COMMENT. Seizures appear to be relatively uncommon in association with NF1. A possible increased frequency of infantile spasms in NF1 patients was suggested in two previous reports (Huson SM et al. Brain 1988;111:1355; see Millichap JG, Ed. Progress in Pediatric Neurology , Chicago, PNB, 1991).

ANTIEPILEPTIC DRUGS

USE OF AED LEVELS BY PEDIATRIC NEUROLOGISTS

Replies from 56 of 60 pediatric neurologists surveyed regarding the use and value of antiepileptic drug (AED) levels were evaluated in the Departments of Pediatrics and Toxicology, Dalhousie University and The IWK Children's Hospital, Halifax, Canada. The majority of respondents were in academic practice. Drug concentrations were measured frequently or always at the following times: 1) pre-dose (trough) by 63%, 2) at the expected peak by 18%, 3) at time of clinic visit by 60%, 4) at each office visit by 38%, 5) when a second AED was introduced by 77%, 6) on high doses by 96%, 7) for possible toxicity by 96%, 8) when compliance in doubt by 95%, 9) routinely once or twice a year by 60%, and 10) more than twice a year by 18% of respondents. AED monitoring was generally perceived as valuable and results frequently (75%) influenced clinical decisions. Therapeutic ranges in laboratories varied; they were most consistent for phenytoin (10 - 20 mcg/ml) and most variable for carbamazepine, with lower limits from 3 - 9 and upper limits from 8 - 12 mcg/ml. (Dooley JM et al. The use of antiepileptic drug levels in children: a survey of Canadian pediatric neurologists. Can J Neurol Sci Aug 1993;20:217-221). (Reprints: Dr JM Dooley, Neurology Division, The IWK Children's Hospital, University Ave, Halifax, Nova Scotia, Canada B3J 3G9).

COMMENT. The interpretation of AED levels may be misleading because trough level specimens are often impractical and therapeutic ranges used by laboratories are variable. The authors question the value of carbamazepine levels in children in particular, based on the findings in their survey. Their conclusions and concerns are confirmed by a report from the Poison Centers of Phiadelphia and Pittsburgh (Spiller HA, Krenzelok EP. Carbamazepine overdose: serum concentration less predictive in children. Clin Toxicol Sept 1993;31:459-460). A group of 29 children ages 1 - 12 years were at risk of serious morbidity (seizures, coma, and mechanical ventilator) from CBZ overdose at lower serum concentrations (27 mg/L) than a group of 33 adult patients whose mean toxic CBZ levels for coma were 41 - 44 mg/L. Serum levels were not accurate predictors of risk of toxic overdosage from carbamazepine in children. The following report shows that CBZ levels are more predictive of severe toxicity and morbidity in adults.