

Neurosyphilis: a masked evildoer

To the Editor,

We read with interest the paper by Sakai *et al.* (2018) addressing an case of a 33-year-old male suffering from repetitive tonic-clonic seizures due to neurosyphilic infection. The paper describes the uncommon onset of *Treponema pallidum* infection with regards to its presentation, complicating the differential diagnosis. However, in our opinion, the differential diagnostic process should also cover the neuropsychiatric presentation of neurosyphilis.

Danielsen *et al.* (2004) found that over a third of patients with neurosyphilis presented with neurological symptoms and nearly a fifth manifested with psychiatric symptoms. Moreover, Flood *et al.* (1998) found that less than a third of patients with neurosyphilis examined between 1970 and 1990 presented with psychiatric symptomatology, while 86% of subjects examined between 1985 and 2005 exhibited psychiatric symptoms. Ahbeddou *et al.* (2018) reviewed 53 patients who suffered a stroke as a neurosyphilic manifestation between 2001-2015 with almost half of the subject presenting prodromal syndrome with mental status change, seizures, headaches or memory loss.

Clinical manifestations as well as psychiatric symptoms of syphilis are pleomorphic and should be considered as non-specific (Rozwens *et al.*, 2003). Włodarczyk *et al.* (2017) presented two case reports of prominent cognitive decline in subjects with neurosyphilis, initially diagnosed with early-onset dementia. One of the subjects had a history of sight loss, which is believed to be the first symptom of neurosyphilis associated with optic nerve neuropathy. Both subjects were otherwise asymptomatic and eventually revealed abnormalities of angiogenic origin on brain MRI that led to broadening the differential diagnosis with regards to neurosyphilis.

Serological examination is the gold standard for diagnosis of neurosyphilis. However, we would like to emphasize the importance of a multidisciplinary approach involving physicians with expertise in different fields. Neuroimaging along with ophthalmic examination may contribute to the differential diagnosis of neurosyphilis, moreover, in asymptomatic

subjects, additional cerebrospinal fluid examination for *Treponema pallidum* (using polymerase chain reaction testing to hasten diagnosis) plays a significant role in the diagnosis (Hagihara *et al.*, 2017). With the general change in the clinical presentation of neurosyphilis symptoms over the years, the emphasis on meticulous differential diagnosis is of particular importance. □

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Supplementary data.

Summary didactic slides are available on the www.epilepticdisorders.com website.

References

- Ahbeddou N, El Alaoui Taoussi K, Ibrahim A, *et al.* Stroke and syphilis: a retrospective study of 53 patients. *Revue Neurol* 2018; 174: 313-8.
- Danielsen AG, Weismann K, Jorgensen BB, *et al.* Incidence, clinical presentation, and treatment of neurosyphilis in Denmark, 1980-1997. *Acta Derm Venereol* 2004; 84: 459-62.
- Flood JM, Weinstock HS, Guroy ME, *et al.* Neurosyphilis during the AIDS epidemic. San Francisco, 1985-1992. *J Infect Dis* 1998; 177: 931-40.
- Hagihara M, Yamagishi Y, Kato H, *et al.* Frequency of *Treponema pallidum* invasion into cerebrospinal fluid in primary or secondary early-stage syphilis. *J Infect Chemother* 2017; 24: 404-6.
- Rozwens A, Radziwillowicz P, Jakuszkowiak K, Cubala WJ. Neurosyphilis with its psychopathological implications. *Psychiatr Pol* 2003; 37: 477-94.
- Sakai K, Yazawa S, Sugimoto A, *et al.* Electroclinical and radiological observation of dysfunctional zones in a patient with neurosyphilis. *Epileptic Disord* 2018; 20: 164-8.
- Włodarczyk A, Szarmach J, Jakuszkowiak-Wojten K, *et al.* Neurosyphilis presenting with cognitive deficits - a report of two cases. *Psychiatria Danubina* 2017; 29: 341-4.