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Abstract (poster session)

**Ability of automated susceptibility testing instruments to detect glycopeptide intermediate resistance in *Staphylococcus aureus***

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**OBJECTIVES:** Reduced glycopeptide susceptibility in *Staphylococcus aureus* is an important clinical problem. It is now current practice not to disc test for detection of homogenous and heterogeneous intermediate resistance to glycopeptides in *S. aureus* (GISA/hGISA). BSAC & EUCAST recommend MIC determination. With automated susceptibility testing now common in laboratories it is important to evaluate their use in detecting hGISA/GISA. **METHODS:** 11 hGISA & 9 GISA plus 3 *S. aureus* susceptible controls were used in this study. MIC determination was performed in two centres (Cardiff & Birmingham) by 2 technicians in each centre using vancomycin (V) Etest (BioMerieux) & MICE (Oxoid) plus Vitek (Birmingham) & Phoenix (Cardiff). All gradient tests were performed on Mueller Hinton agar (MHA) as advised by the manufacturer. MIC & interpretation was compared for all methods using BSAC guidelines. **RESULTS:** Of 11 hGISA 11.3%, 38.7%, 0% & 9.1% were detected successfully by Etest, MICE, Phoenix and Vitek respectively. Of 9 GISA 60.9%, 58.6%, 33% & 59.6% were detected successfully by Etest, MICE, Phoenix and Vitek respectively (Table 1). 0% of 2 control strains exhibited MICs of >2mg/L using both Etest & MICE. MICs of >2mg/L were seen in ATCC 25923 on 75% of occasions using MICE and 0% using Etest. **CONCLUSIONS:** Detection of hGISA/GISA was poor for all methods, with approximately 40% of GISA missed by most methods. Gradient strips detected more hGISA than any automated instrument, with MICE detecting more hGISA than Etest but suffering false positives with the ATCC 25923 sensitive control strains. Further work is required to determine a satisfactory method for diagnostic laboratories to detect reduced glycopeptides susceptibility in *S. aureus*.

Table: Percentage of resistance detected

	Mean % detected	
	hGISA	GISA
Etest	11.3	60.9
MICE	38.7	58.6
Phoenix	0	33
Vitek	9.1	59.6