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SEIZURE DISORDERS

OUTCOME OF ABSENCE EPILEPSY

A meta-analysis of 2303 patients with a diagnosis of absence epilepsy (AE), derived from 26 publications on 23 study cohorts, was conducted at Leiden University Hospital, The Netherlands. Age at onset of AE, stated for 60%, was as follows: 73% before puberty, 18% between 12 and 17 years, and 8% in adulthood, not conforming to strict AE criteria. Despite application of the 1989 diagnostic classification criteria of the International League against Epilepsy, the outcome definitions differed substantially due to heterogeneity in inclusion criteria and length of follow-up. Remission rates varied from 0.21 to 0.89, the poorest outcomes occurring in patients who developed generalized tonic-clonic seizures (GTCS) and in studies with longer follow-up periods. In the 50 percent with AE and GTCS, the proportion seizure free at follow-up was only 0.35, whereas in the 50 percent with absence seizures alone, 0.78 were seizure free. The prognosis for AE suggested by this meta-analysis was worse than previously stated, and the results would not permit an early prediction of outcome in individual patients presenting with absence seizures. (Bouma PAD, Westendorp RGJ, van Dijk JG, Peters ACB, Brouwer OF. The outcome of absence epilepsy: a meta-analysis. Neurology Sept 1996;47:802-808). (Reprints: PAD Bouma MD, Department of Neurology, Leiden University Hospital, PO Box 9600, 2300 RC Leiden, The Netherlands).

COMMENT. The main purpose of this study was to determine if the outcome of absence epilepsy could be predicted with certainty at the time of diagnosis in the individual patient. The authors conclude that early prognostication is not feasible because of the extensive heterogeneity of calculated remission rates. Generally, the outcome should be more pessimistic than that currently accepted. If the AE is "pure" and uncomplicated by tonic clonic seizures (GTCS), the outcome may be good and remission rates favorable. In long-term follow-up, however, a 50% chance of developing GTCS is accompanied by a poorer outcome and lower remission rates.

In a previous study of childhood epilepsies which showed an overall

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remission rate of 0.71 after AED withdrawal, predictors of relapse were adolescent age at onset, symptomatic epilepsies, and an abnormal interictal EEG (Berg AT, Shinnar S. Relapse following discontinuation of antiepileptic drugs: a meta-analysis. Neurology 1994;44:601-608). An identical remission rate was reported by Camfield and colleagues in a study in which patients with absence and minor motor seizures were excluded and seizure type was not of predictive value.(see Progress in Pediatric Neurology II, PNB Publ, 1994, for further discussion of outcome studies in childhood epilepsies). Greater attention to EEG characteristics, especially form of spike-wave complexes and duration of paroxysms, at the time of diagnosis and later at AED withdrawal could be more revealing in future outcome studies.

Accidental injuries, especially bicycle accidents, pose a 27% risk during absence seizures in children, according to a study of 59 patients at the IWK-Grace Health Centre and Dalhousie University, Halifax, Nova Scotia (Wirrell EC, Camfield PR, Camfield CS, Dooley JM, Gordon KE. Accidental injury is a serious risk in children with typical absence epilepsy. Arch Neurol 1996;53:929-932).

NOCTURNAL FRONTAL LOBE EPILEPSY

The electroclinical pattern of 33 patients with familial, autosomal dominant, nocturnal frontal lobe epilepsy was studied, including video-polysomnographic monitoring in 12, at the University of Milano, School of Medicine, Italy. The syndrome is characterized by clusters of brief nocturnal motor seizures during sleep, beginning in childhood and persisting throughout adult life. The motor seizures during sleep varied from thrashing hyperkinetic activity to tonic extension with clonic movements. The most frequently repeated patterns included pelvic thrusting, facial grimacing and moaning, and dystonic posturing. Some had sudden elevation of the head and an expression of fear. Misdiagnoses included benign nocturnal parasomnias, including nightmares, night terrors, and somnambulism. Diurnal episodes in 58% included generalized shivering followed by loss of consciousness, and complaints of tingling and daytime sleepiness. Interictal and ictal EEGs showed nonspecific patterns (atypical K-complexes), or epileptiform abnormalities (in 58% of patients), consisting of bilateral or right frontal spikes, during stage 2 non-REM sleep. Normal EEGs were recorded during wakefulness. Both nocturnal and diurnal attacks were controlled by carbamazepine or clonazepam. (Oldani A, Zucconi M, Ferini-Strambi L, Bizzozero D, Smirne S. Autosomal dominant nocturnal frontal lobe epilepsy: electroclinical picture. Epilepsia October 1996;37:964-976). (Reprints: Dr A Oldani, Sleep Disorders Center, IRCCS H San Raffaele, via Prinetti 29, 20127 Milano, Italy).

COMMENT. Nocturnal frontal lobe epilepsy is often misdiagnosed as nightmares, night terrors, or somnambulism. Nocturnal paroxysmal dystonia is also considered in the differential diagnosis. EEGs are frequently nonspecific, and video-polysomnographic monitoring is often essential. If the diagnosis is suspected but unconfirmed by EEG, a trial of antiepileptic drugs may still be warranted.

RISK OF SEIZURE RECURRENCE AFTER FIRST SEIZURE

The long-term recurrence risk after a first unprovoked seizure was determined in a prospective study of 407 children, followed for a mean of 6.3 years, at the Montefiore Medical Center, Albert Einstein College of Medicine, Bronx, New York. Seizures recurred in 42%; the cumulative risk of seizure recurrence at 1, 2, 5, and 8 year follow-up was 29%, 37%, 42%, and 44%,