

Letter to Editor

Syphilis: To Get Unstuck

Dear Editor,

Syphilis prevalence varies by region. It remains prevalent in many developing countries. New cases of primary and secondary syphilis are more in the age group of 25 – 29 years.<sup>[1]</sup> The etiological agent *Treponema pallidum* cannot be cultivated in vitro. The organism is so narrow; the volume of protoplasm so small that it is extremely difficult to see by direct illumination and ordinary staining methods. Silver impregnation technique and immune fluorescent staining techniques have proved of value.<sup>[2]</sup> In clinical work, dark ground illumination is the usual method employed. Serological testing is considered the standard methods for diagnosis for all stages of syphilis.<sup>[3]</sup> Diagnosis of syphilis is made with certainty by finding *Treponema pallidum* from mucocutaneous lesions and lymph node aspirate.

Serological tests for syphilis are

1. Non Treponemal tests VDRL/ RPR
2. Treponemal tests TPHA. TPPA tests, FTA-Abs

Application of laboratory investigations in the diagnosis of syphilis

1. Primary syphilis
  - a. Dark field microscopy of ulcer (80%)
  - b. Non Treponemal tests (78% to 86%)
  - c. Treponemal specific tests (76% to 84%)
2. Secondary syphilis
  - a. Dark field microscopy of skin lesions (80%)
  - b. Non Treponemal tests (100%)
  - c. Treponemal specific tests (76% to 84%)
3. Latent syphilis

- a. Non Treponemal tests (95% to 100%)
- b. Treponemal tests (97% to 100%)

4. Tertiary syphilis

- a. Non Treponemal tests (71% to 73%)
- b. Treponemal tests (94% to 96%)

5. Neurosyphilis (CSF examination)

- CSF should be tested for WBC count, protein level and for VDRL reactivity.
- Positive VDRL test is specific, but negative test does not rule out neurosyphilis.
- WBC count – 10 per cubic mm (10X10<sup>6</sup>/L)
- Protein level - >50mg/dL
- TPHA negative test rules out neurosyphilis

Testing of spirochete DNA-PCR may be helpful because it detects organism rather than antibodies in the CSF. In this juncture, clinician should not forget the prozone phenomenon and false positive reaction.<sup>[3]</sup>

Considering the laboratory investigations, its sensitivity and specificity, diagnosis of syphilis is not possible by serological tests alone. Likewise, diagnosis is never made by clinical evidence alone.<sup>[4]</sup> To maintain the fundamental principle, the diagnosis before treatment is made by the clinical and laboratory examinations.<sup>[3]</sup> Legal issues regarding venereal diseases should not be forgotten. So, to establish the diagnosis of syphilis all should be taken into account.

1. History of exposure other than marital
2. Clinical examination in details
3. Dark field microscopy from serum exudates of mucocutaneous lesions
4. Serological testing and careful interpretations.

**References**

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