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Poster Session V

Global epidemiology and molecular typing

MOLECULAR TYPING OF MRSA FROM IAȘI, ROMANIA

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Objectives: Romania is one of the countries with the highest prevalence of methicillin-resistant *Staphylococcus aureus* (MRSA) in the world. Aim of the study was to characterise a collection of clinical isolates from Iași, a city in the North-Eastern part of Romania.

Methods: Isolates from bloodstream infections, skin and soft tissue infections as well as from screening swabs were collected at a tertiary care hospital during the years 2008-2012. 97 isolates were characterised by microarray hybridisation. This included the detection of toxin genes, of genes associated with resistance and the assignment to clonal complexes and strains.

Results: The MRSA prevalence was high; during the study period, nearly half of all isolates and about one third of bloodstream isolates were MRSA. The most common MRSA strain was a PVL-negative CC1-MRSA-IV. ST239-MRSA-III were also frequently found while other MRSA strains were only sporadically detected. Such sporadic strains included ST5/225-MRSA-II, CC5-MRSA-IV, CC22-MRSA-IV and CC398-MRSA-V. The prevalence of the Panton-Valentine leukocidin (PVL) was high (30.9%) due to a common occurrence of PVL-positive ST8-MRSA-IV ('USA300') and sporadic isolates of CC80-MRSA-IV [PVL+].

Conclusions: Our study provides a snapshot of *S. aureus*/MRSA epidemiology in Romania. Although it focuses on one city only, it confirms a high burden of MRSA and PVL on Romanian healthcare settings that might also become relevant for Western Europe with increasing travel activities.