Infection Rates with Use of Adjunctive Intrathecal Morphine in Posterior Instrumented Spinal Fusion Surgery: Preliminary Findings of a Retrospective Study

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Introduction. Intrathecal morphine (ITM) may be used as a supplement to opioid-based postoperative pain control regimens in spine surgery. In fact, ITM has been reported to reduce opioid consumption and pain scores in the first 20 hours following spine surgery. ITM constitutes an attractive adjuvant treatment for postoperative pain due to ease of access to the thecal sac and the potential to produce an analgesic effect at low dosages. However, the occurrence of surgical site infections may pose a deterrent to widespread adoption of ITM if associated infection rates are determined to be too high. As a result, the goal of this study was to compare rates of surgical site infections between those administered ITM and the control group among patients undergoing posterior instrumented spinal fusion surgery.

Methods. A retrospective review of the electronic medical records of patients that underwent posterior instrumented fusions between 2010 and 2016 was conducted. Patients that were given a single injection of intrathecal morphine prior to wound closure were compared to the control group (no ITM) in terms of the incidence of surgical site infections. Fisher's exact test was used to compare rates of infection.

Results. A total of 479 patients were incorporated into the analysis. Surgical site infections were found in 1.4% of patients in the ITM group compared to 1.2% in the control group. Although the infection rate was slightly higher in patients that were administered ITM, the difference between groups in terms of infection rates was not considered statistically significant (p=1.000).

Conclusions: There was no significant difference between surgical site infection rates between the ITM and control groups in 479 patients that underwent posterior spinal instrumented fusion surgery between 2010 and 2016. These preliminary findings suggest that
the use of ITM for control of postoperative pain may not increase the occurrence of surgical site infections in posterior instrumented fusion.

References:

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