Repetitive Discharge in a Case of Isaacs Syndrome with Burning Sensation

Masanori Kurihara 1,2, Izumi Sugimoto 1, Yuki Hatanaka 1,3 and Yasuhisa Sakurai 1

Key words: Isaacs syndrome, repetitive discharge, nerve conduction study, burning sensation

A 66-year-old man consulted a physician with 1-and-a-half-year history of a burning sensation in all of his extremities without muscle weakness or reduced sensation. Screening tests for neuropathy revealed slightly elevated hemoglobin-A1c but otherwise normal findings. A nerve conduction study (NCS) showed a normal amplitude and velocity, and the physician did not consult a neurologist. Four months later, the patient presented to our neurology clinic with worsening symptoms. Taking his history revealed frequent muscle cramps, and myokymia was noted in both calves, suggesting Isaacs syndrome. NCS showed abnormal repetitive discharges after compound muscle action potential, which were also found in the first NCS (Picture A). Serum anti-VGKC antibodies were positive. Antiepileptic drugs and immunoadsorption plasmapheresis plus steroid pulse therapy were started, followed by oral prednisolone (30 mg/day), resulting in symptom improvement. A follow-up NCS after symptom improvement showed the near disappearance of abnormal repetitive discharges (Picture B). Isaacs syndrome is an autoimmune neurological disease typically presenting with frequent muscle cramps (1). However, a burning sensation can also be the initial complaint, as in our patient (2). NCS results, including a visual assessment of the wave, should be cautiously interpreted.

The authors state that they have no Conflict of Interest (COI).

Acknowledgement

We thank Dr. Osamu Watanabe of Kagoshima University Graduate School of Medical and Dental Sciences for the measurement of the anti-VGKC antibody.

References
