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Abstract (poster session)

Susceptibility of clinical Staphylococcus aureus isolates to the glycopeptides and comparators at a district general hospital in the UK

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Objectives: Recent reports indicate decreasing in vitro susceptibility of Staphylococcus aureus to vancomycin and poor clinical outcome when vancomycin is used to treat strains with a minimum inhibitory concentration (MIC) between 1 mg/L and 2 mg/L. With the emergence of glycopeptide resistance and routine use of vancomycin in serious staphylococcal infections, continued monitoring of vancomycin MIC is required in order to target antibiotic therapy. This study compares in vitro susceptibility of S. aureus isolates, evaluated via gradient strip, against routine and novel antimicrobials used in treatment of serious gram-positive infections. Methods: Clinically significant S. aureus isolates (n=182), cultured on non-selective media from patient samples at the Queen Elizabeth Hospital, Kings Lynn, were retrieved for MIC testing. MIC values were determined by antibiotic gradient strip (AB biodisk, Sweden and Oxoid, UK) for daptomycin, tigecycline, linezolid and the glycopeptides, following BSAC methodology. Results: Using BSAC susceptibility breakpoints, all isolates were susceptible to vancomycin, teicoplanin and linezolid. However, 29% of isolates exhibited an MIC of 2 mg/L for vancomycin. Non-susceptibility was observed for daptomycin (2%) and tigecycline (6%). Conclusions: Continued surveillance of S. aureus MIC is required at a local level to monitor emerging resistance to vancomycin and comparator antibiotics.

Table 1. MIC frequency distribution for five antimicrobials against S. aureus clinical isolates

MIC (mg/L)	**Daptomycin** (%)	**Teicoplanin** (%)	**Vancomycin** (%)	**Linezolid** (%)	**Tigecycline** (%)
0.125	1	1	0	0	5
0.25	14	2	0	0	53
0.5	37	22	13	0	36
1	46	60	58	5	5
2	2	15	29	91	1
4	0	0	0	4	0