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Abstract (poster session)

Daptomycin MIC increase among patients with methicillin-resistant Staphylococcus aureus persistent bacteraemia treated with daptomycin. Prospective study in 22 Spanish hospitals.

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Objectives. The aim of this study was to ascertain the evolution of daptomycin minimum inhibitory concentration (MIC) of subsequent isolates in Persistent Bacteraemia (PB) episodes from a large series of MRSA bacteremia. Methods: Prospective study from Jun-08 to Dec-09, in 22 Spanish hospitals. Epidemiology and clinical data were recorded. Methicillin-resistant Staphylococcus aureus (MRSA) strains were analyzed in a central lab, including susceptibility to antibiotics and molecular characterization. Vancomycin MIC (V MIC) and daptomycin (D MIC) were studied by E-test and microdilution methods. Microbiological failure: Long Persistent bacteremia (LPB): documented MRSA bacteremia during 7 days or more. Clinical failure: 30-day mortality. Results: 579 episodes were included, 67% male, mean age 69years. Microdilution vancomycin MIC90 and E-test daptomycin MIC90 were 1 and 0.5 ug/ml, respectively. Definitive therapy was daptomycin in 124 episodes (22%). Among them, 23 (19%) episodes of LPB were observed. All the isogenic isolates from 5 LPB episodes were studied. Their main characteristics are summarized in table 1. Conclusions: Moderate increasing MIC and treatment failure may not be rare in patients with MRSA long persistent bacteremia treated with daptomycin. Our results support switching to other antibiotic options if sterile blood cultures are not early achieved.

Table 1: Summary of patients with MRSA LPB treated with daptomycin

PATIENT		MRSA STRAIN			THERAPY	OUTCOME	
Age/Gender	Source/Acquisition	Molecular Identification	Initial/Final D MIC	Initial/Final V MIC	Antibiotic, dose (days)	Sterile BC	30-day mortality
84/M	Catheter/HCR	CC5/agr2/Scmec IV	0.09/1	0.7/1.5	D 10mg/kg (18)	No	Yes
74/F	Osteoarticular/HCR	ST22/agr1/Scmec IV	0.2/1.5	0.7/0.7	D 10mg/kg (28)	Yes w/ fos+imi	No
65/M	Catheter/ICU	CC5/agr2/Scmec IV	0.12/0.38	0.7/0.7	D 10mg/kg (21)	Yes w/ fos+imi	No
83/M	Endocarditis/HCR	ST8/agr1/Scmec IV	0.09/1	0.7/1.5	D 10mg/kg (13)	No	Yes
76/F	Catheter/ICU	ST22/agr1/Scmec IV	0.12/1.5	0.5/1	D10mg/kg (13)	No	Yes

D MIC: Daptomycin MIC; V MIC Vancomycin; M Male, F Female, HCR Health-care related, ICU Intensive Care Unit

BC Blood cultures FOS: fosfomycin, IMI imipenem