

Vancomycin-Resistant Enterococcus spp.

Rationale for speciation of Enterococcus in cases of intermediate vancomycin MICs

Question:

When testing a rectal surveillance culture for VRE that reveals an Enterococcus spp. with a vancomycin MIC of 8 mcg/ml, what action does your laboratory take?

Report results as “no VRE isolated”

Report this to infection control as VRE

Repeat susceptibility tests using a disk diffusion method

Set up a BHI-vancomycin (6 mcg/ml) screen plate

Identify species of Enterococcus or rule out motile Enterococcus before reporting vancomycin resistance

Discussion:

The following specific information for Enterococcus spp. is provided in the Clinical and Laboratory Standards Institute (CLSI) guidelines:

For isolates for which the vancomycin MICs are 8 to 16 ug/ml, perform biochemical tests for identification as listed under the “Vancomycin Resistance” test found in Appendix D.¹

Test for motility and pigment production to distinguish species with acquired resistance (VanA and VanB) from those with intrinsic, intermediate-level resistance to vancomycin (VanC), such as E. gallinarum and E. casseliflavus, which often grow on the vancomycin screen plate. In contrast to other enterococci, E. casseliflavus and E. gallinarum with vancomycin MICs of 8-16 ug/mL (intermediate) differ from vancomycin-resistant enterococci (VRE) for infection control purposes.²

Answer:

Identify species of Enterococcus or rule out motile Enterococcus before reporting vancomycin resistance

¹CLSI M100-S19, Table 2D: Zone Diameter and MIC Interpretive Standards for Enterococcus spp., Pg 61

²CLSI M100-S19, Appendix D: Screening Tests for High-Level Aminoglycoside Resistance (HLAR) and Vancomycin Resistance in Enterococcus spp., Pg 128