Vitek2 may deduce false susceptibility to cefixime in Staphylococcus

The VITEK 2 (bioMérieux) Advanced Expert System (AES) suggests biological corrections when a single MIC inconsistency is detected and it is presumed that an error has occurred in the generated data, results are atypical due to the strain, a false-negative result is provided (for instance non-induced β-lactamase), or an incorrect one was entered by the operator (Sanders et al., 2001). For instance, any discrepancies between the cefoxitin screening and the oxacillin MIC are fixed with a biological correction when investigating β-lactam resistance in Staphylococcus isolates (Sanders et al., 2001).

Instead, a therapeutic correction is made when no bacteriological error is presumed, but the interpretation of the MIC is modified; for instance, cotrimoxazole MICs may be in the susceptible range for a few strains of Pseudomonas aeruginosa but interpretation is changed to resistant by the AES (Sanders et al., 2001).

Finally, the AES also deduces susceptibility to drugs not tested, and the user may select multiple antibiotics to detect resistant phenotypes those not testing an appropriate range of antibiotics to detect resistant phenotypes using interpretative reading (Barry et al., 2003). Nonetheless, we believe machines cannot replace microbiologists, who should always consider results from automated tests in the light of their personal knowledge and experience.

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