

High Rate of False-Negative Results of Rectal Culture Screening in the Detection of VRE and its Duration of Colonisation in Chronic Haemodialysis Patients

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Purpose: Infection or colonisation with vancomycin-resistant enterococci (VRE) is common in chronic haemodialysis (HD) patients. However, there is limited information on the duration of VRE colonisation or on the reliability of consecutive negative rectal cultures to determine the clearance of VRE in chronic HD patients.

Methods: Chronic HD patients from whom VRE was isolated were examined retrospectively. Rectal cultures were collected more than 3 times, at least 1 week apart, between 1 June 2003 and 1 March 2010.

Results: The results of the sequential VRE cultures and patients' data were analyzed. Among 812 patients from whom VRE was isolated, 89 were chronic HD patients and 92 had three consecutive negative cultures. It took 60.7 ± 183.9 and 111.4 ± 155.4 days to collect three consecutive negative cultures in the 83 non-chronic haemodialysis patients and nine chronic haemodialysis patients, respectively ($p=0.011$). The independent risk factors for more than three negative sequential rectal cultures were glycopeptide (odds ratio [OR], 2.155; $p=0.003$) and hospital day (OR, 1.009; $P=0.001$). After three consecutive negative rectal cultures, two of the six chronic HD patients, and 10 out of 36 patients were culture-positive again.

Conclusion: A significant proportion of patients colonised with VRE cannot be detected even after three negative weekly rectal cultures, and the duration of VRE colonisation in chronic haemodialysis patients tends to be prolonged. These results may be contributing to the continued increase in the prevalence of VRE.

Key Words: 반코마이신 내성 장구균, 혈액 투석

Vancomycin-resistant enterococci, Haemodialysis, End-stage ren