Correlation of Reference Agar Dilution MIC Values and Kirby-Bauer Disk Diffusion Testing for Fosfomycin against Gram-Positive and Gram-Negative Bacteria

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1. Background

Fosfomycin has been used as an intravenous and oral form to treat a variety of infections, including urinary tract and skin infections. In the United States, fosfomycin is licensed as an oral dosage form (3 grams) taken once daily. This study was performed by JMI Laboratories and supported by Zavante Therapeutics, Inc., which funded the research. Contact Information: Robert Flamm, PhD, JMI Laboratories, 345 Beaver Creek Centre, Suite A North Liberty, IA 52317. Phone: (319) 665-3372. Fax: (319) 665-3371. Email: robert.flamm@jmilabs.com

2. Materials and Methods

A total of 96 gram-negative and 96 gram-positive recent clinical isolates (<60 days old) of clinical and laboratory isolates were selected for testing against fosfomycin. The MIC range for the test compounds were 2 to 256 mg/L for the agar dilution method and 0.5 to 256 mg/L for the disk diffusion method.

3. Results

Susceptible organisms: 100% of gram-positive and 95% of gram-negative isolates were susceptible to fosfomycin. When correlating disk and MIC values, there were no major errors and 2.6% minor errors in the I+1 to I-1 range (Table 4).

4. Conclusions

The CLSI MIC breakpoints for fosfomycin are 0.5/2/8/16/32/64/128/256 mg/L and apply only to Enterococcus species complex.

References


