

中文題目：非流行病學定義之社區發生的 methicillin 抗藥性金黃色葡萄球菌感染，而是社區型 methicillin 抗藥性金黃色葡萄球菌株在透析併發菌血症的族群中有較好預後

英文題目：Community acquired methicillin-resistant *Staphylococcus aureus* (MRSA) strain, but not community onset MRSA infection by epidemiological classification, is associated with better outcome of MRSA bacteremia in hemodialysis patients

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Background : Methicillin-resistant *Staphylococcus aureus* (MRSA) infections in the hemodialysis (HD) population are epidemiologically classified as healthcare-associated hospital-onset (HAHO) and healthcare-associated community-onset (HACO). The clinical impact and bacterial characteristics of HAHO- and HACO-MRSA in HD patients are unclear.

Materials and methods : We performed a retrospective review and molecular analysis of clinical isolates from 106 HD patients with MRSA bacteremia in a Taiwan medical center from 2009 to 2014. Community-associated MRSA (CA-MRSA) strains were defined as isolates carrying the SCCmec type IV or V, and hospital-associated MRSA (HA-MRSA) strains were defined as isolates harboring SCCmec type I, II, or III.

Results : Seventy-six patients had HACO-MRSA infections and 30 patients had HAHO- MRSA infections. 76% HAHO-MRSA infections are caused by HA-MRSA strains, while 64% HACO-MRSA infections are due to CA-MRSA strains. A higher Pitt score was associated with higher treatment failure ($p=0.003$) and CA-MRSA strains were associated with less treatment failure ($p=0.001$). There was no significant difference in the treatment failure rates between patients with HACO-MRSA infections and those with HAHO-MRSA infections ($p=0.178$). For isolates with a vancomycin minimum inhibitory concentration (MIC) ≤ 1.5 mg/L, the multivariate analysis revealed that HA-MRSA strains, a high Pitt score and endocarditis were associated with treatment failure. For isolates with a vancomycin MIC > 1.5 mg/L, the only risk factor for treatment failure was a higher Pitt score.

Conclusion: CA-MRSA strains, but not the epidemiological classification of HACO-MRSA, determined the outcomes of MRSA bacteremia in the HD population, especially when the isolates have a vancomycin MIC ≤ 1.5 mg/L.