correlated with genetics: 90% of BFNS families are linked to KCNQ2 compared to only 3% of BFIS families. (Zara F, Specchio N, Striano P, et al. Genetic testing in benign familial epilepsies of the first year of life: Clinical and diagnostic significance. **Epilepsia** 2013 Mar;54(3):425-36). (Response: Dr Federico Zara. E-mail: federicozara@ospedale-gaslini.ge.it).

COMMENT. Mutational screening for neonatal and infantile seizures should involve KCNQ2 in both BFNS and BFNIS, and PRRT2 in BFIS families. A clear clinical classification of the seizure phenotype is an essential preliminary to genetic analysis. In addition to confirming a clinical diagnosis, a positive SCN1A mutation will influence treatment and improve seizure control. (Brunklaus A, et al. The clinical utility of an SCN1A genetic diagnosis in infantile-onset epilepsy. **Dev Med Child Neurol** 2013 Feb;55(2):154-61).

ANTIEPILEPTIC DRUGS AND DIET

FETAL AED EXPOSURE AND COGNITIVE OUTCOME AT AGE 6

Investigators at Emory University, Atlanta, GA and multiple centers in the USA and UK conducted a prospective study of the effects of antiepileptic drug (AED) monotherapy (carbamazepine, lamotrigine, phenytoin, or valproate) on the intelligence quotient (IQ) at 6 years of age (age-6 IQ). Of 305 mothers and 311 children (6 twin pairs) in the primary analysis, 224 children completed the 6 years of follow-up. Age-6 IQ was 7-10 points lower after exposure to valproate than to carbamazepine, lamotrigine, or phenytoin (p=0.0015, 0.0003, 0.0006, respectively). Measures of verbal and memory abilities were lower in children exposed to valproate compared to the other AEDs, and non-verbal and executive functions were lower with valproate compared to lamotrigine (but not carbamazepine or phenytoin). High doses of valproate were negatively associated with IQ, verbal ability, non-verbal ability, memory, and executive function; other AEDs were not. Age-6 IQ correlated with IQs at younger ages, and IQ improved with age for infants exposed to any AED. Right-handedness was less frequent overall and in the lamotrigine and valproate groups. Verbal abilities were lower than non-verbal abilities overall and in the lamotrigine and valproate groups. Mean IQs were higher in children exposed to periconceptual folate than in unexposed children (p=0.0009). (Meador KJ, Baker GA, Browning N, et al, for the NEAD Study Group. Fetal antiepileptic drug exposure and cognitive outcomes at age 6 years (NEAD study): a prospective observational study. **Lancet Neurol** 2013 Mar;12(3):244-52). (Response: Prof Kimford J Meador, Dept of Neurology, Emory University, Atlanta, GA. E-mail: kimford.meador@emory.edu).

COMMENT. Fetal valproate exposure is associated with a range of cognitive deficits at 6 years of age, an effect dependent on the dose. IQ improves with age and with periconceptual folate. The authors hypothesize that a change in cerebral lateralization, with reduced right-handedness and lower verbal (vs non-verbal) abilities, may be caused by exposure to AEDs.