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Journal club

MRSA colonisation may lead to increased mortality in patients with cystic fibrosis

The long-term impact of respiratory tract methicillin-resistant *Staphylococcus aureus* (MRSA) on cystic fibrosis (CF) outcomes is unclear. This cohort study used longitudinal data from the US CF registry between 1996 and 2008. The aim of the study was to assess whether acquisition of MRSA influenced mortality.

A total of 19 833 MRSA negative patients aged 6–45 years were included in the study. Over the study period 5759 patients developed positive cultures for MRSA and there were 2537 deaths. The mortality rate was 27.7 deaths (95% CI 25.3 to 30.4) per 1000 patient-years in patients with MRSA and 18.3 deaths (95% CI 17.5 to 19.1) per 1000 patient-years in those without MRSA. After adjusting for variables associated with disease severity, the risk of death in patients positive for MRSA was higher than in patients who never cultured MRSA, with the greatest risk in patients chronically colonised with MRSA. Interestingly, patients who cleared MRSA within a year did not have an increased risk of death. No treatment or eradication data were described in the study.

This study provides convincing evidence that MRSA is an important pathogen in the CF airway. Questions remain about both the pathogenesis of MRSA infection and the optimal medical management in chronically infected patients. For now it is essential that strict infection control is in place to minimise transmission, and that eradication protocols are followed after a new identification.

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