Guidelines for the Use of Antiretroviral Agents in Pediatric HIV Infection

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Table 17k. Antiretroviral Therapy-Associated Adverse Effects and Management Recommendations—Peripheral Nervous System Toxicity (Last updated November 1, 2012; last reviewed November 1, 2012)

Adverse Effects	Associated ARVs	Onset/Clinical Manifestations	Estimated Frequency[a]	Risk Factors	Prevention/Monitoring	Management
ARV toxic neuropathy[b]	d4T, ddI	Onset: Variable, weeks to months following NRTI initiation Presentation: Decreased sensation Aching, burning, painful numbness Hyperalgesia (lowered pain threshold) Allodynia (non-noxious stimuli cause pain) Decreased or absent ankle reflexes Distribution: bilateral soles of feet, ascending to legs and fingertips	HIV-infected children: 1.13% prevalence (baseline 2001); 0.23 per 100 person-years (2001–2006) 0.07%–0.26% incidence in two large African cohorts (aged 1 month–18 years, median follow-up 1.8–3.2 years) HIV-infected adults: 17%–57% taking d4T	HIV-infected adults: Pre-existing neuropathy (diabetes, alcohol abuse, vitamin B_{12} deficiency) Elevated triglyceride levels Older age Poor nutrition More advanced HIV disease Mitochondrial DNA haplogroup	Limit use of d4T and ddI, if possible. As part of routine care, monitor for symptoms and signs of peripheral neuropathy.	Discontinue offending agent. Persistent pain can be difficult to treat; topical capsaicin 8% may be helpful. Data are insufficient to allow the Panel to safely recommend use of any of the following modalities in children: tricyclic antidepressants, gabapentin, pregabalin, mexilitine, or lamotrigine.

[a] 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, NRTI = nucleoside reverse transcriptase inhibitor

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