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J. GORDON MILLICHAP, M.D., F.R.C.P., EDITOR

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CNS INFECTION

BACTERIAL MENINGITIS: PRESENTING COMPLAINTS.

The presenting complaints and their relation to age were investigated in 110 cases of childhood bacterial meningitis diagnosed at the Depts of Pediatrics, Universities of Oulu, Helsinki, and Turku, Finland. Fever and vomiting were the most frequent reasons for consulting a physician (60% and 31% respectively). Despite the frequency of irritability (85% of infants 1-5 mos), impaired consciousness (79% of infants 6-11 mos), and neck rigidity (78% of children 12 mos or older), these symptoms and signs prompted consultation infrequently (6%, 22%, and 3%, respectively). A short duration of symptoms correlated with absence of neck stiffness even in children older than 12 mos. The age-specific frequency of convulsions in 11-14% cases resembled that of simple febrile convulsions. Respiratory symptoms, a long duration of pre-diagnostic symptoms, and pre-diagnostic prescription of antimicrobial therapy were more frequent in patients with H. influenzae meningitis than in those with meningococcal disease. Earlier consultation and better prognosis might follow the better education of parents in the recognition of irritability and lethargy in addition to fever and vomiting as important suspect signs of meningitis in infants and children. (Valmari, P et al. Childhood bacterial meningitis: initial symptoms and signs related to age, and reasons for consulting a physician. Eur J Pediatr 1987; 146: 515-518).

COMMENT. In a busy ER the missed diagnosis of meningitis is not a rare occurrence, unfortunately. Physicians as well as parents might be reminded of the importance of irritability and lethargy as early signs of meningitis in the febrile child and the absence or late appearance of neck rigidity, especially in the infant.

The decision to perform lumbar puncture in febrile children, even in those with an accompanying seizure, remains controversial. Of 241 children aged 6 mos to 6 yrs who came to the ER at Sinai Hospital or Johns Hopkins Hospital, Baltimore, with a first seizure and fever and who received a lumbar puncture, 94.6% did not have meningitis. Items in the history and examination predictive of meningitis were: (1) a

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visit to a physician in the prior 48 hours, (2) seizure in ER, (3) focal seizure, (4) petechiae, cyanosis, grunting respiration, and (5) abnormal neurologic signs. Item (5) was the most sensitive factor in diagnosis and the use of items (1) or (5) or both in the selection of children for L.P. would have identified all those with menigitis (5.4%) and would have spared 144 the need for L.P. The authors concluded that routine L.P. is not warranted if these risk factors are absent and provided that immediate follow-up is available. (Joffe A et al. Am J Dis Child 1983;137:1153). This analysis approach may be useful for house staff but each child is an individual and the intuitive judgment of the experienced pediatrician is perhaps the best predictor of the need for L.P.

IMMUNIZATIONS AND SEIZURES

The Committee on Infectious Diseases of the American Academy of Pediatrics issue 2 reports in the current issue of Pediatrics recommending immunization of children against measles and pertussis despite a positive family history for seizures. The recommendations were in response to data from the Centers for Disease Control that suggested an increased risk of convulsions following these immunizations among children with a family history of seizures. A positive family history was obtained in 17.3% and 16.7% of children who had febrile and nonfebrile convulsions, respectively, following DPT vaccine c.f. 4.8% without neurologic complications. (Pediatrics 1987;80:741/743).

Comment. The authors wisely add a footnote, albeit in small print, to these reports that their recommendations do not indicate an exclusive course of treatment or procedure to be followed and that variations, taking into account individual circumstances, may be appropriate. The dangers of measles encephalitis and its sequelae in unimmunized children far outweigh the risks of vaccine-induced seizures, and the committee recommendation for measles vaccine is sound. Children suffering from epilepsy should be examined by a neurologist before immunization as a precaution and anticonvulsant drug levels should be adjusted to optimal therapeutic amounts when necessary.

Regarding pertussis immunization, the statement that "there is no reason to treat children with a family history of convulsive disorder or of "neurologic disease" any differently from children without such a history" may be misleading without qualification. Again, a pediatrician may be well advised to consult the neurologist caring for a sibling or parent with epilepsy to determine the etiology of the seizures and the degree of familial susceptibility before proceeding with DPT immunization in an infant at increased risk.

The debate concerning DPT vaccine-induced encephalopathy continues in the courts (Br Med J 1987;295:1053) with experts quoted as favoring and others opposing a causal relation. In my experience of 14 cases of DPT-related seizure disorders evaluated in the past three years, 6 had infantile spasms with onset temporally related to the immunization. (ACTA Paedtr Jpn 1987:29;54-60).