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CASE STUDY: LANDAU-KLEFFNER SYNDROME

Physician: Hiroshi Otsubo, M.D., Hospital for Sick Children, Toronto, Ontario, Canada

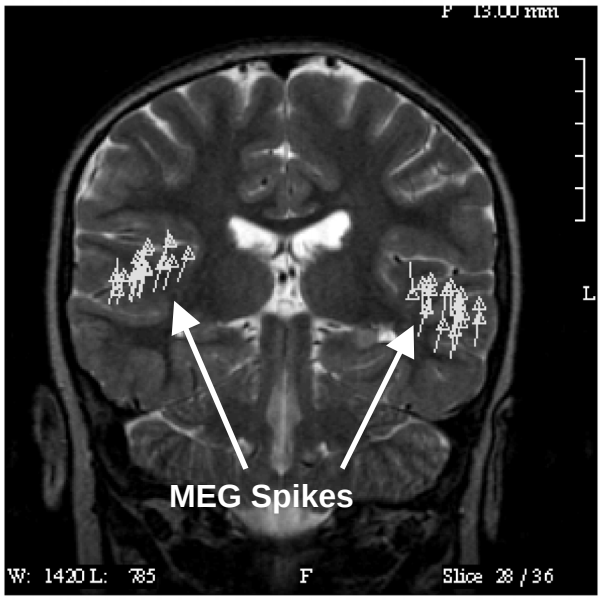
Case History:

A 6 year-old male experienced an acute loss of expressive and receptive language at 4 years of age.

Scalp EEG showed continuous spike and waves during slow-wave sleep. The patient was diagnosed as Landau-Kleffner Syndrome (LKS).

An MEG study was performed at Scripps Clinic, La Jolla, California using a 4-D Neuroimaging Magnes II 74-channel system. . Interictal MEG spikes were captured in 6 second epochs by an observer who monitored the spontaneous MEG and simultaneous EEG signals. The MEG study required about 2 hours of recording time. Sources of interictal epileptic spikes were analyzed with a single equivalent current dipole model.

Vertically oriented MEG spikes were found clustered over the superior temporal region bilaterally.



This pattern, unilaterally or bilaterally, is typical of a classic LKS patient.

The patient was put on prednisone therapy and had an improvement in language development.

Conclusions:

The MEG study revealed a pattern of MEG spike activity in the superior temporal region that is characteristic of LKS.

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