Acute sensory ataxic polyneuropathy revealing early secondary syphilis in an immunocompetent patient

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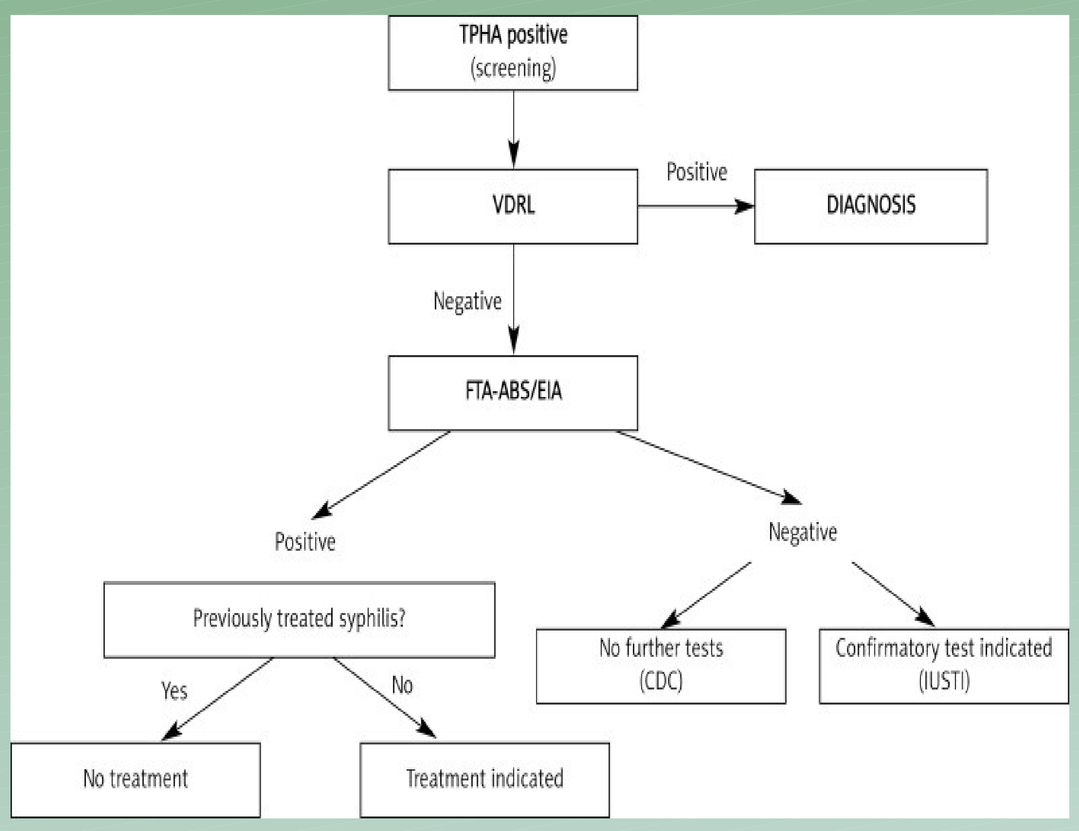
Syphilis is a resurgent pathology in HIV positive patients and in non-immunocompromised individuals (1-2). Following systemic infection by the Treponema Pallidum, early Central Nervous System (CNS) invasion manifests in a variety of clinical patterns, which mainly express the meningeal or meningovascular involvement. We hereby report on a rare (3-5), atypical expression of syphilis represented by an acute sensory polyneuropathy.

