Effect of Oral Postoperative Steroids on Surgical Site Infection in Adult Upper Extremity Surgery

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INTRODUCTION:
The recent trend in administering postoperative oral corticosteroids has proven effective in alleviating pain, decreasing opioid consumption, and improving surgical outcomes for hand and upper extremity procedures. Nonetheless, concerns persist regarding potential infection risks, despite a lack of supporting evidence in the current literature. Hence, we propose that a six-day regimen of low-dose postoperative oral corticosteroids is safe and does not increase the likelihood of surgical site infections in adult upper extremity surgeries.

METHODS:
A retrospective study of all adult patients who underwent clean, upper extremity surgery, including both soft-tissue and hardware implantation cases, between November 2021 and November 2023, performed at a single institution were included in the study. Primary outcome measures were diagnosis of surgical site infection by 14-days and 30-days. Secondary outcomes included management with antibiotic treatment, operative washout, or hardware removal if diagnosed with an infection. Categorical variables were compared using chi-square or Fisher's exact tests, and continuous variables were compared using Wilcoxon rank-sum tests.
A p value < 0.05 was considered statistically significant.

RESULTS: 813 cases were included for analysis – 196 received a 6-day course of postoperative oral steroids (methylprednisolone), and 617 did not. Both groups had similar surgical site infection rates of 4.1% and 3.1%, with no statistical differences between the groups at any postoperative time. Subgroup analysis of patients diagnosed with a surgical site infection identified no statistically different demographic factors or medical comorbidities when comparing patients who received postoperative oral corticosteroids versus those who did not.
DISCUSSION AND CONCLUSION: Low-dose, postoperative oral steroid use following adult hand and upper extremity surgery is safe and does not increase the risk of surgical site infections. With concerns over initial usage, further investigations with prospective studies on postoperative oral corticosteroids would prove advantageous.