

rates are similar to those reported among French and US children. Recent observed increases in prevalence of autism in California and Denmark have occurred well after the introduction of the MMR vaccine and may possibly be related to heightened awareness of the diagnosis among physicians. The role of vaccines in certain neuropsychiatric illness is often controversial, but a link between MMR and autism appears to be unlikely.

ABNORMAL FRONTAL AND TEMPORAL LOBE ASYMMETRIES IN AUTISM

Regional cortical volume asymmetry patterns, particularly those associated with language function, in 16 boys with autism (aged 7-11 years) were compared with measures in 15 normal, age- and handedness-matched controls, in an MRI study at the Massachusetts General Hospital, Boston, and other centers. Boys with autism had significant asymmetry reversal in frontal language-related cortex: 27% larger on the right in autism and 17% larger on the left in normal controls. In addition, the posterior temporal fusiform gyrus was more left-sided in autism, whereas adjacent fusiform gyrus and temporooccipital inferior temporal gyrus were more right-sided in autism. Inferior temporal regions are involved in visual social/face processing. Abnormal structural asymmetries in language and face processing cerebral regions may relate to language and social disturbances common in autism. (Herbert MR, Harris GJ, Adrien KT, et al. Abnormal asymmetry in language association cortex in autism. *Ann Neurol* November 2002;52:588-596). (Respond: Dr Herbert, Center for Morphometric Analysis, Massachusetts General Hospital, CNY-149, Room 6012, Boston, MA 02114).

COMMENT. Both frontal (Broca) and temporal (Wernicke) language-related association cortex regions show a reversal of asymmetry in boys with autism compared to controls, but the frontal abnormality is significantly greater. Previous SPECT and PET regional cerebral blood flow studies also show similar asymmetry reversals. MRI studies in normal adults show that the left hemisphere cortical regions are larger in right-handed, left-hemisphere language dominant subjects. In children with specific language impairment (SLI), MRI studies have shown abnormal asymmetries in language cortical measures, similar to those observed in autistic children. Language abnormalities in autism share many features of those in SLI, and these studies support a link between the two disorders.

SEIZURE DISORDERS

EXERCISE-INDUCED TEMPORAL LOBE EPILEPSY

Two patients, ages 16 and 28, with left temporal lobe seizures induced by exercise are reported from Austin and Repatriation Medical Centre, Victoria, Australia. Patient 1 had seizures precipitated by physical activity from age 12 years. An aura was followed by blank stare, orobuccal automatisms, and postictal confusion. The seizures occurred within 5 to 20 minutes of commencing running and playing soccer or tennis. Other family members had seizures but none was exercise induced. Interictal EEG showed left temporal slowing, and during video EEG monitoring, two complex partial seizures were induced by stair stepping for 5 minutes. MRIs were normal, but interictal PET scan showed left temporal hypometabolism. Reduced exercise and topiramate were followed by seizure control for 7 months. Patient 2 had seizures from age 21. They began with *deja vu* and decreased awareness, followed by staring, and oral and bimanual automatisms.

They were precipitated by strenuous exercise such as bicycle riding and racing and running. He would continue to ride automatically during seizures. Neurologic exam and MRI were normal. Interictal EEG showed left temporal lobe epileptiform discharges. He continues to have seizures during exercise despite treatment with carbamazepine and gabapentin. Neither patient had seizures induced by hyperventilation, passive and active stationary limb movement or by imagining competitive sports. (Sturm JW, Fedi M, Berkovic SF, Reutens DC. Exercise-induced temporal lobe epilepsy. Neurology 2002;59:1246-1248). (Reprints: Dr David C Reutens, Department of Neurology, Austin and Repatriation Medical Centre, Studley Road, Heidelberg, Victoria 3084, Australia).

COMMENT. Reflex epilepsies in response to a well-defined precipitating stimulus occur in about 5% of patients with epilepsy. Exercise-induced epilepsies are usually generalized or frontal lobe in origin, and less commonly involve the temporal lobe. Other reflex precipitants for temporal lobe seizures include music, eating, hot water immersion, laughter, and thinking. The stimuli may involve emotional and motivational factors, and require complex processing in limbic structures. Exercise-induced seizures are rare and should not lead to a sedentary life-style. In fact, moderate exercise may offer some protection or improved control of epilepsy.

LANGUAGE DISORDER WITH FOCAL EPILEPSIES

The relationship between language disorder and epileptic seizures was examined in 109 children, ages 5-17 years, attending a national center for epilepsy over a 4 year period and at the University of Manchester, UK. Median age at onset of epilepsy was 2 years 5 months, and seizure onset was before 6 years of age in 89% of the cohort. Of the 46 (42%) children with language disorders in the research sample, 30 had localization-related epilepsies and an additional 3 were unclassified. Less than 18% had generalized seizures. Twelve had Lennox-Gastaut syndrome, 7 temporal lobe epilepsy, 5 frontal lobe epilepsy, and 3 had a history of West syndrome. Children with focal epilepsies were 30% more likely to have language disorder than other language disability subtypes. Children with simple or complex partial seizures had an increased risk of language disorder. A routine screening test to check for language impairment is recommended in children with focal epilepsies. Early detection and therapy may prevent the development of cognitive, emotional, and behavior problems. (Parkinson GM. High incidence of language disorder in children with focal epilepsies. Dev Med Child Neurol 2002;44:533-537). (Respond: Dr Gillian M Parkinson, The David Lewis Centre for Epilepsy, Cheshire and the Faculty of Education, University of Manchester, UK).

COMMENT. In addition to specific epileptic aphasias (Landau-Kleffner syndrome), language disorders occur with increased incidence in children with focal epilepsies. In the management of children with focal simple or complex partial seizures, an evaluation of language development is important. One in 5 children with language impairment have seizures (Robinson 1991), compared to a 5-7% seizure prevalence in the general childhood population. Reasons postulated for this association include altered brain function due to seizures, a genetic association, and a link between antecedent brain abnormalities and seizures leading to cerebral dysfunction in language centers.

Developmental language disorder associated with varying degrees of polymicrogyria is discussed in Ped Neur Briefs August 2002;16:58. An MRI should be considered in children with language disorder and focal seizures.