



Seroprevalence of Cytomegalovirus, Toxoplasma gondii and Rubella among pregnant women in Greece



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Introduction and Purpose: Primary infections caused by Cytomegalovirus (CMV), Toxoplasma gondii (T.gondii) and Rubella virus in pregnant women are commonly mild or asymptomatic. However, these infections which are asymptomatic in healthy individuals, may pose a significant medical risk in newborns since they can lead to serious complications. The aim of the present study was to determine the seroprevalence of CMV, T. gondii and rubella infections through antenatal screening among pregnant women during the first trimester of pregnancy.

Methods: In this study, pregnant women who had received antenatal care in the outpatient clinic of our hospital between January 2010 and January 2012 were included. Women were divided into two groups: Greeks and immigrants. The results of the antenatal screening for CMV, T. gondii and rubella during the first trimester of pregnancy were evaluated. Anti-CMV, anti-T. gondii and anti-rubella IgG and IgM antibodies were detected using a chemiluminescent microparticle immunoassay method (Architect i1000 SR, Abbott Diagnostics, Sligo, Ireland).

Results: During the study period, the presence of specific IgG and IgM antibodies for CMV were tested in 712 women (471 Greeks and 241 immigrants), for T. gondii in 810 women (535 Greeks and 275 immigrants) and for rubella in 582 women (385 Greeks and 197 immigrants). Anti-CMV IgG antibodies were found in 57.5 % (271/471) of the Greek women and 77.6 % (187/241) of immigrants, while 3.2 % (15/471) of Greeks and 2.5 % (6/241) of the immigrants tested positive for anti-CMV IgM. Anti-T. gondii IgG antibodies were positive in 10.7 % (57/535) of the Greeks and 26.5 % (73/275) of immigrants while none of the Greek women and only 2 out of 275 (0.7 %) of immigrants tested positive for anti-T. gondii IgM antibodies. Finally, anti-rubella IgG antibodies were detected in 83.4 % (321/385) of Greek women and 86.8 % (171/197) of immigrants, while anti-rubella IgM antibodies were positive in the same percentage, 1 % (4/385) of Greeks and 1 % (2/197) in immigrants.

Conclusions: Seropositivity to CMV and T. gondii was higher in immigrants compared to Greek women. Furthermore, approximately 15 % of the population remains susceptible to rubella infection despite vaccination. In order to prevent congenital infections, antenatal screening should be provided and pregnant women should be educated about preventive measures and strict hygiene practices. Early diagnosis and appropriate intervention will aid in the proper management of these infections.