

In a special article on the "role of therapeutic drug monitoring in pediatric anticonvulsant drug dosing," Walson PD at Children's Hospital, Columbus, OH refers to a rapid phenytoin clearance and a first order (linear) rather than saturated kinetics observed in some children found to have unusually low serum drug levels despite doses as high as 18 mg/kg/day. (*Brain & Dev* 1994;16:23). The effects of rate and extent of absorption on the interpretation of phenytoin concentrations and cognitive function are often unappreciated. Various factors can modify phenytoin absorption in children, including the dose and stool frequency. Doses well tolerated in healthy children may become toxic if the patient is constipated. High dose phenytoin loading can affect glucose homeostasis, with possible changes in cognition. The hyperglycemic effect of phenytoin was first demonstrated in the Division of Neurology and Neurochemistry Laboratories at Children's Memorial Hospital, Chicago (Belton NR, Etheridge JE Jr, and Millichap JG. Effects of convulsions and anticonvulsants on blood sugar in rabbits. *Epilepsia* 1965;6:234).

BRAIN NEOPLASMS

SURVEILLANCE SCANNING FOR MEDULLOBLASTOMA

The value of surveillance scanning, compared to periodic history taking and physical examination, in detection of asymptomatic recurrent tumors was examined in 86 children with posterior fossa medulloblastoma followed regularly between 1980 and 1991 at the Children's Hospital of Philadelphia. Recurrences were diagnosed in 23 (27%); 4 were detected by scanning only and 19 were associated with symptoms that developed at a median of 4 months after the last scan. No patient survived after a recurrence. (Torres CF et al. Surveillance scanning of children with medulloblastoma. *N Engl J Med* March 31, 1994;330:892-5). (Reprints: Dr Beverly J Lange, Division of Oncology, Dept of Pediatrics, Children's Hospital of Philadelphia, University of Pennsylvania School of Medicine, Philadelphia, PA 19104).

COMMENT. The authors conclude that surveillance scanning in children with medulloblastoma has limited clinical value. General anesthesia was required for MRI in 10% of children under 4 years of age, and sedation was requested or required by most children under the age of 7 years. More frequent scanning has the disadvantages of morbidity from sedation or anesthesia and increased cost, and earlier detection of recurrence is unlikely to change the outcome. Regular clinical evaluation and scanning are recommended to determine response and change in status after therapy. After a maximal response is achieved, scanning should be based on clinical symptoms and signs. These investigators had reached these conclusions more than 18 months ago and had presented their findings in Oct 1992: Torres C et al. *Ann Neurol* Sept 1992;32:458(abstract). (see *Ped Neur Briefs* Dec 1992;6:94).