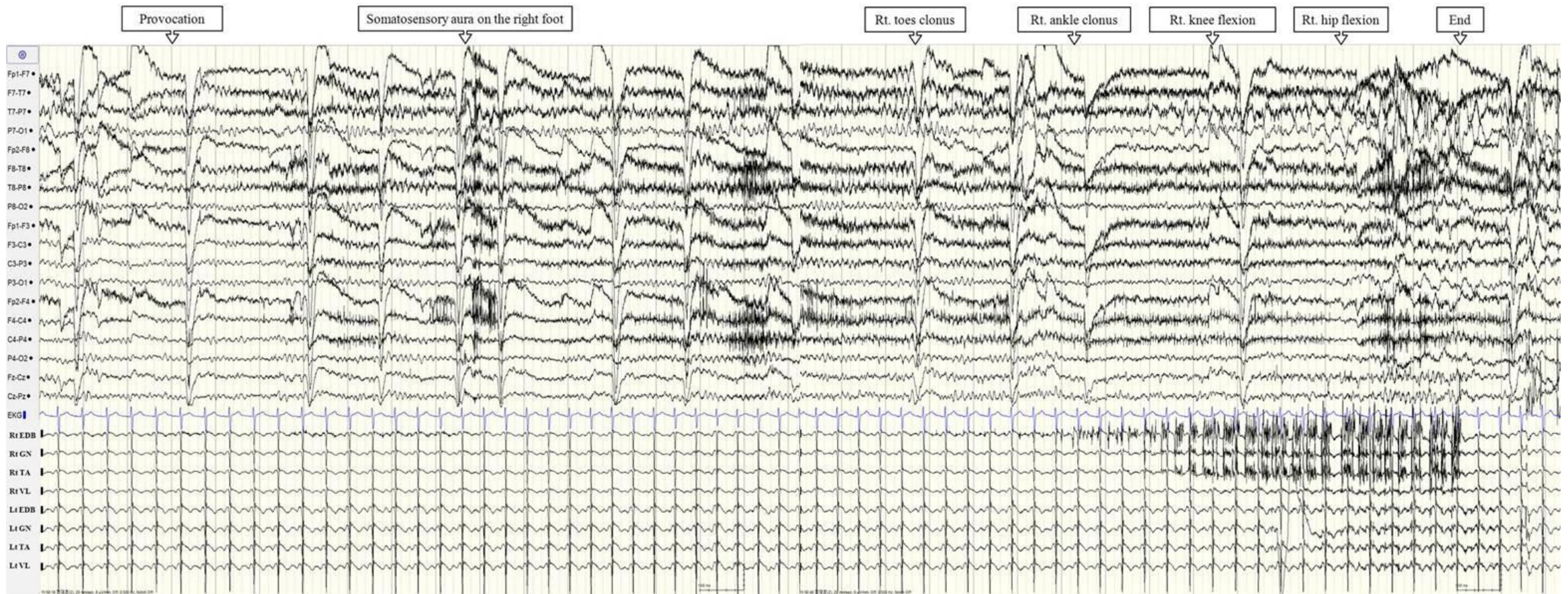


Somatosensory reflex epilepsy: simultaneous video-EEG monitoring and surface EMG

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EEG (upper panel) and sEMG (lower panel) on both lower extremities during a typical attack. The EEG shows rhythmic theta activity on the posterior temporal area; the EMG shows sequential progression of involved muscles, from the extensor digitorum brevis, across the gastronecmius and tibialis anterior, to the vastus lateralis. EDB: extensor digitorum brevis; GN: gastronecmius; TA: tibialis anterior; VL: vastus lateralis; Rt: right; Lt: left.



Seizure is triggered by repetitive tapping on the right sole aspect of the second to fourth metatarsophalangeal joint using a hammer. After stimulation, a tingling sensation is felt on the sole of the right foot that extends to the rest of the right foot and lower leg. This is followed by clonic movement of the right toe and clonic movements through the knee, from the foot to the hip. Consciousness is well-preserved during the seizure.