State of Alaska Epidemiology **Bulletin**

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Syphilis Serologic Tests

BEGINNING NOVEMBER 1, 1976, THE STATE OF ALASKA, SECTION OF LABORATORIES ESTABLISHED THE FOLLOWING POLICIES REGARDING SYPHILIS SEROLOGY

RPR TEST

All blood specimens submitted to the State Regional Laboratories for syphilis serology are tested by the Rapid Plasma Reagin (RPR) Test.

1. A reactive RPR associated with clinical or epidemiologic evidence of syphilis is adequate confirmation of clinical diagnosis.

2. The RPR is occasionally non-reactive during the early stages of infection with syphilis. The procedure of choice in this case is to repeat the RPR in 7-10 days. Meanwhile, if exposure to infectious syphilis had definitely occurred within the past 90 days, the patient should receive epidemiologic (prophylactic) treatment with 2.4 million units bicillin or 30-40 grams tetracycline.

3. Since the RPR titer usually falls after treatment, this may be used as a measure of treatment adequacy. Conversely, a fixed or rising titer raises the suspicion of inadequate treatment or reinfection.

FTA-ABS Test

The FTA-ABS should be considered a confirmatory test, not a screening test. Though it may be reactive earlier than the RPR in primary syphilis, in most instances, the yield from performing a FTA-BS on a RPR non-reactive serum is very low, and should not be done routinely. The FTA-BS usually remains reactive for life, despite adequate treatment (i.e., patient is “serofast”). The FTA-BS may be useful in the following situations:

1. If the RPR is reactive in low titer and there is no epidemiologic or clinical suspicion for syphilis, a non-reactive FTA-BS generally indicates that the RPR is a biologic false positive (BFP) and other reasons for seroreactivity should be sought. Work-up would, of course, include a follow-up RPR.

2. If there is a clinical suspicion of late syphilis, including neuro-syphilis, the FTA-BS may be more sensitive than the RPR in indicating distant infection. In these relatively rare circumstances, the FTA-BS should be requested even through the RPR is non-reactive.

   If recent syphilitic exposure took place, the procedure of choice is to repeat the RPR in 7-0 days in order to detect the diagnostic titer rise.

Summary

PHYSICIANS ARE ASKED NOT TO REQUEST A FTA-ABS AS A SCREENING TEST. WHEN LATE SYPHILIS (INCLUDING NEUROSYPHILIS) IS CLINICALLY SUSPECTED, THE FTA-BS **SHOULD** BE REQUESTED EVEN THOUGH THE RPR IS NEGATIVE.

Many FTA tests are requested on patients who were previously identified as positive. The FTA-BS, once positive, remains serofast for life; thus, repeat tests are not helpful. When laboratory records show a previous positive, the physician will receive the following note:

> "We have received your request for a FTA-BS serologic test for syphilis on _____. Our records indicate one or more positive FTA-ABS tests (3+ or 4+) from this patient in the past.
>
> The FTA-BS will generally remain reactive for life; hence it is not a useful test for determining adequacy of therapy or reinfection.
>
> In view of this, we will not process this specimen unless we receive further instructions from you."

Another group of potentially unnecessary FTA-BS tests are those requested on RPR negative patients who are not suspected of having either a) very early syphilis prior to RPR reactivity or b) neurosyphilis or other late syphilis after the RPR has spontaneously become negative. Physicians who may have requested such unnecessary tests will receive the following note:

> "Since the RPR on your patient, _____, is negative we will not now perform the FTA-BS test. We will hold the serum specimen for 2 weeks and will perform the test upon further instructions from you.
>
> The FTA-BS is an expensive test. The quality of its results is hindered by excessive volume and use as a screening test. We are, therefore, trying to reduce the number of unnecessary tests. The FTA-BS may be a useful test if late syphilis (including neurosyphilis) or primary syphilis is suspected and the RPR is negative."

FOR DIAGNOSTIC OR EPIDEMIOLOGIC ASSISTANCE, CALL THE SECTION OF COMMUNICABLE DISEASE CONTROL, 272-534, TOM KELLY, SENIOR PUBLIC HEALTH ADVISOR, VD CONTROL OR JOHN MIDDAUGH, M.D., STATE EPIDEMIOLOGIST.