

suspected tumor cases (Korman M et al. Acta Radiologica 1987; 28: 369). The prompt surgical excision of the tumor before seizures become medically unresponsive may prevent the development of the mesial temporal sclerosis and dual pathology stressed in the present report.

#### INTRACRANIAL ARTERIAL ANEURYSMS

Neurosurgeons from the Universita degli Studi di Roma "La Sapienza," Rome, Italy, report a 4-year-old girl with a cerebral saccular aneurysm and analyze 71 cases under 5 years of age in the literature. The patient presented with headache, vomiting and immediate coma with opisthotonus and trismus. A CT scan revealed a round, hyperdense area near the midbrain, and an angiogram demonstrated an aneurysm on the left posterior cerebral artery. Recovery of consciousness and regression of nuchal rigidity took 3-4 days. At operation 12 days after the bleed, the artery was clipped above and below the aneurysm. A post-operative right facial-brachial paresis had resolved after 1 year but the hemianopia persisted.

Saccular aneurysms are rare in childhood, accounting for only 1-2% of cases. Most occur in the first year of life and affect the middle and anterior cerebral arteries in 40% and 12% of cases, respectively. Surgery appears to be tolerated better in early childhood than in adults, with operative mortalities after 1970 of 2.3% and 7.8% respectively. (Ferrante L et al. Intracranial arterial aneurysms in early childhood. Surg Neurol 1988; 29: 39-56).

COMMENT. Early versus delayed operation for ruptured intracranial aneurysm is controversial. An International Comparative Study on Timing of Aneurysm Surgery in 3000 cases is expected to answer this question (Kassell NF, Torner JC. Stroke 1984; 15: 566). The favorable outcome in this 4-year-old child would support a delay in operation until after recovery from the acute hemorrhage. The early age of presentation of the saccular aneurysm in children contrasts with an average age of 10 years for children with arteriovenous malformations (Ventureyra ECG, Herder S. Child's Nerv Syst 1987; 3: 12 -- see Ped Neuro Briefs 1987; 1: 8).

#### PAROXYSMAL DISORDERS

##### FLUNARIZINE IN ALTERNATING HEMIPLEGIA

The effects of flunarizine, a calcium-entry blocker, in alternating hemiplegia are reported in the first 12 children included in an international study coordinated from the Dept Pediatrics, University Hospital Gasthuisberg, B-3000 Leuven, Belgium. Cases from France, Italy, Portugal, Spain and Scotland meeting the following diagnostic criteria were included: onset before 18 months, repeated attacks at least 2 per month involving both sides of the body, associated oculomotor abnormalities and autonomic disturbances, and

mental and neurological abnormalities. A family history of migraine was present in half the patients. Various anticonvulsants used in 10 patients were without benefit. The dose of flunarizine was 5 mg daily for 4 months. During the open study period, all but one patient had a reduction in frequency and/or duration and severity of attacks, and mental development improved in several. In a subsequent double-blind placebo-controlled withdrawal study lasting another 4 months, 6 patients received placebo, 3 continued flunarizine therapy, and 3 declined inclusion in the controlled trial. Deterioration occurred in 5 of the 6 placebo patients and 2 of the 3 flunarizine treated patients. Relapses were thought to be precipitated by parental anxiety occasioned by the double-blind protocol. Flunarizine was well tolerated except for somnolence and weight gain. The author is soliciting further investigators and patients for a larger, more definitive study. (Casaer P et al. Flunarizine in alternating hemiplegia in childhood. An international study in 12 children. Neuropediatrics 1987; 18: 191-195).

**COMMENT.** The failure of conventional anticonvulsant drugs in the treatment of alternating hemiplegia (AH) is well known. Propranolol (Inderal), of reputed benefit in childhood migraine, was without effect in 2 patients with AH followed personally, and flunarizine treatment observed in a 3-year-old boy had only an equivocal and partial effect.

The pathogenesis of alternating hemiplegia is unknown although a vascular mechanism related to migraine is probable. Calcium channel antagonists such as flunarizine, effective in the treatment of migraine, are vasodilators and prevent the influx of extracellular calcium into vascular smooth muscle (Peroutka SJ. Headache 1983; 23: 278). The response of AH to flunarizine is certainly not proven but the results of these preliminary studies are promising.

#### **RECTAL ANTICONVULSANT THERAPY**

The use of rectally administered antiepileptic drugs (AEDs) is reviewed by experts from the College of Pharmacy and Division of Pediatric Neurology, University of Minnesota, Minneapolis, Minn. Paraldehyde, diazepam, secobarbital, and valproic acid (VPA) in solution are used when a rapid effect is desired for termination of prolonged or serial seizures. VPA, lorazepam, carbamazepine, and phenytoin in suspension or suppository can be used in maintenance therapy. The authors recommended the following rectal doses: paraldehyde 0.3ml/kg diluted with an equal volume of mineral oil in glass, not plastic, syringe and rubber tube; diazepam 0.5mg/kg as parenteral solution or commercially available rectal preparation in Europe; valproic acid 6-15 mg/kg as oral solution diluted with equal volume of water; clorazepam 0.05-0.1 mg/kg as parenteral solution; clonazepam 0.02-0.1 mg/kg as suspension; secobarbital 5 mg/kg as parenteral solution or suppository; and carbamazepine 5 mg/kg as oral suspension diluted with equal volume of water as maintenance therapy