

Use of interictal HFOs in Tohoku University Hospital Epilepsy Center

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Abstract (Clinical challenge, <100 words)

Tohoku University Hospital Epilepsy Center hosts 4 and 1 video-EEG monitoring beds for adult and pediatric patients, respectively, for pre-surgical evaluation. Approximately 40 epilepsy surgeries are performed a year including 6 to 10 cases with invasive EEG evaluation. Interictal HFOs are routinely analyzed for 5- to 10-minute samples of chronic intracranial EEG using automated detection system. Scalp EEG is simultaneously recorded for sleep staging. Occurrence rates of interictal ripples and fast ripples are separately mapped for REM sleep and slow wave sleep. Although clinical interpretation is still developing, REM sleep HFOs seems more specific to epileptogenic area in our experience.