

# A female with positive serum nontreponemal tests

Sir,

A 32-year-old woman was referred to our clinic in Al-Zahra University Hospital, Isfahan, Iran for positive serum nontreponemal; Venereal Disease Research Laboratory (VDRL) and rapid plasma reagin (RPR) tests recently. She was in a healthy condition. She works in a bank as cashier. Her previous husband was an intravenous drug user. She lived with him for about 2 years and divorced. She had no pregnancy in the past. She is going to be married to another person. She underwent lumbar puncture. Cerebrospinal fluid (CSF) analysis was in normal range. VDRL of CSF was negative. All rheumatologic tests including rheumatoid factor, P-ANCA, C-ANCA, antinuclear antibody, Cardiolipin LE cell was negative. Hepatitis markers, hepatitis B surface antigen, hepatitis C antibody and human immunodeficiency virus antibody all were negative. Other sexually transmitted diseases were ruled out. Serology for brucellosis was negative. History of Chronic TB, Recent vaccination and IVDU were negative. Blood smear stain for Malaria showed no parasite. She had received doxycycline for 4 weeks period.

## ARE YOU SURE IT'S SYPHILIS?

*Treponema pallidum*, the spirochete that causes syphilis, cannot be cultured in conventional culture mediums. As a result, syphilis is usually diagnosed by tracking the immunologic footprints of its etiologic agent.<sup>[1]</sup> Nontreponemal tests measured by the RPR and VDRL are directed against lipoidal antigens of the host and probably the organisms; they rise during acute infection and often decline following treatment.<sup>[2]</sup> Our case had a negative fluorescent treponemal antibody absorption test. This conventional treponemal test and the majority of newer commercially available treponemal assays chemiluminescence and treponema pallidum particle agglutination assay measure both immunoglobulin G and immunoglobulin M. These tests have high sensitivity but cannot discriminate between active and past infection.<sup>[3-5]</sup> Unfortunately conditions other than treponemal infections can elicit antilipoidal

antibodies that cause reactivity in a nontreponemal test with the positive treponemal test result, termed a biologic false positive (BFP) reaction.<sup>[3]</sup> Many infections and diseases particularly systemic lupus erythematosus are more likely to cause BFP. CSF examination should be performed in all persons with serologic evidence of syphilis infection and neurologic symptoms.<sup>[6]</sup> This case had not a known disease or condition to describe this seropositivity for nontreponemal tests. We think these positive tests are BFP. But she may have an occult disease which may become apparent later.

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## AUTHOR'S CONTRIBUTIONS

All authors have contributed in designing and conducting the study. All authors have assisted in preparation of the first draft of the manuscript or revising it critically for important intellectual content. All authors have read and approved the content of the manuscript and confirmed the accuracy or integrity of any part of the work.

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