



There was no statistically significant difference between linezolid and vancomycin when used as definitive treatment for hVCoNS CLABSI in NICU patients, in terms of CLABSI duration, recurrence or all-cause mortality” Blanchard et al (2017).

Abstract:

OBJECTIVES: Heterogeneously resistant vancomycin-intermediate coagulase-negative staphylococci (hVCoNS) are emerging pathogens causing central-line-associated bloodstream infections (CLABSIs) in neonatal intensive care unit (NICU) patients. Given the burden of disease associated with CLABSI and the current lack of therapeutic guidelines, we aimed to compare the effectiveness of linezolid versus vancomycin used as the definitive antibiotic therapy for hVCoNS CLABSI.

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METHODS: We performed a retrospective cohort study of infants with hVCoNS CLABSI from a single NICU between 2009 and 2014, treated with either linezolid or vancomycin as definitive antibiotic therapy. CLABSI duration, early and late recurrence and in-hospital mortality were compared using propensity score-adjusted proportional hazards and logistic regression models.

RESULTS: Of 89 infants with hVCoNS CLABSI, 33 (37.1%) treated with linezolid were compared with 56 (62.9%) treated with vancomycin. The median duration of CLABSI was 5 (range 1-12) versus 4 days (range 0-14) ($P = 0.11$), early recurrences were 3.0% versus 7.1% ($P = 0.42$), late recurrences 0% versus 14.3% ($P = 0.02$) and mortality 27.3% versus 28.6% ($P = 0.90$), when treated with linezolid versus vancomycin, respectively. When adjusting using a continuous propensity score, linezolid had an HR of 0.78 (95% CI 0.48-1.27) for CLABSI duration, an OR of 0.23 (95% CI 0.02-2.56) for early recurrence and an OR of 0.9 (95% CI 0.3-2.67) for mortality, relative to vancomycin.

CONCLUSIONS: There was no statistically significant difference between linezolid and vancomycin when used as definitive treatment for hVCoNS CLABSI in NICU patients, in terms of CLABSI duration, recurrence or all-cause mortality.

Reference:

Blanchard, A.C., Fortin, E., Laferrière, C., Goyer, I., Moussa, A., Autmizguine, J. and Quach, C. (2017) Comparative effectiveness of linezolid versus vancomycin as definitive antibiotic therapy for heterogeneously resistant vancomycin-intermediate coagulase-negative staphylococcal central-line-associated bloodstream infections in a neonatal intensive care unit. *The Journal of Antimicrobial Chemotherapy*. March 3rd. .

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