Plesiomonas shigelloides

Calibration of zone diameter breakpoints to MIC values

Version 1.0
June 2018
**Plesiomonas shigelloides**

MIC and zone diameter correlates

- The following histograms present inhibition zone diameter distributions from EUCAST antimicrobial susceptibility testing. In most, the different colours of the bars indicate different MIC values. In some, the colours of the bars indicate a resistance gene or a resistance mechanism.

- The distributions include data for wild-type isolates and for isolates with acquired resistance mechanisms. These distributions can not be used to infer resistance rates or the performance of the tests with routine isolates.

- For some agents, isolates were tested on more than one occasion, including parallel tests with disks and media from several manufacturers. When this is the case, data are presented as both the “number of isolates tested” and the “total number of MIC-zone diameter correlates”, including replicate tests and parallel tests with disks and media from different sources.
Plesiomonas shigelloides
Materials and methods

- Antimicrobial susceptibility testing was performed on clinical isolates of *Plesiomonas shigelloides*. Disk diffusion was performed according to EUCAST methodology and MIC determination was performed with broth microdilution.

- *Plesiomonas shigelloides* was previously considered to be part of the family Enterobacteriaceae. Recent taxonomic studies have narrowed the definition of the family Enterobacteriaceae and *Plesiomonas shigelloides* is now included in another family within the Order Enterobacterales. EUCAST breakpoints for Enterobacteriaceae apply to all members of the Enterobacterales. Distributions for *Plesiomonas shigelloides* are represented separately in this document and are not included in the document on Enterobacteriaceae.

- This presentation is based on EUCAST Clinical Breakpoint Table v. 8.1.
Explanation of graphs:

Zone diameter distribution with MIC values or resistance mechanisms as coloured bars.

Trimethoprim-sulfamethoxazole 1.25-23.75 μg vs. MIC
*Plesiomonas shigelloides*, 46 isolates (60 correlates)

Zone diameter breakpoint

Resistant by EUCAST MIC breakpoints

Susceptible by EUCAST MIC breakpoints
Piperacillin-tazobactam 36 µg vs. MIC
_Plesiomonas shigelloides_, 46 isolates (61 correlates)

(1 data source)

### Breakpoints

- **MIC**
  - S≤8, R>16 mg/L
- **Zone diameter**
  - S≥20, R<17 mm
Cefepime 30 µg vs. MIC

*Plesiomonas shigelloides*, 46 isolates (61 correlates)

(1 data source)

**Breakpoints**

<table>
<thead>
<tr>
<th>Breakpoints</th>
<th>S≤1, R&gt;4 mg/L</th>
<th>S≥27, R&lt;24 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zone diameter</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Cefotaxime 5 µg vs. MIC

*Plesiomonas shigelloides*, 46 isolates (61 correlates)

(1 data source)

Breakpoints

- **MIC**
  - S≤1, R>2 mg/L
- **Zone diameter**
  - S≥20, R<17 mm
Ceftazidime 10 µg vs. MIC
*Plesiomonas shigelloides*, 46 isolates (61 correlates)

(1 data source)

**Breakpoints**

MIC
S≤1, R>4 mg/L

Zone diameter
S≥22, R<19 mm
Ceftriaxone 30 µg vs. MIC

*Plesiomonas shigelloides*, 46 isolates (61 correlates)

(1 data source)

**Breakpoints**

<table>
<thead>
<tr>
<th>MIC (mg/L)</th>
<th>S≤1, R&gt;2 mg/L</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zone diameter</td>
<td>S≥25, R&lt;22 mm</td>
</tr>
</tbody>
</table>
Cefuroxime 30 µg vs. MIC
*Plesiomonas shigelloides*, 46 isolates (61 correlates)

(1 data source)

### Breakpoints
- **MIC**: S≤8, R>8 mg/L
- **Zone diameter**: S≥19, R<19 mm
Ertapenem 10 µg vs. MIC

*Plesiomonas shigelloides*, 46 isolates (61 correlates)

(1 data source)

<table>
<thead>
<tr>
<th>Breakpoints</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIC</td>
</tr>
<tr>
<td>Zone diameter</td>
</tr>
</tbody>
</table>
Imipenem 10 µg vs. MIC

*Plesiomonas shigelloides*, 46 isolates (61 correlates)

(1 data source)

**Breakpoints**

<table>
<thead>
<tr>
<th>MIC (mg/L)</th>
<th>Breakpoint</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤0.25</td>
<td>S≤2, R&gt;8 mg/L</td>
</tr>
<tr>
<td>0.125</td>
<td></td>
</tr>
<tr>
<td>≤0.06</td>
<td></td>
</tr>
</tbody>
</table>

**No of isolates**

- MIC (mg/L)
  - 0.25
  - 0.125
  - ≤0.06

**Inhibition zone diameter (mm)**

0 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40

- No of isolates
  - 0
  - 2
  - 4
  - 6
  - 8
  - 10
  - 12
  - 14
  - 16
  - 18
  - 20
  - 22
  - 24
  - 26
  - 28
  - 30
  - 32
  - 34
  - 36
  - 38
  - 40
Meropenem 10 µg vs. MIC
Plesiomonas shigelloides, 46 isolates (61 correlates)

(1 data source)

<table>
<thead>
<tr>
<th>MIC (mg/L)</th>
<th>No of isolates</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.03</td>
<td>3</td>
</tr>
<tr>
<td>≤0.016</td>
<td>34</td>
</tr>
</tbody>
</table>

Breakpoints
MIC          S≤2, R>8 mg/L
Zone diameter S≥22, R<16 mm
Ciprofloxacin 5 µg vs. MIC
Plesiomonas shigelloides, 46 isolates (61 correlates)

(1 data source)

No of isolates

Breakpoints
MIC
S≤0.25, R>0.5 mg/L
Zone diameter
S≥26, R<24 mm
Levofloxacin 5 µg vs. MIC

*Plesiomonas shigelloides*, 46 isolates (61 correlates)

(1 data source)

**Breakpoints**
- **MIC**
  - S ≤ 0.5, R > 1 mg/L
- **Zone diameter**
  - S ≥ 23, R < 19 mm
Trimethoprim-sulfamethoxazole 1.25-23.75 µg vs. MIC
*Plesiomonas shigelloides*, 46 isolates (60 correlates)

(1 data source)

**Breakpoints**
- MIC: $S \leq 2$, $R > 4$ mg/L
- Zone diameter: $S \geq 14$, $R < 11$ mm

**MIC (mg/L)**
- $\geq 32$
- 16
- 8
- 4
- 2
- 1
- 0.5
- 0.25
- $\leq 0.125$

**Inhibition zone diameter (mm)**

**No of isolates**

<table>
<thead>
<tr>
<th>MIC</th>
<th>No of isolates</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\geq 32$</td>
<td>1</td>
</tr>
<tr>
<td>16</td>
<td>2</td>
</tr>
<tr>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>0.5</td>
<td>7</td>
</tr>
<tr>
<td>0.25</td>
<td>8</td>
</tr>
<tr>
<td>$\leq 0.125$</td>
<td>9</td>
</tr>
</tbody>
</table>