

POTENTIAL IMPACT OF CYTOMEGALOVIRUSES CMV, IGG, IGM, TOXOPLASMOSIS TXM AND TXG AS POTENTIAL CAUSES OF STERILITY AND ABORTION IN PREGNANT WOMEN

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Abstract

Abortion can be attributed to a certain number of factors affecting the human reproductive system. Maternal and genetic abnormality, immunological dysfunction and endocrine, infectious agents, external pollutants, psychogenic factors and endometriosis are the most common factors. Generally, various infections affecting the mother can lead to bacteremia and infection with viruses that causes abortion. The most frequent infectious agents with a high risk of causing abortion include the TORCH complex (Toxoplasma gondii, Rubella virus, Cytomegalovirus, Herpes simplex virus) and other agents such as Cocksackie virus, Ureaplasma urealyticum, Mycoplasma hominis, Chlamydia trachomatis, Treponema pallidum, Niesseria gonorrhoeae, HIV and others. All of these agents have a widespread environmental disruption and their effect on the immune response during pregnancy leading to apoptosis that is observed during the fetal abortion process.

This research aims to curb the effect of infections during pregnancy, the infections that lead to spontaneous abortion. This research also contains data on the number of abortions in Tetovo and the vicinity, mainly data for 2012 to June 2017. This research includes data on patients in different months of pregnancy and with a positive history of infections mainly with Toxoplasma or Citomegalovituse. The samples taken from these patients were analyzed for the presence of serum immunoglobulin using ELISA for immunoglobulin and also microbiological tests - antibiogram tests for the presence of infectious ages. Cytomegalovirus and toxoplasma infections may lead to congenital abnormalities in children, especially since it has been infected in the first trimester of pregnancy.

While it comes to infection during pregnancy, 40% of the cases pass through the placenta and infect the fetus that may result in the development of cytomegalovirus syndrome and congenital toxoplasmosis.

Key words: Cytomegaloviruses, IgG, IgM, toxoplasmosis, pregnant women, abortions.

Introduction

Healthy pregnant women in particular are not at risk for any CMV infection. Pregnant women who are infected with CMV rarely have symptoms, but even though the infection is not re-infected, the baby may have been attacked by CMV after its birth. Follow-up during the emerging development of cases suspected of a possible infection has given a score of 30% -50% of the positive cases detected by the Organization for Information Technologies (OTIS). Of those children who are infected only 10-15% show signs of infection at birth with CMV after the primary infection of the mother. CMV born in children in the world is 0.2-2.5%. For a woman who has recurrent CMV infection during pregnancy (that is, this is not a primary infection), the rate of CMV infections is somewhat 1%. Of these, only 1 to 10% of children born with CMV infection will have symptoms at birth, while others 10 to 15% may not show any symptoms but may still have long-term effects such as loss of hearing and difficulty in it learning.

Primary cytomegalovirus (CMV) infection during pregnancy can cause intrauterine infection of the fetus, leading to profound sensory and cognitive defects in the newborn (1,-3). Cytomegalovirus is the most common cause of intrauterine infection, and is a common cause of hearing loss and mental retardation.

Primary infection is defined as CMV infection in a previously seronegative person.

Secondary infection is defined as intermittent excretion of the virus in the presence of host immunity and may be due to either reactivation of an endogenous virus or exposure to a new virus strain from an exogenous source. Cytomegalovirus infection is the most prevalent congenital infection in the world and is the leading infectious cause of mental retardation and deafness. Currently, routine serologic testing of all pregnant women is not recommended, and use of serologic testing should be used only in pregnant women who develop influenza-like illness or following detection of sonographic findings suggestive of CMV infection.

Material and method of work

CMV infections are rarely diagnosed because the virus usually shows little or no symptoms at all. Whatever the case, the people who are exposed to CMV develop antibodies that remain in their body until the end of life. Laboratory blood tests can confirm whether there are CMV antibodies. Although the diagnosis of congenital CMV infection is still complex, important goals have been achieved in recent years, among which are: tests to determine the avidity index of anti-CMV IgG, allowing the diagnosis of a primary CMV infection and innovative and traditional virological tests to detect the virus in amniotic fluid.

