

[ PICTURES IN CLINICAL MEDICINE ]

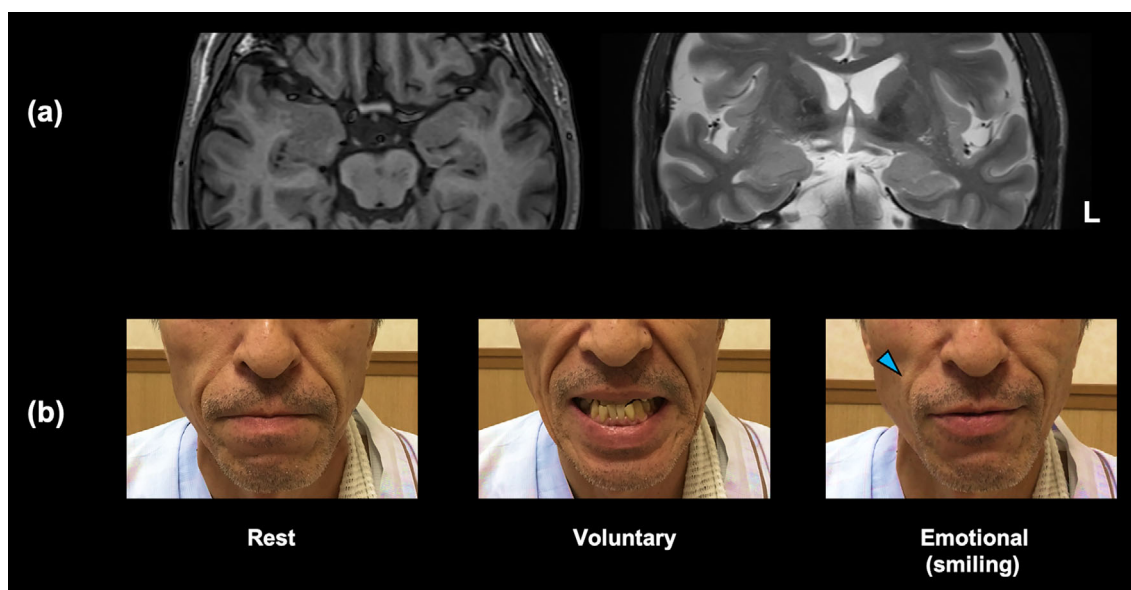
## Emotional Facial Paresis in Temporal Lobe Epilepsy

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**Key words:** complex partial seizure, focal seizure, electroencephalography, loss of consciousness, clinical neurophysiology

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**Picture.**

A 61-year-old man was admitted for weekly focal impaired awareness seizures over several years. The seizures lacked lateralizing signs. Brain MRI revealed that the amygdalae were of asymmetric size (Picture a). Interictal-electroencephalography (EEG) showed independent left dominant bilateral temporal spikes. Thus, he was diagnosed with left mesial temporal lobe epilepsy. Subsequent video-EEG monitoring also documented seizures arising from the left region. The only neurological abnormality found was emotional facial paresis, that is, unilateral lower facial weakness on the right only during emotional expression (blue arrowhead in Picture b); it was absent during rest or voluntary facial movement. This paresis is an important neurological lateralizing sign because it has been reported to occur contralateral to the side of the epileptogenic focus in temporal lobe epilepsy (1). Although the precise anatomical pathway

is still unknown, the epilepsy-related functional deficit in the regions associated with emotional expression, such as the amygdala, hippocampus, and cingulate cortex, could be responsible for the paresis (2).

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## References

1. Jacob A, Cherian PJ, Radhakrishnan K, Sarma PS. Emotional facial paresis in temporal lobe epilepsy: its prevalence and lateralizing value. *Seizure* **12**: 60-64, 2003.
2. Lin K, Carrete H, Lin J, et al. Facial paresis in patients with mesial temporal sclerosis: clinical and quantitative MRI-based evidence of widespread disease. *Epilepsia* **48**: 1491-1499, 2007.

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