

COMMENT. Embryopathy and major fetal malformations in children of mothers with epilepsy are associated with the use of AED during the first trimester of pregnancy and not maternal epilepsy itself. Low serum folic acid concentrations and maternal level of education are additional causative factors. Valproate and carbamazepine are especially teratogenic, whereas the association with phenytoin and phenobarbital in this study is not significant. Periconceptual folate supplements are especially recommended in women using AED, although a recent study found 0.4 mg daily of folic acid failed to reduce the risk of fetal malformations in women using AED in early pregnancy (Hernandez-Diaz S et al. N Engl J Med 2000;343:1608-1614). The appropriate dose of folic acid needs to be determined.

## **VASCULAR AND TRAUMATIC DISORDERS**

### **MILD HEAD INJURY AND STROKE**

Five children, ages 1 to 6 years (4 female, 1 male), who suffered acute hemiparesis due to ischemic stroke and striatocapsular infarction within a few minutes to 6 hours following a mild head injury are reported from the Institute of Child Health and Great Ormond Street Hospital, London, UK. The cases were identified during an analysis of 200 cases of ischemic stroke in childhood. The head injury occurred during a minor fall. All were neurologically and developmentally normal before the injury, and all made a complete or near complete recovery. Mechanisms suggested include mechanical disruption of the arterial blood flow, trauma to the arterial intima and thrombosis, or arterial spasm secondary to trauma. One child developed chicken pox 8 days later, and a pre-eruptive varicella arteritis may have sensitized the vasculature to trauma-induced thrombosis. None had signs of other trauma to suggest non-accidental injury. (Shaffer L, Rich PM, Pohl KRE, Ganesan V. Can mild head injury cause ischaemic stroke? Arch Dis Child March 2003;88:267-269). (Respond: Dr V Ganesan, The Wolfson Centre, Mecklenburgh Square, London WC1N 2AP, UK).

COMMENT. The authors cite a previous report of 8 cases of cerebral infarction following minor head trauma in children (Kieslich M et al. J Neurol Neurosurg Psychiatry 2002;73:13-16).

Progress in Pediatric Neurology III (PNB Publishers, 1997;pp447-450) includes three different reports of minor neck trauma as a cause of vertebral artery dissection and stroke occurring during sports activities: Garg BP and colleagues report 3 cases in boys playing football and mention 16 further cases in the literature (Neurology 1993;43:2555-2558); Sheth RJ, Bodensteiner JB et al report a girl with cerebellar infarction following minor neck injury sustained while ice-skating (Clin Pediatr 1994;33:503-505); and Lannuzel A et al report a boy with vertebral artery dissection following a judo session (Neuropediatrics 194;25:106-108). The majority of these cases were discharged taking aspirin, but less than 50% recovered. In the report of Shaffer et al, the use of aspirin was not recorded and the majority recovered.