COMMENT. In this uncontrolled study of melatonin (1.5 mg) in children with refractory epilepsy, sleep continuity and some sleep-related disorders were significantly improved. Seizure severity, but not frequency, also showed significant improvement.

INTERICTAL EEG SPIKES IDENTIFY SEIZURE FOCUS

A computerized spike detector was used to measure and localize interictal epileptiform discharges (IEDs) over prolonged, representative segments of recordings in 19 children with intractable, mostly extratemporal lobe epilepsy. Approximately 8 hours of IEEG, randomly selected 30-min segments of continuous interictal IEEG per patient, were analyzed over all intracranial electrode contacts. Spike frequency was averaged over the 16-time segments, and electrodes with the highest mean spike frequency were within the seizure-onset region in 11 of 19 patients. Large statistical samples of interictal activity were required for improved localization. Low-voltage fast EEG at seizure onset was the only factor predicting IED localization to the seizure-onset region. Automated IED detection over multiple samples of IEEG may be of value in planning epilepsy surgery for intractable epilepsy in children. (Marsh ED, Peltzer B, Brown MW, et al. Interictal EEG spikes identify the region of electrographic seizure onset in some, but not all, pediatric epilepsy patients. **Epilepsia** 2010;51(4):592-601). (Respond: Eric D Marsh MD PhD, Division of Child Neurology, Children's Hospital of Philadelphia, 3400 Civic Center Blvd, Philadelphia, PA 19104. E-mail: marshe@email.chop.edu).

COMMENT. Ictal recording is the mainstay of localizing epileptic foci for surgical resection. The inconsistent correlation with interictal spikes in previous reports may be related to the relatively short periods of observation. Further research is recommended to determine which patients may benefit from this technique.

VASCULAR DISORDERS

MINOR ATHLETIC TRAUMA AND ISCHEMIC STROKE

Three cases of arterial ischemic stroke (AIS) following sports-related neck trauma are reported from Johns Hopkins University School of Medicine, Baltimore, MD. *Case 1.* A 10-year-old boy developed a left hemiparesis within a few minutes of colliding with another soccer player and sustaining a hit on his right head and neck. MRI revealed a right basal ganglia stroke. MRA showed no evidence of arterial dissection, and echocardiogram was normal. Treatment with heparin (UFH) followed by aspirin resulted in complete recovery. He was heterozygous for factor V mutation and MTHFR C677T polymorphism. *Case 2.* A 12-year-old boy sustained right neck and shoulder trauma during a lacrosse game. Later that night, he developed tingling of his right face and headache, and the next morning he awoke with vomiting, right-sided weakness, followed by nystagmus, truncal ataxia, and dysmetria of the right upper and lower limbs. MRI confirmed stroke in the right posterior pontomedullary junction. Traumatic vertebral artery dissection was suspected, and heparin was administered. Digital subtraction angiography (DSA) performed 12 h after admission showed no dissection, and heparin

was replaced with aspirin. Echocardiogram revealed a small patent foramen ovale. Lipoprotein (a) level was elevated, and he was heterozygous for MTHFR C677T mutation. Recovery was almost complete after one month. *Case 3.* A 7-year-old boy had acute right-sided numbness and tingling 3 h after a karate chop to his neck. In the ER 1 hour later he had flaccid right-sided weakness of face, arm and leg. MRI showed infarcts in left parietal lobe, left medial medulla, and right cerebellum. DSA showed right vertebral artery dissection and occlusion. He recovered slowly and had no weakness at 1 year. (Sepelyak K, Gailloud P, Jordan LC. Athletics, minor trauma, and pediatric arterial ischemic stroke. **Eur J Pediatr** May 2010;169:557-562).(LC Jordan MD, Dept Pediatrics, Johns Hopkins University School of Medicine, 200 N Wolfe St, Suite 2158, Baltimore, MD 21287. E-mail: Ljordan2@jhmi.edu).

COMMENT. Diagnosis of arterial ischemic stroke following minor athletic trauma is often delayed, with risk of progression or recurrence. Arterial dissection is associated in up to 20% cases. Treatment with anticoagulation is usually continued for 3 to 6 months (Roach ES et al. **Stroke** 2008;39:2644-2691). If dissection is not visualized by DSA, the Johns Hopkins authors recommend discontinuing anticoagulants and replacing with aspirin at time of discharge. Some restrictions on contact sports participation are generally followed. Recurrence risks of up to 30% are reported.

Endovascular therapy in pediatric intracranial carotid artery dissection is reported in a 12-year-old boy. (Lai Y-J et al. **Pediatr Neurol** April 2010;42(4):291-294). Intra-arterial thrombolysis and stent reconstruction successfully recanalized the occluded arterial segment.

GRADENIGO'S SYNDROME WITH LATERAL VENOUS SINUS THROMBOSIS

A 4-year-old girl was admitted to the Department of Pediatrics, University of Chieti, Italy, with a 2-week history of fever and right otitis media, headache and vomiting. Exam showed right facial and abducens nerve palsies. CT scan showed a right mastoiditis. MRI revealed ipsilateral sinus thrombophlebitis. Complete resolution followed treatment with high dose IV antibiotics and oral anticoagulants. (Scardapane A, Del Torto M, Nozzi M, Elio C, Breda L, Chiarelli F. Gradenigo's syndrome with lateral venous sinus thrombosis: successful conservative treatment. **Eur J Pediatr** April 2010;169:437-440). (Dr A Scardapane. E-mail: a.scardapane@gmail.com).

COMMENT. Otitis media, pain in the distribution of the first and second branches of the trigeminal nerve, and ipsilateral abducens palsy are the three characteristic signs of Gradenigo's syndrome. Facial nerve palsy occurs in severe cases, as above. Otitis media and inflammation spread to involve the petrous apex, dura and lateral venous sinus. Irritation of the ophthalmic branch of the trigeminal nerve and sixth nerve follow. The nerve involvement may be delayed for 1 to 3 months. The syndrome is now rare, but early diagnosis is important, to avoid necessity for surgery.