Zika virus testing in pregnant women: new guidelines for interpreting serologic results

Introduction

The Centers for Disease Control and Prevention (CDC) recently issued new guidance to medical providers on how to interpret the results of Zika IgM serologic tests. Recent studies have indicated that Zika IgM antibodies may persist for prolonged periods in some infected persons, making it difficult to establish whether recent infection has occurred. These findings have the greatest implications for the management of pregnant women who may have been infected with Zika virus before becoming pregnant, such as those women who reside in or who have frequently traveled to areas of local transmission.

Background & Previous Testing Recommendations

Until the release of these most recent guidelines, prior recommendations for Zika testing in pregnant women stated that all women with possible exposure to Zika virus infection (because of travel to areas of active transmission, or from sexual contact with a partner who traveled) should be evaluated for possible infection, whether or not symptoms of Zika virus infection are present. The choice of testing depends on the interval since the last potential exposure to Zika:

- For pregnant women whose last potential exposure to Zika virus was within the preceding 2 weeks, nucleic acid testing (NAT) of serum and urine for Zika virus, such as rRT-PCR testing, should be done.
- For pregnant women whose last potential exposure occurred between 2-12 weeks ago, testing for Zika IgM antibodies is recommended.
- For those pregnant women who present for care more than 12 weeks after the last potential exposure, testing for Zika IgM antibodies may be considered. If fetal abnormalities are present, NAT of the mother's serum and urine testing for Zika virus may be done; however, negative Zika IgM antibody results or negative NAT results do not rule out Zika infection.

Updated Guidance

Because Zika IgM antibodies have been found to persist in some persons beyond 12 weeks after infection, it is now recognized that the detection of Zika IgM antibodies in a pregnant woman might represent an infection that occurred before conception. Updated recommendations now include the following:

- Recommendations for symptomatic pregnant women remain unchanged.
- Screen all pregnant women for risk of Zika exposure and for any symptoms of Zika. Promptly test pregnant women with NAT testing if they become symptomatic during their pregnancy or if a sexual partner tests positive for Zika virus infection.
- For those asymptomatic pregnant women who reside in or frequently travel to areas with active Zika transmission, or who have sexual partners who test positive for Zika because of symptoms of Zika infection, testing for Zika nucleic acid by NAT should be performed at least once per trimester, in addition to the Zika IgM antibody testing that was previously recommended (unless testing has been previously positive). However, if a symptomatic pregnant woman is IgM positive and NAT negative, and lived in or traveled

to an area with a posted CDC Zika Travel Notice, healthcare providers should recognize that the positive IgM result does not necessarily indicate recent infection.
- Consider NAT testing of amniocentesis specimens from women with potential Zika exposure if amniocentesis is performed for other reasons.
- For non-pregnant women who reside in or frequently travel to areas with active Zika transmission, consider IgM testing to determine baseline Zika virus IgM levels as part of preconception counseling.

The current list of countries with posted Zika Travel Notices can be found here: https://wwwnc.cdc.gov/travel/page/world-map-areas-with-zika.

Sources

https://emergency.cdc.gov/han/han00402.asp

https://www.cdc.gov/mmwr/volumes/65/wr/mm6529e1.htm

Thank you,
Alabama Health Alert Network