Saginaw County HEALTH DEPARTMENT

LABORATORY

Rev.11/6/23

Syphilis Antibody Assay
(Venereal Disease Research Laboratory)

ANALYTES TESTED: Treponema pallidum (syphilis)

USE OF TEST: A microscopic flocculation test to detect anti-lipoidal antibodies (Reagin) in human serum for the serological diagnosis and prognosis of syphilis. The VDRL test is a nontreponemal test like the RPR and the USR tests.

SPECIMEN COLLECTION AND SUBMISSION GUIDELINES:

H:\Lab forms\Sag Test Req 09.20.22 .doc
\ Specimen Submission Guidelines 2023.doc
Transport Temperature: Ambient temperature

SPECIMEN TYPE:

Specimen Required: Serum.
Minimum Acceptable Volume: 1 – 3 ml serum, 5 – 7 ml whole blood (less than 8 hours old).
Container: Plastic capped tube for serum
Plastic vacutainer for whole blood (pre-approval necessary for whole blood submissions).
Shipping Unit: MDHHS shipping unit 8 for mailing or courier specimens
In-house specimens use appropriate transport container

SPECIMEN REJECTION CRITERIA:

1. Critical Data Needed For Testing:
   - Patient name
   - Patient date of birth
   - Date collected
   - Submitting Agency
2. Serum specimens that are excessively hemolyzed (when newspaper print cannot be read through the serum.
3. Serum specimens that are grossly contaminated with bacteria, or extremely turbid
4. Serum specimens that are extremely turbid
5. Whole blood that is over 12 hours and not refrigerated
6. Insufficient volume for testing

TEST PERFORMED:

Methodology: Microflocculation
Turn Around Time: Typically tests are reported within three business days of receipt. Specimens requiring confirmatory testing at MDHHS Lansing Lab may take up to two weeks.
When Performed: Typically on Fridays.

RESULT INTERPRETATION:

Reference Range: Nonreactive

1. Nonreactive – No serologic evidence of current infection.

2. Reactive – Suggests past or current infection with a pathogenic treponeme; however, it may represent a biological false positive. Reactive serum will be titered to endpoint.

3. When the VDRL test is used as a screening test for low risk populations, all reactive tests should be confirmed with a treponemal test (TP-PA) since more than half may be falsely positive (not confirmed by treponemal tests) in some populations.

4. The VDRL test results must be interpreted according to the stage of syphilis suspected. In early primary syphilis, approximately 30% of the cases will have nonreactive results on initial visit. Nonreactive tests over a 3-month (1 week, 1 month, 3 months) period exclude the diagnosis of primary syphilis. In secondary syphilis, nearly all patients will have a positive VDRL titer greater than 1:16. Patients with atypical lesions and/or VDRL test titers below 1:16 should have a repeat VDRL test and a treponemal test. Approximately 20% of individuals with late latent syphilis will have nonreactive VDRL test results. A treponemal test should be performed in this situation.

5. A rising VDRL test titer in serial bleeding from an infant monthly over a 6 month period is diagnostic of congenital syphilis. By 3 months, passively transferred antibodies should no longer be detected by the VDRL test.

FEES:

The current fee is $15.00 for a VDRL test. Medicaid or private insurance will be billed based on information provided with the requisition. If no billing information is provided, the submitter will be billed.

ADDITIONAL INFORMATION:

1. Plasma, contaminated or grossly hemolysed specimens are unacceptable for testing and will be reported as Unsatisfactory.

2. Chronic false positive VDRL results may occur in cases of autoimmune disease (lupus, SLE, etc.), persons who abuse drugs, leprosy, mononucleosis, malaria, viral pneumoniae, Lyme disease, etc.

3. Transitory false positives occur in 1-2% of pregnancies and up to 6 months after occurrence of various febrile diseases.

4. The use of plasma has not been evaluated for VDRL testing; therefore, plasma cannot be used in this assay.

LIMITATIONS:

This test is intended for screening only, and requires appropriate confirmatory testing. A non-reactive result does not rule out a new syphillis infection.

ALIASES:

VDRL, Nontreponemal assay