SPINAL CORD INVOLVEMENT IN BRACHIAL PLEXUS INJURY

The role of spinal cord plasticity after birth injury and recovery from obstetric brachial plexus lesions was investigated in newborn rats with selective crush injury to spinal roots C5 and C6, in a study at University Clinics of Vienna School of Medicine, Austria. Evaluation of recovery of function following motoneuron loss, using the Bertelli test of grooming, grid walk, retrograde tracing of motoneuron pools, and functional muscle testing, showed that the adjacent C7 motoneuron contribution to biceps muscle innervation increased 4-fold after upper trunk lesions, compensating for the motoneuron loss from injury. (Korak KJ, Tam SL, Gordon T, et al. Changes in spinal cord architecture after brachial plexus injury in the newborn. **Brain** 2004;127:1488-1495). (Respond: Oskar C Aszmann MD, Division of Plastic and Reconstructive Surgery, Department of Surgery, University Clinics of Vienna School of Medicine, Waehringer Guertel 18-20, 1090 Vienna, Austria).

COMMENT. In newborns with obstetric brachial plexus palsy affecting spinal roots C5 and C6, an intact C7 innervation of the biceps muscle is essential for a recovery process to ensue. The loss of motoneurons in C5 and C6 spinal cord segments is compensated for by changes in the spinal cord architecture and an increased contribution of C7 motoneurons.

SEIZURE DISORDERS

PARTIAL EPILEPSY WITH AUDITORY FEATURES

The clinical characteristics of 53 sporadic (S) cases of idiopathic partial epilepsy with auditory features (IPEAF) were analyzed and compared to previously reported familial (F) cases of autosomal dominant partial epilepsy with auditory features (ADPEAF) in a study at the University of Bologna, Italy. Age at onset of seizures ranged from 6 to 39 years (aver. 19 years), and the most common type were secondarily generalized (79%). Auditory auras occurred alone (53%) or were associated with visual, psychic or aphasic symptoms. Most auditory auras were simple hallucinations of sound, like hissing, buzzing and vibration. Forty percent described complex, well-formed acoustic symptoms, like music or human voices. Loss of hearing was reported in 25%. Symptoms could be lateralized to one ear in 28% and were bilateral in 15%.. Sudden noise, a flushing toilet or answering the phone triggered the aura in 5 patients. The EEG was epileptiform in 18 (34%), and showed temporal slowing in 27 (51%). NMR scans in 47 and CT in 6 were normal except for minor asymmetries of ventricles in 6. Seizures were controlled in 51%, but tended to recur after drug withdrawal. The clinical characteristics of S and F patients were similar in age at onset, seizure frequency and response to therapy. Unlike cases of ADPEAF, mutations in LG11/epitempin exons were absent and the family history was negative in IPEAF. IPEAF is a form of temporal lobe epilepsy closely related to ADPEAF, and the majority of cases have a benign course. (Bisulli F, Tinuper P, Avoni P, et al. Idiopathic partial epilepsy with auditory features (IPEAF): a clinical and genetic study of 53 sporadic cases. **Brain** 2004;127:1343-1352). (Respond: Paolo Tinuper MD, Department of Neurological Sciences, University of Bologna, Via Ugo Foscolo 7, 40123 Bologna, Italy).