VASCULAR DISORDERS

NEONATAL CEREBRAL SINOVENOUS THROMBOSIS

The presentation, treatment, and outcome of neonatal cerebral sinovenous thrombosis (SVT) were studied in 42 children, using neurology clinic records (1986-2005) at Indiana University School of Medicine. Gestational/delivery complications occurred in 82%, including preeclampsia/hypertension in 26%, gestational diabetes (26%), and meconium aspiration in 24%. Comorbid risk factors in 62% included dehydration. sepsis, meningitis, and cardiac malformations. Seizures in 57% were the most common presenting symptom. A single sinus was involved in 50%, most commonly the sagittal sinus. Infarcts occurred in 60%, and 64% had received prothrombotic evaluations, testing negative for protein C, protein S, or antithrombin III deficiencies. Three (13%) of 24 tested were heterozygous for factor V Leiden, and 8 (42%) of 19 were positive for other prothrombin gene mutations. Three (7%) were treated with heparin sodium, and all others received only supportive care. One died, and of 41 who survived, 23 (79%) had impairments that included cognitive disorders, cerebral palsy, and epilepsy. (Fitzgerald KC, Williams L S, Garg BP, et al. Cerebral sinovenous thrombosis in the neonate. **Arch Neurol** March 2006;63:405-409).

COMMENT. SVT is a risk factor in neonates following a complicated pregnancy or birth or with acute systemic debilitating illness. Presenting symptoms include seizures, focal or generalized, focal motor deficits, and increased intracranial pressure. Diagnosis is made with MRI and venogram. The outcome is usually poor, with long-term sequelae. Fortunately, due to improved fluid therapy and antibiotics, cerebral venous thrombosis is now uncommon. In earlier times, thrombosis was usually due to sepsis of the mastoid, lip or orbit, and often as a complication of cyanotic congenital heart disease (Byers RK, Hass GM. **Am J Dis Child** 1933;45:1161).

PROGNOSIS OF CEREBRAL ARTERIOPATHY IN STROKE

The evolution of cerebral arteriopathy in 50 children with first arterial ischemic stroke (AIS) was evaluated at Great Ormond Street Hospital for Children, and Neuroscience Unit, Institute of Child Health, London. The median age was 49 months (range 4 mo to 14 yr). Risk factors for AIS included varicella-zoster within 12 months (22 patients), congenital heart disease (4), sickle cell disease 1, and gene mutations in 6. Arteriopathy graded for severity on serial MR angiograms affected 72 arteries in 43 (86%) patients; 5 had clinical recurrence, 12 were progressive, 24 improved, and 7 were stable. Magnetic resonance angiograms were normal in 7. Arteriopathy was transient in 24, chronic in 11, and diagnoses included arterial dissection in 3, moyamoya (3), and vasculitis in 1. In patients with progressive arteriopathy, the hazard of stroke recurrence was increased threefold. After adjusting for age and AIS risk factors, the hazard ratio was 3.1; p=0.27). (Danchaivijitr N, Cox TC, Saunders DE, Ganesan V. Evolution of cerebral arteriopathies in childhood arterial ischemic stroke. **Ann Neurol** April 2006;59:620-626). (Respond: Dr Ganesan, Department