

VASCULAR DISORDERS

PRETHROMBOTIC DISORDERS IN THROMBOSIS AND STROKE

The frequency of inherited and acquired prethrombotic disorders in 30 consecutive children with arterial ischemic stroke (AIS) and 10 with sinovenous thrombosis (SVT) was determined at the Hospital de Pediatría, Buenos Aires, Argentina. The median age for AIS was 7.3 years (range, 0.4-18); for SVT it was 6 years (range, 0.8-12.6). Risk factors and underlying disease included infection, dehydration, head trauma, Moyamoya, and lupus. Hemostatic assays included protein C, protein S, antithrombin, plasminogen, activated protein C resistance, factor V Leiden mutation, and antiphospholipid antibodies. Nine children (30%) with AIS had one or more prethrombotic disorders (inherited protein S deficiency (2), inherited protein C deficiency (1), acquired antithrombin deficiency (2), antiphospholipid antibodies (3), and antiphospholipid antibodies and plasminogen deficiency (1)). Five children (50%) with SVT tested positive: 1 had inherited protein S deficiency, 3 had acquired antithrombin deficiency, and 1 had antiphospholipid antibodies. No cases of activated protein C resistance or factor V Leiden mutation were found. (Bonduel M, Sciuccati G, Hepner M et al. Prethrombotic disorders in children with arterial ischemic stroke and sinovenous thrombosis. Arch Neurol 1999;56:967-971). (Reprints: Mariana Bonduel MD, Hospital de Pediatría "Prof Dr Juan P Garrahan," Combate de los Pozos 1881, Buenos Aires, Argentina 1245).

COMMENT. The majority of children with cerebral thrombosis and stroke have underlying disease or risk factors and hereditary or acquired prethrombotic disorders. A complete hemostatic evaluation is recommended for all children with arterial ischemic stroke and sinovenous thrombosis, including those with obvious clinical risk factors.

TRAUMATIC DISORDERS

MRI IN ACUTE NON-ACCIDENTAL HEAD INJURY

The value of magnetic resonance imaging (MRI) in the diagnosis of acute non-accidental head injury (NAHI) was studied retrospectively in 12 infants and children, ages 1 to 34 months (average, 5.7 months), admitted to the Royal Hospital for Sick Children, Edinburgh, Scotland. Injuries were whiplash-shaking with impact in 4 cases and without impact in 7, and a compression injury in 1. Subdural hematomas, commonly subtemporal, were present in all cases, and MRI findings were similar in cases with and without evidence of impact. MRI is superior to CT scan in defining subtemporal hematomas, tearing of bridging veins, and demonstrating hemorrhages at the grey-white matter junction, lesions common to cases of acute NAHI involving rotational acceleration/deceleration forces. (Barlow KM, Gibson RJ, McPhillips M, Minns RA. Magnetic resonance imaging in acute non-accidental head injury. Acta Paediatr July 1999;88:734-740). (Respond: Dr RA Minns, Department of Paediatric Neurosciences, Royal Hospital for Sick Children, 9 Sciences Road, Edinburgh, UK, EH9 1LF).

COMMENT. In infants with suspected non-accidental head injury, a CT scan on admission should be followed by MRI at 3 to 7 days after the acute injury, and as a guide to resolution of the hemorrhage. Whiplash-shaking injury syndrome without impact can result in MRI evidence of contusion and subdural hematomas, similar to that resulting from injury with impact.