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Cytomegalovirus in pregnancy: a review of epidemiology, semiology and differential treatments

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1 INTRODUCTION

Cytomegalovirus (CMV) is a very common virus that belongs to the Herpesviridae family and, together with Ebstein Barr, is the leading cause of infectious mononucleosis worldwide. CMV invades mainly the salivary glands and is excreted through body fluids such as saliva, blood, urine, semen, and breast milk, so close and direct contact with an infected person is necessary for its transmission. Furthermore, CMV can be present in transplanted organs. This virus has the capacity to remain latent in the organism for long periods. It has a variable incubation period, between 28 and 60 days, and can remain dormant in the host cell after initial infection with later reactivation capability. CMV is the most common infection transmitted from pregnant women to babies during pregnancy. One in every 3 pregnant women passes the infection to her baby. Most babies with congenital CMV have no problems, but some get sick or have long-term health problems. A baby can also be infected after birth if it comes into contact with infected body fluids. Determination of IgG indicates that the patient has had contact with the virus and has an immunological memory. Although the presence of IgM alone cannot guarantee a recent infection, an IgG avidity test is required. The affinity of the antibodies increases over time until high avidity antibodies are obtained. There is no specific treatment for Cytomegalovirus in pregnant women, only the use of antiviral drugs. An alternative therapy has also been proposed for pregnant women with the use of specific anti-CMV immunoglobulin. However, the cost of this treatment is very high and can only be performed in a hospital environment on an inpatient basis.

2 OBJECTIVE

Demonstrate the epidemiological, clinical, diagnostic, and differential treatment aspects of cytomegalovirus disease, promoting how CMV is a differential factor in pregnancy.

3 METHODOLOGY

Retrospective descriptive study by reviewing clinical-surgical cases widely reported in the medical community, obstetric and pediatric literature, and articles on innovations in the area of cytomegalovirus, during the period from January to September 2022.

4 DEVELOPMENT

Of all infected newborns, only 10-15% have symptoms and subsequently develop neurological, auditory, visual, and mental changes in the medium to long term, and these are most evident in early school age. The remaining infected newborns remain asymptomatic. The fetal transmission rate is 36%, 40% and 65% in the first, second and third trimesters, respectively. However, fetal involvement with symptomatic newborns is lower at higher gestational age, being approximately 25% in the first trimester, 5 to 10% in the second trimester, and asymptomatic if infection occurs after 28 weeks. Vertical transmission is also described in 5.2% of patients with primary viral infection occurring 3 to 6 months before conception. The fetus can also be infected via the placenta, during delivery by cervical secretions or maternal blood, or through breastfeeding.

5 CONCLUDING REMARKS

In conclusion, cytomegalovirus is a virus with the ability to remain inactive in an organism for several periods of time and its transmission is through close and direct contact with infected people. It is transmitted vertically during pregnancy and is most frequent during primary infection. The clinical picture is mainly asymptomatic, but it can present flu-like symptoms. The diagnosis is made by specific serologic exams and also with sonographic signs such as: oligodramnios, polydramnios, hydrops, intracranial and intrahepatic calcifications, among others. For the treatment of CMV infection there are some authorized drugs such as ganciclovir, cidofovir and foscarnet. These, in animal models, present toxicity and teratogenic potential, so they are not used during pregnancy. The studies reviewed show the most promising results for the treatment and prophylaxis of fetal CMV infection, specifically with hyperimmune anti-CMV immunoglobulin (anti-CMV IgH), valacyclovir and ganciclovir (GCV).

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