Sexually transmitted infections (STIs) among HIV-infected patients are a large global problem for public health systems. The recent resurgence of syphilis presents a challenge for all physicians, particularly when patients are coinfected with HIV/syphilis. The diagnosis of neurosyphilis (NS) is also a challenge, especially in coinfected patients, and the criteria for deciding when to perform a lumbar puncture (LP) in HIV-infected patients with syphilis are still controversial. The aim of this research was to assess the demographic and laboratory data including cerebrospinal fluid serological and biochemical abnormalities in HIV-infected subjects with secondary or late latent syphilis and serum VDRL ≥ 1:8.

Methods & Materials: We retrospectively reviewed demographic and laboratory data from 360 patients coinfected with HIV and syphilis who underwent a LP to rule out NS at the outpatient clinic of the Instituto de Infectologia Emilio Ribas (Brazil), between July 2012 and September 2013. Neurosyphilis was defined by white blood cell (WBC) counts >20cells/μL, elevated CSF protein concentration (≥ 45 mg/dL), and/or elevated CSF protein concentration (≥ 45 mg/dL)–but CSF-VDRL was not reactive. 95/120 patients with NS (79.16%) had CD4 T cell counts > 350 cells/μL, and 35/120 patients (28.33%) had serum VDRL ≥ 1:8, independently of CD4 cell count. Several important questions regarding the diagnosis of neurosyphilis remain unanswered and should be a priority for future research.

Results: 140 of the 360 patients (38.89%) had NS based on the criteria described above. Most were male (97.5%) and 68.33% had sex with men (MSM). Mean age 41.12 years, range 22-72 years. 33.34% (n = 120) of patients met the criteria of confirmed neurosyphilis (reactive CSF-VDRL). In 16 (4.5%) patients CSF WBC count >20cells/μL was found, and 20 subjects (5.5%) had CSF WBC count >20cells/μL and/or elevated CSF protein concentration (≥ 45 mg/dL)–but CSF-VDRL was not reactive. 95/120 patients with NS (79.16%) had CD4 T cell counts > 350 cells/μL, and 35/120 patients (28.33%) had detectable viremia defined by an HIV-1 RNA count of ≥50 copies/ml.

Conclusion: STIs like HIV and syphilis are acquired as comorbidities by high risk populations and may influence their original course and prognosis. Rapid diagnosis is essential for management, treatment, and cure. We actually perform lumbar puncture for all HIV-infected patients with serum VDRL ≥ 1:8, independently of CD4 count. Several important questions regarding the diagnosis of neurosyphilis remain unanswered and should be a priority for future research.

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