Neurosyphilis manifesting as trigeminal nerve dysfunction


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A 20-year-old woman presented with four-month long facial paresthesia and difficulty in performing mandible abduction, both on the right side. Contrast-enhanced axial T1-weighted magnetic resonance imaging (MRI) of the brain revealed thickening and heterogeneous enhancement of the right trigeminal nerve (Figure 1, white arrow). Axial three-dimensional constructive interference in steady state MRI revealed thickening of the cisternal and intradural portions of the trigeminal nerve, as well as filling and expanding of the Meckel’s caves (Figure 2, white arrow). Cerebrospinal fluid (CSF) obtained via lumbar puncture showed elevated protein (78mg/dL), high white blood cell count (16 cells/µL) with lymphocyte predominance and reactive venereal disease research laboratory (VDRL) test. Blood Treponema pallidum hemagglutination assay (TPHA) and VDRL were reactive and human immunodeficiency virus (HIV) negative. After the first dose of penicillin, the patient had a Jarisch-Herxheimer reaction. Two months after the 14-day crystalline penicillin treatment, clinical regression and imaging data improvement were observed (Figure 3).

Neurosyphilis is a disease with complex neurological presentation. Neurosyphilis screening is highly recommended for patients with cranial nerve palsy or other unexplained neurological conditions, with special consideration for HIV patients. Brain MRI and CSF analyses are essential for treatment planning and management. Early diagnosis and treatment is crucial due to potential persistent disabilities that can be easily treated or prevented[1]. Neurosyphilis should be considered among the differential diagnoses of cranial nerve dysfunctions that include the trigeminal nerve[2,3].

Conflicts of interest
The authors declare that there is no conflict of interest.

REFERENCES