Guidelines for the Use of Antiretroviral Agents in Pediatric HIV Infection

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Table 15g. Antiretroviral Therapy-Associated Adverse Effects and Management Recommendations—Lactic Acidosis
(Last updated April 16, 2019; last reviewed April 16, 2019)

<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>Lactic Acidosis</td>
<td>NRTIs; ZDV; Less likely with 3TC, FTC, ABC, TAF, and TDF</td>
<td>Lactic acidosis is associated with use of ddl and d4T. Cases are rare now that these NRTIs are no longer recommended.</td>
<td>Adults:</td>
<td>Due to the presence of propylene glycol as a diluent, LPV/r oral solution should not be used in preterm neonates or any neonate who has not attained a postmenstrual age of 42 weeks and a postnatal age of ≥14 days.</td>
<td>Lactate 2.1–5.0 mmol/L (Confirmed with a Second Test):</td>
<td>Lactate &gt;5.0 mmol/L. (Confirmed With a Second Test) or &gt;10.0 mmol/L (Any One Test):</td>
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<tr>
<td>Other Drugs:</td>
<td>See Risk Factors and Prevention/ Monitoring columns for information regarding the toxicity of propylene glycol when LPV/r oral solution is used in neonates.</td>
<td>Insidious Onset of a Combination of Signs and Symptoms:</td>
<td></td>
<td>Due to the presence of propylene glycol as a diluent, LPV/r oral solution should not be used in preterm neonates or any neonate who has not attained a postmenstrual age of 42 weeks and a postnatal age of ≥14 days.</td>
<td></td>
<td>Discontinue all ARV drugs.</td>
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<td>Monitor for clinical manifestations of lactic acidosis and promptly adjust therapy.</td>
<td></td>
<td>Provide supportive therapy (e.g., IV fluids; some patients may require sedation and respiratory support to reduce oxygen demand and ensure adequate oxygenation of tissues).</td>
</tr>
</tbody>
</table>

Key to Acronyms: 3TC = lamivudine; ABC = abacavir; ARV = antiretroviral; BMI = body mass index; CD4 = CD4 T lymphocyte; d4T = stavudine; ddl = didanosine; FTC = emtricitabine; HCV = hepatitis C virus; IV = intravenous; LPV/r = lopinavir/ritonavir; NRTI = nucleoside reverse transcriptase inhibitor; TAF = tenofovir alafenamide; TDF = tenofovir disoproxil fumarate; THAM = tris (hydroxymethyl) aminomethane; ZDV = zidovudine

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* Blood for lactate determination should be collected, without prolonged tourniquet application or fist clenching, into a pre-chilled, gray-top, fluoride-oxalate-containing tube and transported on ice to the laboratory to be processed within 4 hours of collection.

* Management can be initiated before receiving the results of the confirmatory test.
References

General Reviews


Risk Factors


Monitoring and Management

