ToxTidbits

Maryland Poison Center
UNIVERSITY OF MARYLAND SCHOOL OF PHARMACY

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The Maryland Poison Center's Monthly Update: News, Advances, Information

Toxicity of Newer Atypical Antipsychotics in Young Children

Asenapine (Saphris®), iloperidone (Fanapt®) and lurasidone (Latuda®) are relatively new atypical antipsychotics that work by antagonism at dopamine receptor subtype D2 and serotonin receptor subtype 5HT2A . All three are FDA approved for management of schizophrenia; asenapine and lurasidone are also approved for bipolar disorder. As they are not indicated in young children, there is limited information on toxicity of pediatric exposures. To learn more about the toxicity of these drugs, researchers at the Maryland Poison Center used national U.S. poison center data from 2010 to 2015 to compare the toxicity associated with asenapine, iloperidone and lurasidone exposures in children < 6 years of age. *(Clin Toxicol 2018;56:355-359)*

Of the 283 cases, median age was 2 years (range 7 months to 5 years) and 272 were accidental. There were 95 asenapine, 64 iloperidone and 124 lurasidone cases. Drowsiness/lethargy and tachycardia occurred most frequently with iloperidone (45%; 16%) and less often with asenapine (29%, 2%) and lurasidone (8%; 1%), respectively. Toxicity that was more serious occurred with iloperidone including respiratory depression requiring intubation and ventilation in one child and seizures in two children. Clinical effect duration was 8 hours or less for 80% of children managed on-site (usually at their residence) and for 72% of children treated/discharged from an emergency department (ED). Clinical effects lasted for more than 8 hours in 83% of those admitted to critical care and 74% of those admitted to non-critical care. Overall, duration of clinical effects was longest for iloperidone. The majority of children were managed in a health care facility and most children were treated and released from the ED for all three drugs. Thirty-six percent of iloperidone cases were admitted compared to 20% for asenapine and 11% for lurasidone.

The researchers concluded that lurasidone exposures were least serious and iloperidone exposures were most serious in children under 6 years of age. They recommended that symptomatic children be observed in the ED for 8 hours. If toxic effects resolve during that period of time, the child may be discharged. If toxic effects continue or worsen, the child should be admitted.

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Did you know?

More children are being prescribed atypical antipsychotics.

National data show a dramatic rise in off-label (non-approved use) as well as FDA–approved uses of atypical antipsychotics in children and adolescents. This finding includes a twofold to fivefold increase in the use of antipsychotic medications in preschool children. Little is known of potential adverse effects of long term use in this population (*J Pediatr Health Care 2012;26(2):139-145).*

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