

ORAL PRESENTATION

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Risk factors for previously unknown methicillin-resistant *Staphylococcus aureus* (MRSA) carriage on admission to 13 surgical wards in Europe

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Introduction / objectives

MRSA carriers admitted to surgical wards may pose both clinical and epidemiological problems. We performed a prospective, observational cohort study of patients screened for MRSA on admission to 13 surgical wards in 4 European hospitals, to identify risk factors of previously unknown MRSA carriage and to define a common predictive rule.

Methods

Multivariate logistic regression models were used to predict probabilities of MRSA colonization on admission based on patient characteristics. A scoring system was defined based on odds ratio results. The c-statistic was calculated to evaluate several models.

Results

We enrolled 2901 patients, of whom 111 (3.8%) were unknown MRSA carriers on admission. We identified 7 independent risk factors associated for newly identified MRSA carriage on admission: urinary catheter, nursing home residency, chronic skin disease, wounds, recent hospitalization, diabetes, and age ≥ 70 years. No risk factor was common to all 4 centres. The overall prediction rule with a lower cut-off had 87% sensitivity and 32% specificity, while values for a higher cut-off were 40% and 89%, respectively. Local predictive rules performed slightly better: 56% sensitivity and 96% specificity for Barcelona. The c-statistic for the model including all centres was 0.64, indicating limited predictive power of the common model.

Conclusion

Risk factors for unknown MRSA carriage vary substantially between surgical wards across Europe. A common predictive rule is of limited clinical value.

Disclosure of interest

None declared.

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