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Serologic Test for Syphilis

Everything you always wanted to know about utilization and interpretation of serologic test for syphilis

Routine blood tests performed in most Alaska laboratories are either the Rapid Plasma Reagin (RPR) or VORL antigen tests. These nontreponemal antigen tests are used for syphilis screening because of their economy and availability. They usually become reactive within ten days after full incubation of syphilis. Since the minimum incubation period is ten days and the maximum is 90 days, syphilis cannot be ruled out by blood test short of 100 days. However, in a symptomatic patient, a non-reactive test after a symptom duration of four weeks should rule out syphilis.

When the RPR or VORL is reactive, the quantitative test is more informative than a qualitative test. Quantitation is a dilution of serum in geometric proportions. The last dilution to produce a reactive result is the titer; e.g., a titer of 1:16 means the serum is reactive 1:16 but nonreactive at 1:32 dilution. This is sometimes referred to as positive at 16 "dil's". Quantitation provides a standard from which change or lack of change can be measured. If the disease is inactive but serofast, the titer will not change on subsequent testing (one dilution change either way, is not considered significant in these cases).

In most cases of early syphilis the RPR or VORL will become nonreactive with adequate treatment. This non-reactive result should occur roughly 6 to 18 months after treatment. In cases of syphilis of more than 1-2 years duration, the patient will likely become serofast (i.e., maintain a constant antibody level) even though adequately treated. A patient who was serofast, with record of adequate treatment, and is now showing a rapid rising titer is likely to have been reinfected.

#### Disease Reports

Reports of an increased number of mononucleosis like illness have been reported in Anchorage. In addition, a rash illness, compatible with Fifth Disease (Erythema Infectiosum) but also characterized by fever, pharyngitis and lymphadenopathy has been noted in Anchorage children.

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