Imitation, The Greatest Form of Flattery?

Abstract:

Sir,

A recent interesting case at our institution reminded us to remain cognisant of the oldest known venereal disease; known as the great imitator, syphilis is a sexually transmitted infection caused by the spirochete Treponema pallidum.

A 45-year-old Romanian man presented with weakness and paraesthesia in his left arm and leg, and an occipital headache. His wife noted he was disorientated and had slurred speech. He had no facial droop, gait or visual problems. He had no past medical or relevant family history. On presentation, within hours of symptom onset, he was asymptomatic and neurological exam was normal except for reduced power in the left upper limb (4+/5). Blood investigations were essentially normal but his CSF was cloudy with leukocytosis and an elevated protein (120mg/dl). CSF and serology was negative for all viruses tested, as well as paraneoplastic, vasculitic and autoimmune markers. Contrast CT Brain showed an ill-defined area of hypo-attenuation in the right temporal fossa and an area of low attenuation in the right thalamic region. A subsequent MRI Brain showed extensive highT2/FLAIR signal within the same region. Neuroradiology review of the imaging emphasized that the mesiotemporal T2 hyperintensity was virtually pathognomonic for herpes encephalitis. He was treated with IV acyclovir based on these clinical and radiological findings however repeat imaging and LP showed persistent abnormalities. After further discussion with the National Virus Reference Laboratory, his CSF was tested for syphilis and was positive. On questioning, he denied any prior history of syphilis. He was discharged to the Infectious Disease clinic and completed treatment with IM procaine penicillin/probenecid. Follow up serology showed a decline in RPR (Rapid Plasma Reagin) and repeat LPs showed a reduced protein count.

Syphilis has various clinical, laboratory and imaging findings, all of which lack specificity, which can make diagnosis difficult. Of those who contract syphilis, 4-10% will develop neurosyphilis. In the recent past the clinical manifestations have changed; this may be due to the routine use of penicillin antibiotics for non-syphilitic infections and the emergence of immunosuppression in HIV. There is no gold standard diagnostic test. The CDC advises that VDRL (Venereal Disease Research Laboratory test) and RPR (Rapid Plasma Reagin) should be used as screening tests. A positive screening test should lead to a treponemal test specific for syphilitic antibodies and subsequently have the titre results reported quantitatively. Neurosyphilis is diagnosed by a combination of CSF VDRL, cell count, and protein level in the correct clinical setting. A single intramuscular injection of long acting Benzathine penicillin G is the treatment of choice for primary, secondary or early latent syphilis.

Neurosyphilis, the great imitator, has innumerable clinical manifestations, and non-specific investigation findings, which can make diagnosis difficult. Therefore, it is recommended that every patient with neurological or psychiatric symptoms without unambiguous causes should have a serology sent for syphilis. Similarly, all patients with radiological features suggestive for Herpes encephalitis who are not improving on IV Acyclovir should have CSF tested to exclude neurosyphilis.

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References