pain agent, followed by pregabalin (n=19), tricyclic antidepressants (TCA) (n=10), duloxetine (n=5), and venlafaxine (n=1). 2% of patients required initiation of NSAIDs, and likewise 2% were ordered cannabinoids. Muscle relaxants such as baclofen (n=14) and cyclobenzaprine (n=11) were ordered in 10% of patients.

DISCUSSION / CONCLUSIONS

Posterior cervical spine patients require shorter duration of parenteral opioids and less frequent initiation of CR opioids as compared with other spine populations but may need the addition of neuropathic pain agents. In spite of muscle spasm related pain, muscle relaxants were infrequently used. A formal prospective study is required in order to be able to draw broader conclusions about the IV PCA, CR opiate, and adjuvant initiation rates of the overall cervical spine population.

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