COMMENT. Pediatric neurologists are frequently faced with the differentiation of organic and psychiatric causes for behavioral and mood disorders and somatic complaints. The recognition of early onset childhood dysthymic disorder should permit prompt referral to colleagues specialized in child psychology and psychiatry. Early diagnosis and treatment of dysthymia may prevent the occurrence of major depressive disorders.

The distinctions between major depression without dysthymia, dysthymia without major depression, and double depression in 62 child psychiatry inpatients were evaluated at the Department of Psychology, State University of New York at Stony Brook. Externalizing disorders (oppositional defiant and conduct disorders) were present more often in the dysthymic group compared to the major depression and double depression groups, whereas major depression and double depression groups revealed higher rates of depressive symptoms. In contrast to the Pittsburgh report, this study found social functioning to be least impaired in children with major depression. (Ferro T et al. Depressive disorders: distinctions in children. J Am Acad Child Adolesc Psychiatry June 1994;33:664-670).

The role of the Children's Depression Rating Scale-Revised in assessing depression in children with sickle-cell anemia was evaluated at the University of South Alabama Children's Medical Center, Mobile, AL. Excessive fatigue and physical complaints contributed to a high false-positive rate of depression on the standardized screening test, whereas the actual prevalence of depression in these children based on clinical interviews by a child psychiatrist was not increased. (Yang Y-M et al. Depression in children and adolescents with sickle-cell disease. Arch Pediatr Adolesc Med May 1994;148:457-460).

POSTIRRADIATION COGNITIVE AND CNS DISABILITIES

The neurological, neuropsychological, and educational outcome in 14 children who received a second course of cranial radiotherapy or total body irradiation for relapsing lymphoblastic leukemia is reported from the Neurosciences Unit and Department of Haematology, Institute of Child Health, University of London. Nine (64%) had postirradiation somnolence syndrome characterized by lethargy, irritability, nausea, and vomiting. All patients had mild neurological deficits, including hyperreflexia, incoordination, dyspraxia, and hand muscle weakness. All were growth hormone deficient. MRI showed ventricular enlargements. Verbal comprehension and tests of attention and memory were impaired, girls showing greater impairments than boys. Of 9 children still at school, only 2 performed at age appropriate levels in reading, spelling, and math, and social outcome was poor. (Christie D et al. Neuropsychological and neurological outcome after relapse of lymphoblastic leukaemia. Arch Dis Child April 1994;70:275-280). (Respond: Dr D Christie, Neurosciences Unit, The Wolfson Centre, Mecklenburgh Square, London WC1N 2AP, UK).

COMMENT. After survival of the rigors of two and three year protocols of chemotherapy for lymphoblastic leukemia, children who relapse after initial remission now have to face the prospect of postirradiation cognitive and neurological deficits. The morbidity asssociated with cranial radiotherapy has been recognized for some time, and the results

of this study certainly favor the omission of presymptomatic irradiation and the use of intrathecal methotrexate in more current protocols. The justification for over-zealous treatments of relapsing leukemia in children needs re-evaluation in light of the long term adverse effects and the overall quality of life.

NEUROMUSCULAR DISORDERS

DYNAMICS OF MUSCLE MATURATION

A painless, non-invasive technique for measuring the effects of age on the relaxation of calf muscle in 22 healthy children is reported from the Departments of Paediatric Neurology and Physiology, Royal Hospital for Sick Children, Edinburgh. The study was undertaken as a prelude to investigations of contractile properties of muscles in children with cerebral palsy and other motor handicaps. Soleus muscle twitches were generated by a single Achilles tendon tap which caused a monosynaptic reflex muscle-twitch contraction, recorded by EMG. Half-relaxation times halved from about 90 ms at age 3 years to 40 ms at age 10. Compared to a 19-year-old healthy male, relaxation was prolonged in a 3-year-old boy. The younger the child, the slower the muscle-relaxation time. Muscle maturation rate-limits motor tasks, and modifies the effects of early brain or spinal cord damage. (Lin J-P, Brown JK, Walsh EG. Physiological maturation of muscles in childhood. Lancet June 4 1994;343:1386-89). (Respond: Dr J-P Lin, Paediatric Neurology, Great Ormond Street Hospital for Children, London, WC1N 3JH, UK).

COMMENT. Having attempted quantitative measurements of motor function and muscle tone and relaxation in children with cerebral palsy for the purpose of evaluation of muscle relaxant drugs, I am aware of the paucity of reliable measures of muscle function in children. (Millichap JG, Hadra R. Quantitative assessment of motor function in cerebral palsy, Evaluation of Zoxazolamine (Flexin), a new muscular relaxant drug. Neurology Dec 1956;6:843-852). Measurements of muscle tone by speed and height of hammer recoil were abandoned in favor of quantitative tests of muscle function involving range, rapidity, strength, and coordination of voluntary movements. The Edinburgh method of measurement for muscle relaxation should be of value in assessment of various treatments of cerebral palsy.

CEREBRAL PALSY AND LEUKOMALACIA IN LBW INFANTS.

Ultrasound findings and incidence of cerebral palsy in 24 infants < 2500 g with cystic periventricular leukomalacia are reported from Nagoya City University Med School, Japan. One group (14) had symmetrical parieto-occipital cysts, and a 2nd group (10) had non-symmetrical cysts. After a mean 5 year follow-up, the incidence of CP was significantly different in the two groups; 100% in group 1 and 60% in group 2. Size and site of cysts did not predict CP. (Fujimoto S et al. Cerebral palsy of cystic periventricular leukomalacia in low-birth-weight infants. Acta Paediatr April 1994;83:397-401). (Respond: Dr S Fujimoto, Department of Pediatrics, Nagoya City University Medical SDchool, Kawasumi, Mizuho-cho, Mizuho-ku, Nagoya 467, Japan).

COMMENT. Symmetrical parieto-occipital cysts on ultrasound are predictive of the development of cerebral palsy in low-birth-weight infants.