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SEIZURE DISORDERS

HEIGHT OF TEMPERATURE: A FEBRILE SEIZURE RISK FACTOR

Risk factors were identified in 69 children with a first febrile seizure compared to 99 matched controls seen in a three year period at the Bronx Municipal Hospital Center, Montifiore Medical Center, and North Central Bronx Hospital, and Albert Einstein College of Medicine, New York. Multivariable analysis of data obtained from medical records and parent interviews showed that the height of body temperature and family history of febrile seizures were significant independent risk factors. The risk of having a febrile seizure almost doubled for each ^{0}F above 101. An association between otitis media and seizure frequency was related to the higher fevers with this infection. Gastroenteritis was not a factor and may have had a protective effect, although none had *Shigella*. A history of febrile seizures in at least one first-degree relative was obtained in 17 (25%) cases compared to 5 (5%) controls. Maternal smoking during pregnancy showed a significant predisposing trend. (Berg AT, Shinnar S et al. Risk factors for a first febrile seizure: A matched case-control study. Epilepsia April 1995;36:334-341). (Respond: Dr AT Berg, School of Allied Health Professions, Williston Hall, Northern Illinois University, DeKalb, IL 60115; Dr Shlomo Shinnar, Albert Einstein College of Medicine and Bronx Munic Hosp Ctr, Bronx, New York).

> COMMENT. A previous study of 110 patients with febrile seizures examined between 1956 and 1958, almost forty years ago, at the Bronx Municipal Hospital Center, and laboratory investigations involving four animal species, reported in a series of five articles from the Albert Einstein College of Medicine, had established the height of the body temperature as a measure of febrile seizure threshold and the important determinant of occurrence or induction of fever-induced convulsions. In individual patients and in the group as a whole, seizures occurred when the degree of fever reached or surpassed the threshold convulsive temperature. Contrary to previous reports, the rapidity of rise of temperature was not a predisposing factor. (Millichap JG. Studies in febrile seizures I. Height of body temperature as a measure of the febrile seizure threshold. Pediatrics Jan 1959;23:76-85).

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Age and maturity, changes in the balance of water and electrolytes in the brain, and various drugs were factors found to modify the threshold convulsive temperature in young animals. An antihistamine, diphenhydramine and the anticonvulsant, phenytoin lowered the threshold convulsive temperature and exacerbated fever-induced seizures, whereas phenobarbital and phetharbital elevated the threshold and prevented seizures. (Millichap JG. Febrile Convulsions, Macmillan, New York, 1968). See Progress in Pediatric Neurology II, 1994, pp16-32, and I, 1991, pp14-24, (edited by Millichap, PNB Publishers) for a compendium of more current articles on febrile seizures.

SUPPLEMENTARY SENSORIMOTOR SEIZURES

The diagnosis, clinical features, video EEG and MRI findings, medical and surgical treatment, pathology, and prognosis in eleven children and adolescents with supplementary sensorimotor area seizures (SSMA) are reported from the Departments of Neurology, Neurosurgery, and Radiology, Cleveland Clinic Foundation, Cleveland, Ohio. Mean age at onset was 5.8 years, and the diagnosis was made by vertex sharp waves on prolonged video EEG (3 to 7 days) at a mean age of 12 years. Neurologic exam was normal, except for 2 patients with a focal decrease in hand coordination, and routine EEGs were frequently normal. Seizures were usually bilateral and tonic, affecting proximal limb muscles, frequent, occurring daily, refractory to medication, without loss of cosciousness, and mainly during sleep. MRI revealed a low-grade tumor or focal cortical dysplasia in 5 patients. Six had cortical resection after confirmation of SSMA by subdural EEG, and 5 were benefited. (Bass N, Wyllie E et al. Supplementary sensorimotor area seizures in children and adolescents. J Pediatr April 1995;126:537-544). (Reprints: Elaine Wyllie MD, Head, Pediatric Epilepsy Program, Cleveland Clinic Foundation, Desk S51, 9500 Euclid Ave, Cleveland, OH 44195).

COMMENT. SSMA seizures differ from generalized TC seizures in preservation of consciousness, and from perirolandic benign focal epilepsy of childhood in bilaterality and proximal gross flailing movements. Preserved consciousness and gross bilateral, proximal limb movements are the principal distinguishing features of SSMA. Brevity and nocturnal predominance are other characteristic features. Prolonged video EEG and MRI are important in diagnosis, and surgery should be considered in refractory patients. The neuropsychological and behavioral abnormalities often found in adolescents with frontal lobe seizures or damage (see Progress in Pediatric Neurology I, 1991, p71, and Vol II, 1994, p180-3) were not evident in these patients with lesions in the supplementary SM area. Auras and sensory manifestations may be more difficult to elicit in children than in adults. Auras in 5 of the above patients included crawling, tingling or heavy sensations of the limbs and one complained of epigastric discomfort. Similar sensations were described in case reports of Penfield W, and Jasper H. Epilepsy and the Functional Anatomy of the Human Brain. Little, Brown, Boston, 1954, p398.

REFLEX MYOCLONIC EPILEPSY OF INFANCY

Six neurologically normal infants, aged 6-21 months, with attacks resembling benign myoclonic epilepsy of infancy but occurring as reflex