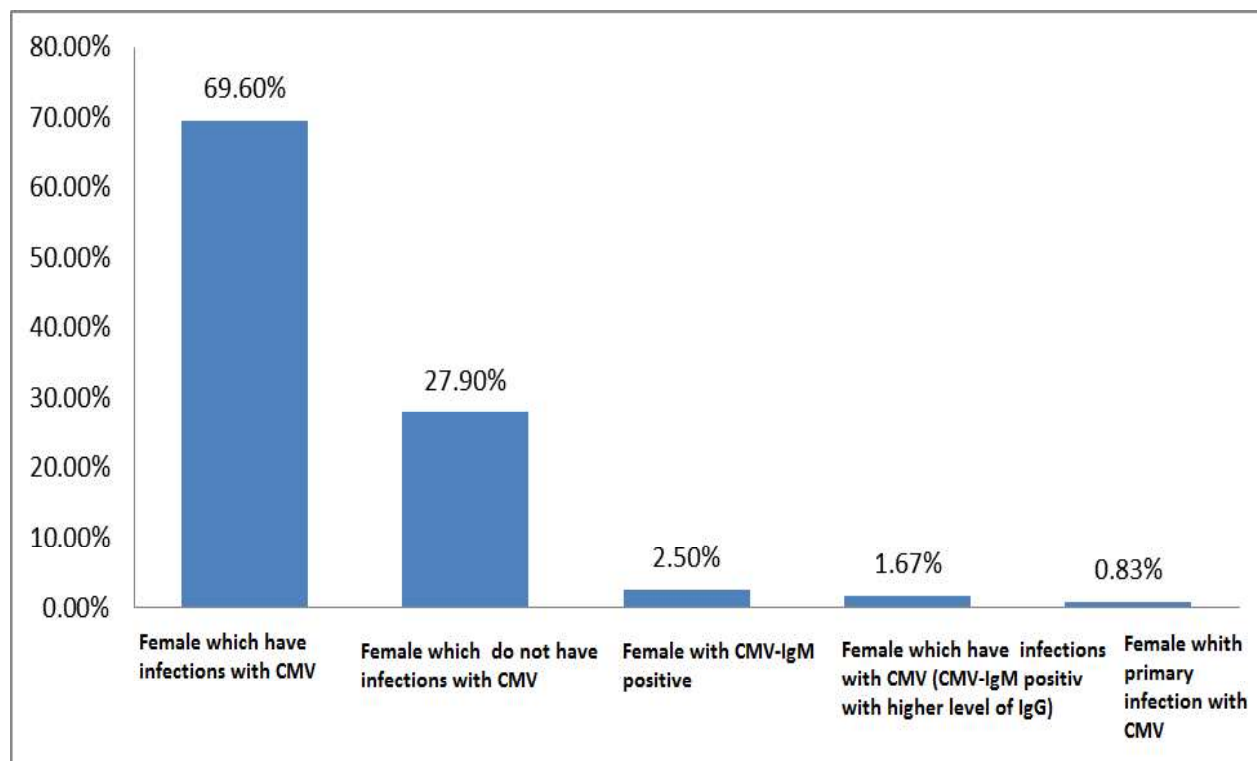
Results

The highest number of women (72.1%) was positive in CMV-IgG during pregnancy. The rate of positive women in CMV-IgM, the primary and recurrent infection was 2.5%, 0.83%, and 1.67% in the ratio. Importantly, the relationship between abortion history ($P = 0.013$) and resident country ($P = 0.017$) with seropositive IgG degree was significant. Two cases with positive CMV-IgM were punctuated with premature birth and birth of infants with small body weight.

Almost 68% of cases with shortened pregnancies and 37% of surveyed women had second pregnancy as in Figure 23. The main age of the investigated case was 28.72 years. The largest number of women surveyed is under 35 years. The average gestation week was 32.43. The main gravitation was 2.07.

The largest proportion of women surveyed were aged from 29 to 35 years, in fact 51%, the youngest was 21 to 28 years old, and their percentage was 32%, while 10% of them the researchers who participated in this research are up to 20 years old and the number of researchers aged 36 years and their percentage is 7%.

Some 66% of the women surveyed and 80% of their spouses were educated less than 12 years. Almost 73% of the women surveyed live in the urban environment.



Graph .1. CMV infection rate.

Two positive women in CMV-IgM with primary infections encountered with premature membrane shedding and premature birth. There were also cases of low birth weight in one of the cases with CMV - IgM positive with recurrent infection. All newborns with positive mothers with CMV-IgM were resigned to a neonatal specialist to assist CMV infection treatment.

Conclusion

During pregnancy the woman is required to practice personal hygiene by practicing hand washing with soap and water.

While a person develops mononucleosis - as a disease, it will need to be tested by CMV infection. You refrain from sharing food with others, not eating from the same dish with someone else or drinking from the same cup with someone else. The maternal physician can test the patient's blood samples for the presence or not of CMV antibodies to determine if there is an infection or not. Breastfeeding (suckling) exceeds the minimum risk of CMV transmission. More than half of pregnant women have a high prevalence of CMV antibodies (ie they have previously undergone). Between 1 and 4% of mothers who are expecting children undergo CMV for the first time during pregnancy, and of these women, one third of them will have infants born with CMV infection. The largest number of infants born to CMV will not have long-term complications, a small part of them may seriously affect it. It is known that infants other than the other respond to CMV.

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