

EVALUATION OF THE DISK DIFFUSION METHOD (DD) TO DETERMINE THE SUSCEPTIBILITY TO PENICILLIN (PEN) AND CEFOTAXIME (CTX) OF VIRIDANS GROUP STREPTOCOCCI (VGS)

Horacio Lopardo¹, María Alejandra Blanco¹, Laura Vigliarolo², Paula Gagetti³, Alejandra Corso³ and WHONET Collaborative Group (28 centers from 20 cities)(1) Hospital J P Garrahan, Buenos Aires, (2) Universidad Nacional de La Plata, (3) INEI, Buenos Aires, Argentina.

INTRODUCTION: The disk diffusion (DD) method is not accepted yet by the CLSI for susceptibility testing to PEN of VGS while it is considered for CTX. **OBJECTIVE:** The aim of this study was to evaluate the DD method with disks of PEN and CTX for VGS by comparing it in a double-blind way with agar dilution (AD) as the "gold standard" method. **MATERIALS & METHODS:** Consecutive significant isolates of VGS (N = 161) were obtained by 28 centers of 20 Argentinian cities. Only 138 could be used for susceptibility testing. Both DD and AD tests for PEN and CTX were performed at least twice following the CLSI guidelines. Strains were classified as resistant (R), intermediately susceptible (I) or susceptible (S) to PEN using the recommendations of CLSI for dilution methods. DD breakpoints for CTX, available in the CLSI guidelines, were used. PEN DD breakpoints were established by us minimizing possible errors. **RESULTS:** Most VGS were PEN S (72.5%) and CTX S (91.3%) while 21.0% were PEN I, 3.6% CTX I, 6.5% PEN R, and 5.1 CTX R. Thirty one additional isolates (8 S, 16 I and 7 R) were also included. A scatterplot showing the correlation between DD and AD susceptibility tests of PEN showed neither major (M) nor very major (VM) errors, however, 14.2 minor (m) errors were recorded. VM (0.6%), M (4.1%) and m errors (11.8%) were found for CTX. Using new breakpoints for CTX, M errors may be reduced to 1.8%, but m errors may grow up to 16%. Correlation factors between both methods were 0.78 for PEN and 0.57 for CTX. **CONCLUSIONS:** Opposite to the recommendations of CLSI, the DD method appears to be a practical alternative for susceptibility testing of PEN for VGS, while it may not be recommendable for CTX.