

Laboratory testing of women in reproductive age for infection sifilis, through detection of IgG and IgM antibodies

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Abstract

Syphilis is a sexually transmitted infection (STI) caused by the bacterium *Treponema pallidum*. It is widespread throughout the world, especially in underdeveloped countries, affecting the health of the population of these countries. For this reason, this study aims to test a population group consisting of women of reproductive age (18-46 years old) for syphilis, by investigating the presence of IgM and IgG antibodies against *T. pallidum* in the serum, allowing us to evaluate prevalence for this infection in the population. Since in most cases the presence of STIs is asymptomatic, it is important to detect them as quickly as possible not only for the health of the affected person but also for the consequences in the development of babies during pregnancy. Immunological methods allow rapid and accurate identification of IgM and IgG antibodies in patient serum.

1287 sera were analyzed (divided into 7 years) for the presence of specific IgM and IgG antibodies against *T. pallidum* (anti-TPA) in women of reproductive age, with the ECL method in the Cobbas apparatus. All samples were analyzed in the Intermedica laboratory during the years 2011-2017. The prevalence of Syphilis in the study group is 5.28%. Anti-TPA IgM antibodies were detected in 1.71% of cases, while anti-TPA IgG antibodies were detected in 4.12% of cases included in our study group. These numbers show that *Treponema Palladium* (Syphilis) infection, which is associated with fetal damage when the infection occurs during pregnancy, or congenital Syphilis exists at low levels, to be assessed in Albanian women of reproductive age. The infection represents a slight increase over the years, which also shows the tendency for this infection to increase. The age group of 26-35 years is the age group that shows a higher level of infection. It is also noted that Syphilis shows a slight tendency to increase in prevalence with increasing age.

Keywords: *Treponema pallidum*, Syphilis, anti-TPA IgG antibody, anti-TPA IgM antibody, bridging system.

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