

POSTER PRESENTATION

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SCCMEC and SPA typing of meticillin resistance *Staphylococcus aureus* isolated from infections from Southern Poland

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Introduction

The *spa* gene encodes protein A and is used for typing of methicillin-resistant *Staphylococcus aureus*, MRSA, such as the *mec* operon carried by staphylococcal cassette chromosome (SCCmec).

Objectives

The aim of this study was the molecular typing of MRSA isolated from different forms of infections for epidemiological purposes using *spa* typing method and SCCmec classification.

Methods

A total of 90 MRSA isolates coming from eight hospitals from southern Poland were tested. Isolates originated from: bloodstream and respiratory tract infections (36), surgical site infections (30), chronic wounds (24). *Spa* typing was performed as described previously [1], using the *spa* typing website (<http://www.spaserver.ridom.de/>). Staphylococcal cassette chromosome *mec* (SCC *mec*) typing was performed as described previously [2].

Results

The majority of MRSA strains were of SCCmec type II (42.2%) or SCCmec IV (21.1%). Eleven strains was marked as SCCmec III (12.2%), 8 as SCCmec V (8.9%), 4 as SCCmec I (4.4%) and one as SCCmec VI.

The *spa* type t003 was the most frequently observed (37.8% of strains), then t138 (14.4%), t008 and t037 and t041 (4.4%),

SCC *mec* type II and *spa*-t003 together were characteristic for 25% of the chronic wounds and 27% in SSI, but 39% in invasive infections.

SCCmec III and t138 occurred in 10% of the strains from two hospitals, SCCmecIV and t003 occurred in 6.7% strains from two hospitals.

Conclusion

Epidemiological and molecular studies of MRSA isolates allowed to detail insight into the problem of staphylococcal infections. Those methods are less time-consuming than PFGE and give the opportunity for the observation of the current situation and epidemiological trends for resistant strains on the level of ward/hospital or even whole region (supported by a grant DEC-2011/03/B/NZ7/01911).

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References

1. Harmsen: *J Clin Microbiol* 2003, **41**(12):5442-5448.
2. Kondo: *Antimicrob Agents Chemother* 2007, **51**(1):264-74.

Disclosure of interest

None declared.

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