

Topical vancomycin's efficacy in preventing infections in spinal surgery sites

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Abstract

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. A retrospective cohort study was conducted using the hospital database. Patients who underwent spinal surgeries from the period of 09/2013 to 09/2019 were included and followed up to 30 days (surgeries without implantation) or 90 days (with implantation). The odds ratio (OR) of the first SSI observed in the follow-up period between vancomycin users vs. non-users was estimated using logistic regression adjusting for the measured confounders. A sensitivity analysis was conducted using a propensity score analysis. We included 81 vancomycin users vs. 375 non-users with 28 infections. The adjusted OR of SSIs between the two groups was 0.40 (95% confidence interval [CI] 0.11 to 1.34). The result of the propensity score analysis was consistent (OR: 0.97 [95% CI 0.35 to 2.68]).

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 findings of this study.

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Biography

Dr. Fernanodo Dias graduated from Beirut Arab University with a Bachelor of Pharmacy (BSc) degree in year 2012, then he joined the post-graduate program and earned the Doctor of Pharmacy degree in year 2014. He was interested in joining a distance learning program in Notting Hill College, UK from which he earned the Post Graduate Diploma in Clinical Pharmacy in year 2019. To date, he has been working in various inpatient wards, particularly

the critically-ill patient units, and he has been recognized as an active member in several scientific committees and the Co-chairman of the Antimicrobial Stewardship committee. Dr. Fernanodo has participated in several CME-accredited conferences and workshops, and he is interested in scientific research for which he has conducted clinical studies in the fields of 'Infectious Diseases' and 'Critical Care.