

Poster Presentation

Effectiveness of Topical Vancomycin in the Prevention of Spinal Surgical Site Infections: A Retrospective Cohort Study

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Introduction

The risk of surgical site infections (SSIs), particularly methicillin-resistant *Staphylococcus aureus* (MRSA) SSIs, post spinal surgeries is one of the most daunting experiences to patients and surgeons. In some practices, vancomycin powder is applied directly on the wound before skin closure to minimize the risk of SSIs; however, this practice is not supported by well-established evidence. This study sought to assess the effectiveness of topical (intra-wound) vancomycin in minimizing the risk of SSIs in patients who underwent spinal surgeries at a private Saudi hospital.

Methodology

A retrospective cohort study was conducted using the hospital database. Patients who underwent spinal surgeries between September 2013 and September 2019 were included and followed-up for up to 30 (for surgeries without implantation) or 90 (for surgeries with implantation) days. The odds ratio (OR) of the first SSI observed in the follow-up period between vancomycin users versus nonusers was estimated using logistic regression adjusting for the measured confounders. A sensitivity analysis was conducted using a propensity score analysis.

Result

We included 81 vancomycin users versus 375 nonusers with 28 infections. The adjusted OR of SSIs between the two groups was 0.40 (95% confidence interval [CI] 0.11–1.34). The result of the propensity score analysis was consistent (OR: 0.97 [95% CI 0.35–2.68]).

Conclusion

We could not find a lower association of SSIs with intra-wound vancomycin in patients who underwent spinal surgeries. Conducting larger multicenter studies would add more emphasis to the findings of this study.

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