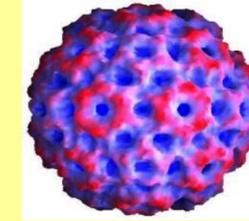


Value of IgG avidity in cytomegalovirus infection diagnosis in pregnant womens



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Objectives

Cytomegalovirus (CMV) is the most common congenital viral infection, with a prevalence of approximately 0.4% of births. Primary maternal infection is diagnosed by documentation of seroconversion through the detection of CMV IgG antibodies in a woman who was previously seronegative. In the absence of seroconversion, the presence of anti-CMV IgG and anti-CMV IgM may represent primary or secondary infection. Cytomegalovirus IgG avidity testing is becoming useful in these cases.

The prenatal diagnosis of CMV has focused on first-trimester screening since the time of maternal CMV infection is an important variable and the rate of transmission from mother to fetus is much higher. To asses the value of IgG avidity in diagnosis of CMV infection in pregnant women.

Methods

5.950 pregnant women in the first trimester of the pregnancy were tested for CMV during the last two-year period (2012-2013) in Kocaeli University, Medical Fakülty. Women were aged between 15 and 47 (mean age 26.5 years).

Samples positive for CMV IgG were tested farther for IgM antibodies. Finally samples positive in both CMV IgG and IgM antibodies were farther tested for CMV Ig G avidity. All tests were performed by chemiluminescent microparticle immunoassay (ARCHITECT, Abbott Laboratories).

Results

Of the 5.950 women tested, 65 (1.1%) had never been infected with CMV, 5769 (96.9%) found to be positive in CMV IgG and negative in IgM. 97 (1.6%) samples found be positive in both CMV I g G and IgM and 19 (0.3%) were in the IgM grayzone.

Of the 97 positive samples, 82 (84.5 %) had a high avidity, 13 (13.5%) had a low avidity. Two sample (2%) was in the grayzone.

Conclusion

Measurement of CMV IgG avidity may help to improve the serodiagnosis of CMV infected women by determining the time infection. The presence of high avidity indicates that primary infection occured well before conception and fetus is most likely protected against debilitating CMV infection.



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