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## **Co-Trimoxazole Versus Vancomycin for the Treatment of Methicillin-Resistant Staphylococcus aureus Bacteraemia: a Retrospective Cohort Study.**

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OBJECTIVES: To evaluate the efficacy and safety of co-trimoxazole versus that of vancomycin in adults with methicillin-resistant Staphylococcus aureus (MRSA) bacteraemia. Patients and methods Retrospective matched cohort study. Thirty-eight patients with MRSA bacteraemia, treated with co-trimoxazole as the main therapeutic agent, were matched with 76 patients treated with vancomycin as the main agent. The groups were matched for age, sex, functional status, endovascular source of infection, appropriateness of empirical antibiotic therapy, presence of a foreign body, sepsis severity and Charlson score. The outcomes collected were 30 day mortality, persistent bacteraemia [defined as positive blood culture (BC) >14 days after the first positive BC, but within 30 days], relapse (defined as recurrence of the same phenotype >30 days after the first positive BC within 12 months) and adverse events.

RESULTS: The groups were well matched. Thirty day mortality was not significantly different between the groups [co-trimoxazole 13/38 (34.2%); vancomycin 31/76 (40.8%); odds ratio 0.76, 95% confidence interval 0.34-1.7]. There was only one case of relapse in the co-trimoxazole group (2.6%) compared with nine cases in the vancomycin group (11.8%). Incidence of relapse or persistent bacteraemia was lower in the co-trimoxazole group (3/38, 7.9%) than in the vancomycin group (13/76, 17.1%), although the difference was not statistically significant (P = 0.182). Development of renal failure was similar [co-trimoxazole 11/38 (28.9%); vancomycin 21/76 (27.6%)].

CONCLUSIONS: Within the limitations of a small retrospective study, co-trimoxazole had a safety and efficacy profile similar to that of vancomycin and may offer an attractive additional therapeutic option for MRSA bacteraemia. A prospective, randomized controlled trial is warranted.

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