

Neurosyphilis combined with acute anterior thalamic infarction

J. Lee¹, H. Rhee², S. Yoon¹, K. Park¹

¹*Neurology, Kyung Hee University Hospital, South Korea*

²*Neurology, Kyung Hee University Hospital at Gangdong, South Korea*

The most common presentations of neurosyphilis are neuropsychiatric manifestations. However, neurosyphilis can also cause a variety of neurological diseases, such as stroke or dementia. Here, we report on a patient who was diagnosed with neurosyphilis combined with acute anterior thalamic infarction. A 65-year-old right-handed man was brought to our memory disorder clinic by his wife, who reported that over the past six months, the patient had experienced personality changes such as apathy, abulia, and emotional lability. The patient's wife recalled him having fairly good memory; however, his memory had deteriorated dramatically over the prior two weeks. He could not remember the names of familiar people, and presented with reduced verbal fluency and word-finding difficulty. The patient was diagnosed with neurosyphilis based on the results of positive treponemal serology, lymphocytic CSF pleocytosis with elevated protein levels, and positive CSF VDRL reaction. However, his brain MRI demonstrated focal hyperintensities in the left anterior thalamus and right basal ganglia on diffusion-weighted imaging. The above lesions were confirmed to be acute ischemic cerebral infarctions based on low signal intensity on the apparent diffusion coefficient map. After a 14-day treatment course with penicillin G, symptoms of apathy, abulia, emotional lability, disorientation to time and place, and reduced verbal fluency noticeably improved. However, the relatively recent symptoms of short-term memory impairment and word-finding difficulty persisted, suggesting thalamic amnesia remained. Considering neurosyphilis as a dementing illness, the mechanism of cognitive impairment may be direct invasion of brain parenchyma as well as strategic infarction by meningovascular syphilis.