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Abstract (poster session)

Methicillin-resistant Staphylococcus aureus in the elderly: a global analysis of trends in occurrence and susceptibility, 2004-2010

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Background: Methicillin-resistant Staphylococcus aureus is a significant pathogen worldwide affecting people of all ages. In this report, occurrence of MRSA in the elderly was compared to younger populations, and the susceptibility of MRSA in the elderly was assessed using data from the Tigecycline Evaluation and Surveillance Trial (TEST). Methods: 3,956 MRSA were collected between 2004 and 2010 in 52 countries from various infection sites in patients ≥ 65 years old. MICs were performed as specified by CLSI at each site using custom broth microdilution panels and interpreted per CLSI/FDA guidelines. Linear trends in % MRSA and % susceptible were assessed with the Cochran-Armitage test. Results: Overall during 2004 to 2010, the MRSA rate was significantly higher in the elderly (45% of all S. aureus) than in the younger population (<65 years, 36%). The MRSA rate in the elderly decreased over that same time period from 52% in 2004 to 29% in 2010 ($p < 0.05$), with a similarly significant decrease in the younger population. The susceptibility of MRSA in the elderly to several antimicrobial agents is shown below. * Statistically significant decreasing trend in susceptibility ($p < 0.05$). Conclusions: MRSA were more prevalent in the elderly than in the younger population but have been decreasing significantly over time. Only minocycline showed a highly significant linear trend of decreasing susceptibility ($p < 0.0001$) from 2004 to 2010. Tigecycline and vancomycin showed excellent in vitro activity against MRSA in the elderly, with only 3 isolates non-susceptible to tigecycline.

	% Susceptible						
	2004	2005	2006	2007	2008	2009	2010
Levofloxacin	5.0	7.5	8.4	12.0	8.6	7.1	2.4
Minocycline	96.5	97.5	96.2	96.1	92.4	86.3	82.8*
Tigecycline	100	100	99.8	100	100	99.7	100
Vancomycin	100	100	100	100	100	100	100
n	479	509	572	773	688	680	255