Toxicity of Extended Course Linezolid: Results of an Emerging Infections Network (EIN) Survey

Susan Beekmann RN MPH1, David Gilbert MD2, Philip Polgreen MD1 and the IDSA Emerging Infections Network

1University of Iowa, Iowa City, IA; 2Providence Portland Medical Center, Portland, OR

Abstract

Background: Since linezolid was licensed in 2000, there have been increasing adverse events associated with the use of intravenous linezolid. A recent study has shown that the use of linezolid is associated with increased use of invasive infections, hospital-acquired pneumonia, and infections.

Methods: In December 2000, the EIN surveyed 750 infectious disease specialists regarding the frequency of linezolid prescribing with adverse events. The survey was sent to all members of the EIN.

Results: The 460 who responded (62% of 750 members) reported 729 adverse events related to linezolid use, with 146 reported deaths.

5. Serious adverse events
   - Of patients who developed sepsis/thrombosis, a mean of 42% (± 10.1%) required discontinuation of therapy.
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6. Serotonin syndrome and linezolid use

<p>| Table: Frequency of adverse events stratified by frequency of linezolid use |
|-----------------------------|-----------------------------|</p>
<table>
<thead>
<tr>
<th>% of CD patients</th>
<th>CD patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>42 %</td>
</tr>
<tr>
<td>Thrombocytopenia</td>
<td>30%</td>
</tr>
<tr>
<td>Lactic acidosis</td>
<td>25%</td>
</tr>
<tr>
<td>Periperal neuropathy</td>
<td>20%</td>
</tr>
<tr>
<td>Optic neuropathy</td>
<td>15%</td>
</tr>
</tbody>
</table>

Summary

- Short-course linezolid (<14 days) is generally well tolerated. However, the majority of patients who prescribe linezolid courses of more than 14 days in a less-than-chronic basis, and more than two-thirds use linezolid for more than 14 days.
- New thrombocytopenia or anemia/neutropenia was reported by the majority of physicians, and more often by those who prescribed linezolid more frequently and for longer periods of time.
- Lactic acidosis was uncommon (reported by 5% of patients) and was seen more often by those who prescribe linezolid more frequently for a longer duration (15%)
- Periperal neuropathy was reported by 12% of physicians, while optic neuropathy was observed by 3%
- Approximately half of respondents reported concomitant use of SBIs with linezolid, and, of those, a quarter had observed serotonin syndrome. Physicians who use linezolid more often are more likely to co-administer SBIs, but were not more likely to observe serotonin syndrome.
- Of respondents who ever use linezolid for >4 weeks duration, 74% of their patients were able to complete the entire course.
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