P1567
Poster Session VI
Resistance surveillance: Gram-positives and others

COMPARISON OF STAPHYLOCOCCAL SENSITIVITY DATA USING EUCAST VS CLSI

A. Marek[1], D. Henderson[2], J. Wilson[2], G. Edwards[3], T. Inkster[1]

[1]Microbiology Department, Glasgow Royal Infirmary, Glasgow, United Kingdom ; [2]Antimicrobial resistance, Health Protection Scotland, Glasgow, United Kingdom ; [3]Scottish MRSA Reference Laboratory, Glasgow Royal Infirmary, Glasgow, United Kingdom

Objectives

Laboratories across Europe are being encouraged to move across to the harmonised European antimicrobial sensitivity testing breakpoints published by the European Committee on Antimicrobial Sensitivity Testing (EUCAST). This will facilitate comparisons of resistance rates throughout Europe. Scottish laboratories moved mainly from CLSI over the course of a year. It is anticipated that changing the breakpoints will have an impact on local resistance rates which has previously been described for Gram negative isolates and Streptococcus pneumoniae. We aim to compare our historical MIC data for Staphylococcus aureus with CLSI and EUCAST breakpoints in order to anticipate likely changes to resistance patterns that may emerge as we adopt the EUCAST breakpoints in Scotland.

Methods

20481 non duplicate isolates (1 per quarter) of S. aureus isolated from blood from April 1996 to September 2013 were compared using the CLSI and EUCAST breakpoints. These isolates consist of 13211 isolates of meticillin sensitive S. aureus and 7270 isolates of meticillin resistant S. aureus. This data was obtained from the Scottish MRSA reference laboratory.

Results

As anticipated, the absence of an intermediate category in some of the EUCAST guidelines has increased the number of isolates testing resistant to many antibiotics. This is most noticeable for gentamicin (where application of the EUCAST breakpoints increased the % resistance from 2.96 to 5.71), rifampicin (increase from 0.85% to 1.67%) and clindamycin (increase from 9.13% to 15.94%). Potential confounding factors with this kind of analysis relate to the long time period that our data spans and the methodology changes for susceptibility testing which have occurred during this time. It is recognised that the method change for some antibiotics results in a change in the MIC which spans the breakpoint.

Conclusion

As countries across Europe move to the new EUCAST breakpoints we would encourage a look back at local data in order to anticipate the effect that the change in breakpoints will have on local resistance rates. While the increase in resistance rates with the adoption of new guidelines is largely anticipated the scale of this for S. aureus in Scotland was not clear prior to this analysis. As resistance data is important for use in developing empirical antibiotic policies it will be interesting to see if this change has a wider impact.