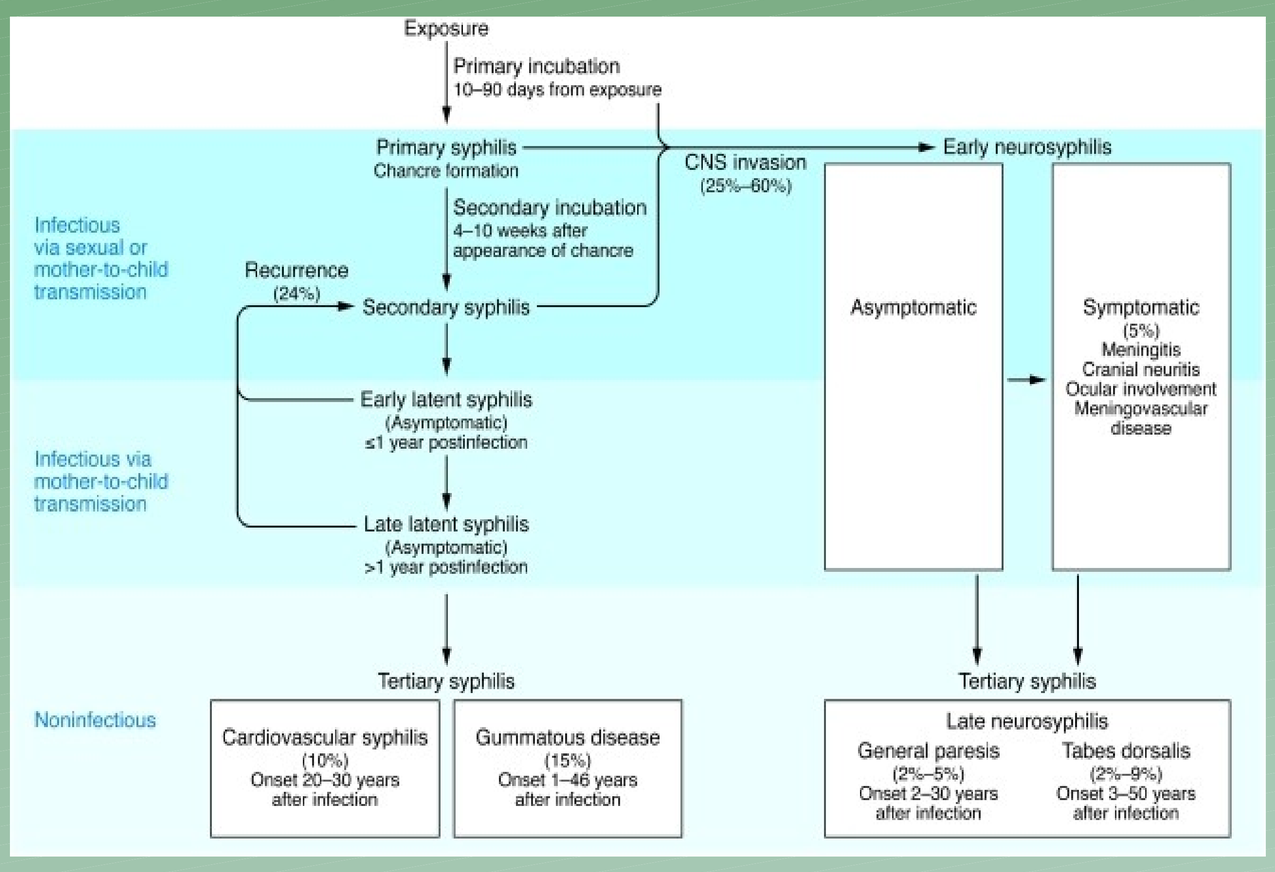
A 73 years old, non-immunocompromised homosexual man was admitted to the Gastroenterology Unit of our Hospital because of vomit and abdominal pain without fever, associated with maculopapular rash of the trunk, limbs and foot plants. Routine blood tests were unremarkable except for two-fold increase of γ-glutamyltransferase (GGT) and alanine aminotransferase (ALT) serum concentrations. Abdominal CT immediately performed at the emergency department was also negative. After one week the patient progressively developed trunk ataxia, lower limbs weakness and four-limb paresthesia, so to cause imbalance and inability to walk without assistance. Neurologic examination showed four limbs hypoesthesia, a profound loss of proprioception, generalized areflexia and weak cough reflex. Strength was normal and there was no ophthalmoparesis or other cranial nerve abnormalities. The patient was moved to the Neurologic Department for the clinical suspicion of acute polyneuropathy. At admission in our Neurological Department, electroneurography/electromyography (ENG/EMG) findings were consistent with a prevalently axonal polyradiculoneuropathy, although limited to the upper right limb. Cerebrospinal fluid (CSF) analysis revealed 4 cells per cubic millimeter, 43.5 mg/dL proteins, normal glicorrachia, no oligoclonal bands. Cytomorphology, bacteriological examinations and search for neurotrophic viruses on CSF were all negative. Brain, spinal cord and lumbosacral roots post contrast T1-weighted MRI resulted unremarkable. Blood screening for autoimmune disorders, tumor markers, celiac disease and antineuronal antibodies, serology for HIV, HBV and HVC were all negative. Unexpectedly serum VDRL (Veneral Disease Research Laboratory) test resulted positive. The Treponema infection was confirmed by positive FTA-ABS (Fluorescent Treponemal Antibody Absorption Test), TPHA (Treponema Pallidum Haemoagglutination Assay) (1/640) and RPR (Rapid Plasma Reagin) (1/64). A second lumbar puncture gave results similar to the previous one. CSF VDRL and PCR for Treponema Pallidum detection were negative.

Following 5 days intravenous immunoglobulin (IVIG) therapy (30 g/die) the motor symptoms progressively improved, but the patient developed dysphonia, which resulted being associated with pulmonary embolism. We started anticoagulant therapy with Enoxaparin Sodium 8000 IU bid. Considering the risk of intramuscular hematoma, we decided to start oral doxycycline 100 mg bid. At discharge, the patient was able to ambulate unassisted. He continued to progressively improve, and at the 10th month follow-up the symptoms disappeared except for a mild gait disturbance.

The patients suffered for acute sensory ataxic polyneuropathy revealing early secondary syphilis. The alternative hypothesis of a direct early infection of the lumbosacral roots was discharged because of the negative MRI and normal CSF, including cellular and bacteriological tests. The negative CSF findings are consistent with the immune-mediated pathogenesis of polyneuropathy. Our patient's presentation fulfills the criteria for the serologic diagnosis of active syphilis, which did not involve the CNS (as shown by negative CSF VDRL), and for acute sensory ataxic polineuropathy. Since the disease is potentially treatable, syphilis should be included in the differential diagnosis of polyradiculoneuropathies, even in immunocompetent patients, as illustrated in the present case.



Syphilis diagnostic scheme. Postepy Dermatol Alergol. 2013 Aug; 30(4): 203–210.



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