Guidelines for the Use of Antiretroviral Agents in Pediatric HIV Infection

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Table 15k. Antiretroviral-Therapy-Associated Adverse Effects and Management Recommendations—Peripheral Nervous System Toxicity  (Last updated May 22, 2018; last reviewed May 22, 2018)

<table>
<thead>
<tr>
<th>Adverse Effects</th>
<th>Associated ARVs</th>
<th>Onset/Clinical Manifestations</th>
<th>Estimated Frequency&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Risk Factors</th>
<th>Prevention/ Monitoring</th>
<th>Management</th>
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</thead>
<tbody>
<tr>
<td>ARV Toxic Neuropathy&lt;sup&gt;b&lt;/sup&gt;</td>
<td>d4T, ddl</td>
<td>Onset:  • Weeks to months  Presentation:  • Decreased sensation  • Aching, burning, painful numbness  • Hyperalgesia  • Allodynia  • Decreased or absent ankle reflexes  Distribution:  • Bilateral soles of feet, ascending to legs and fingertips</td>
<td>Children:  • Around 1% overall  • 10% to 25% in children taking d4T  Adults:  • Up to 50% in adults taking d4T</td>
<td>• Pre-existing neuropathy  • Elevated triglyceride levels  • Poor nutrition  • More advanced HIV disease  • Concomitant use of other neurotoxic agents (e.g., INH)  • Some mitochondrial DNA haplogroups may have increased risk.</td>
<td>Do not use d4T, ddl, or IDV. Co-administration of ddl and d4T is contraindicated (no exceptions).</td>
<td>Investigate potential causes, including non-ARV medications and nutritional deficiencies.</td>
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<td></td>
<td>d4T or ddl are no longer recommended for use in an ARV regimen.</td>
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<td>Discontinue offending agent.</td>
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<td>PIs rarely, primarily IDV</td>
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<td>Topical capsaicin 8% may be helpful.</td>
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<td>Consider referral to a neurologist.</td>
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<sup>a</sup> Peripheral neuropathy may be underreported in children because symptoms are difficult to evaluate in young children.

<sup>b</sup> HIV infection itself may cause a distal sensory neuropathy that is phenotypically identical to ARV toxic neuropathy.

**Key to Acronyms:** ARV = antiretroviral; d4T = stavudine; ddl = didanosine; IDV = indinavir; INH = isoniazid; PI = protease inhibitor; the Panel = The Panel on Antiretroviral Therapy and Medical Management of Children Living with HIV

**References**


