MSHP Virtual Meeting Abstract

The Effect of Post-Operative Intravenous Corticosteroids on Outcomes in Patients Undergoing Total Knee Arthroplasty

Purpose: To determine if post-operative administration of intravenous hydrocortisone or dexamethasone improves outcomes in patients undergoing total knee arthroplasty within a community orthopedic and rehabilitation hospital setting.
Methods: Data was collected retrospectively using an electronic health record between August 2018 and August 2019, reviewing patients receiving total knee arthroplasties at CoxHealth's Meyer Orthopedic and Rehabilitation Hospital. Assessed outcomes included pain scores after surgery, nausea and vomiting, length of hospital stay, daily morphine milligram equivalents, and presence of infection upon follow-up. These outcomes were compared between patients receiving postoperative dexamethasone, hydrocortisone, or neither steroid.
Results: Data from 137 patients was used: 41 patients received hydrocortisone, 65 received dexamethasone, and 31 received neither corticosteroid. Most outcomes were similar amongst the groups. Differences were seen in incidence of nausea and vomiting, with the dexamethasone group having the highest incidence (45%, 12%), followed by the no steroid group (36%, 10%) and hydrocortisone group (24%, 5%). Rate of infection also differed between the groups. The highest rate of infection was found in the no steroid group at 10% (n=3), followed by dexamethasone with 3% (n=2), and hydrocortisone 0% (n=0).
Conclusion: The use of intravenous corticosteroids after total knee arthroplasty did not reduce pain scores, length of hospital stay, or the use of opioid medications. However, rate of infection was lower in groups receiving corticosteroids, and those receiving hydrocortisone had fewer episodes of nausea and vomiting compared to the other groups.