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*</th>
<th>Risk Factors</th>
<th>Prevention/ Monitoring</th>
<th>Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARV Toxic Neuropathyb</td>
<td>d4T, ddi</td>
<td>Onset:</td>
<td>Children:</td>
<td>• Pre-existing neuropathy</td>
<td>Do not use d4T, ddi, or IDV. Co-administration of ddi and d4T is contraindicated (no exceptions).</td>
<td>Investigate potential causes, including non-ARV medications and nutritional deficiencies.</td>
</tr>
<tr>
<td></td>
<td><strong>d4T or ddi are no longer recommended for use in an ARV regimen.</strong></td>
<td>Prevalence:</td>
<td>• Around 1% overall</td>
<td>• Elevated triglyceride levels</td>
<td></td>
<td>Discontinue offending agent.</td>
</tr>
<tr>
<td></td>
<td>PIs rarely; primarily IDV</td>
<td>d4T or IDV</td>
<td>• 10% to 25% in children taking d4T</td>
<td>• Poor nutrition</td>
<td></td>
<td>Topical capsaicin 8% may be helpful.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Adults:</td>
<td>• Up to 50% in adults taking d4T</td>
<td>• More advanced HIV disease</td>
<td></td>
<td>Consider referral to a neurologist.</td>
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<tr>
<td></td>
<td></td>
<td>Distribution:</td>
<td></td>
<td>• Concomitant use of other neurotoxic agents (e.g., INH)</td>
<td></td>
<td>Data are insufficient to allow the Panel to recommend use of any of the following modalities: tricyclic antidepressants, gabapentin, pregabalin, mexiletine, lamotrigine, and acupuncture or other complementary approaches.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bilateral soles of feet, ascending to legs and fingertips</td>
<td></td>
<td>• Some mitochondrial DNA haplogroups may have increased risk.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Peripheral neuropathy may be underreported in children because symptoms are difficult to evaluate in young children.

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

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

**References**


