Amended Abstract

Fusidic acid (CEM-102) is a steroidal antibiotic that possesses a broad spectrum of activity against Gram-positive bacteria such as staphylococci, including methicillin-resistant Staphylococcus aureus (MRSA) and coagulase-negative staphylococci (CoNS). A central monitoring laboratory (JMI Laboratories) used the EUCAST broth microdilution method to determine susceptibilities of FA and comparators. Other agents tested included: vancomycin (VAN), daptomycin (DAP), clindamycin (CLN), trimethoprim-sulfamethoxazole (T-S), and linezolid (LZD). Interpretive criteria were used for FA (based on EUCAST breakpoints) in the US is very low.

Materials and Methods

A total of 1,276 un-duplicated isolates were collected prospectively from 38 US medical centers. Tested isolates from skin and skin structure infections and bloodstream infections were composed of 1,064 Staphylococcus aureus (SA) and 314 coagulase-negative staphylococci (CoNS). A central monitoring laboratory (JMI Laboratories) used the CLSI broth microdilution method to define the presence of FA and comparators. Other agents tested included: vancomycin (VAN), daptomycin (DAP), clindamycin (CLN), trimethoprim-sulfamethoxazole (T-S), and linezolid (LZD). Interpretable data show that FA is a potent agent against SA in the US and support its continued development to treat staphylococcal infections.

Results

• No isolates were R to VAN, DAP, or LZD.
• Against CoNS, 16% had FA MICs of >1 µg/mL with 16 isolates, using EUCAST breakpoints.
• For MR-SA, 99% had FA MICs of ≤0.5 µg/mL with 16 isolates, using EUCAST breakpoints.

Table 1. Activities of fusidic acid and comparators tested against staphylococci from SENTRY 2016

<table>
<thead>
<tr>
<th>Organism</th>
<th>FA</th>
<th>Clindamycin</th>
<th>Tetracycline</th>
<th>Daptomycin</th>
<th>EUCAST</th>
</tr>
</thead>
<tbody>
<tr>
<td>MR-SA (n=16)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>CLS-1</td>
<td>5</td>
<td>3</td>
<td>5</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>CLS-2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>CLS-4</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

Conclusions

• Against staphylococci, FA was among the most potent oral agents tested against SA that included methicillin-resistant SA (MRSA), 99.9% had FA

Acknowledgements

This study was supported by Campen, Inc.

References


Introduction

Fusidic acid (CEM-102) is a steroidal antibiotic that possesses a broad spectrum of activity against Gram-positive bacteria such as staphylococci, including methicillin-resistant Staphylococcus aureus (MRSA) and coagulase-negative staphylococci (CoNS).

• Europe has used fusidic acid (FA) for many years for acute therapy of skin and skin structure infections, and for long-term treatment of bone and joint infections.

Activity of Fusidic Acid against Recent Clinical Isolates of Staphylococcus Collected from United States Hospitals in 2016 as Part of the SENTRY Antimicrobial Surveillance Program

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