INTRODUCTION: Surgical site infections (SSIs) are a devastating complication with significant patient morbidity in total joint arthroplasty. Intrawound vancomycin powder has shown efficacy and safety in decreasing postoperative spine infections. Its use in arthroplasty has not been well established. The purpose of this study was to compare the rate of SSIs with and without the use of intrawound vancomycin powder during total hip and knee arthroplasty.

METHODS: A retrospective chart review of all patients who underwent primary or revision hip or knee arthroplasty by two fellowship trained orthopaedic surgeons over a two-year time period at a single hospital system was performed. One group (control group) received standard systemic prophylaxis only, whereas another group (treatment group) received 0.5-gram vancomycin powder in the surgical wound in addition to systemic prophylaxis. The incidence of SSIs, recognized as positive deep cultures within 90 days of the procedure, was the primary outcome evaluated.

RESULTS: Thirteen patients in the control group (N=824) and four patients in the treatment group (N=816) were found to have a SSI. A statistically significant difference in SSI rate was found between the treatment group (1.6%) and control group (0.49%, p=0.0479).

DISCUSSION AND CONCLUSION: The use of intrawound vancomycin powder was associated with a significant reduction in the incidence of SSIs following total hip and knee arthroplasty. This study supports the current evidence that local vancomycin powder can reduce the risk of SSIs and is the first to address this specific population.