Pediatrics Research Directory

Behavioral and psychiatric adverse events associated with antiepileptic drugs commonly used in pediatric patients.


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Multiple factors-including the efficacy of the antiepileptic drug for the particular seizure type, availability of pediatrics-friendly formulations, the ease of dosing and titration, and tolerability issues, such as possible drug interactions and adverse events-affect the selection of the best antiepileptic drug for a child with epilepsy. Behavioral problems are common in children with epilepsy and can be aggravated or initiated by antiepileptic drug therapy. The types and frequencies of antiepileptic drug-associated behavioral events can influence a clinician's drug selection, drug management, and counseling of parents. Unfortunately, appreciating differences among antiepileptic drugs in behavioral adverse event profiles is problematic because, among other reasons, methodologies for reporting, collecting, and analyzing adverse events are not uniform across trials, and there is marked heterogeneity in study design among trials. This review summarizes incidence rates for behavioral and psychiatric adverse events taken from studies of children with epilepsy. These rates are reported for the 10 most commonly prescribed antiepileptic drugs (valproic acid, carbamazepine, phenobarbital, lamotrigine, phenytoin, levetiracetam, oxcarbazepine, topiramate, zonisamide, and gabapentin), grouped according to their predominant mechanism of action. Despite the numerous methodologic inconsistencies, some similarities in adverse event profiles among antiepileptic drugs that share mechanisms of action are apparent. Moreover, the overwhelming body of data on the behavioral effects of phenobarbital should convince clinicians that, whenever possible, it should not be used as the initial-or even the second-monotherapy in children with epilepsy.

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