

P2392 Predictors of 10-day mortality and region-specific risk factors of methicillin-resistant *Staphylococcus aureus* bacteraemia in a Korean tertiary hospital

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Background: Methicillin-resistant *Staphylococcus aureus* bacteremia (MRSAB) is a global health concern due to its high mortality rate. In South Korea, despite the high incidence rate of MRSAB, there are insufficient evidences to establish treatment guideline. Therefore, we aimed to investigate risk factors of methicillin resistance in SAB, and predictors of mortality for MRSAB in a tertiary hospital in Daejeon, South Korea.

Materials/methods: From September 2011 to December 2017, medical records of adult patients with SAB who were hospitalized in a South Korea tertiary hospital were analyzed retrospectively. For risk factors of methicillin resistance in SAB and predictors of 10-day mortality in MRSAB, multivariate logistic regression and cox proportional hazard model were used, respectively.

Results: Among 441 clinically significant SAB episodes, 251 (56.9%) were identified as MRSAB. Prior use of 3rd generation cephalosporins (aOR 3.119, $p = 0.001$), surgical site infection (aOR 2.647, $p = 0.018$), catheter-related bloodstream infection (aOR 2.401, $p = 0.005$) were risk factors of methicillin resistance with high odds ratio. Of note, bone and joint infection was found as the factor associated with lower methicillin resistance in SAB (aOR 0.236, $p < 0.001$). The predictors of 10-day mortality in MRSAB was Pitt bacteremia score (aHR 1.306, $p < 0.001$). Appropriate antibiotic treatment was the factor of lower mortality (aHR 0.402, $p=0.017$).

Conclusions: Bone and joint infection may be a protective factor of methicillin resistance associated with specific regional characteristics in SAB. Antibiotic use was identified as important factors associated with both methicillin resistance and mortality. Our results will contribute to provide management guidelines for MRSAB infection and improve patients' prognosis in South Korea.

