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CLINICAL CASE

Different clinical manifestations in two siblings with cytomegalovirus infection

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KEYWORDS
Cytomegalovirus;
Congenital infection;
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Abstract In immunocompetent patients, human cytomegalovirus (CMV) infections are generally asymptomatic. Infection by this virus takes on particular importance during pregnancy owing to a risk of congenital infection occurring as a result of fetal transmission. In this article, we report the case of two siblings with this infection. The younger sibling had cystic microphthalmia, which was believed to be secondary to prenatal CMV infection. Given her status as an infectious carrier, she infected her older brother, who had signs and symptoms similar to those of infectious mononucleosis. CMV infection has a wide clinical spectrum, and prenatal CMV infection must be considered in patients within the differential diagnosis of eye malformations.

PALABRAS CLAVE
Citomegalovirus;
Infección congénita;
Micro-oftalmia quística;
Valganciclovir

Manifestaciones clínicas diferentes en dos hermanos con infección por citomegalovirus

Resumen En el paciente inmunocompetente las infecciones por el citomegalovirus (CMV) humano generalmente cursan asintomática, la infección por este agente adquiere especial relevancia durante la gestación debido al riesgo infección congénita producto de la transmisión fetal. En este reporte se presentan dos hermanos, el menor con microftalmia quística, la cual se adjudica a la infección prenatal por CMV, y por su estado de portador infecto a su hermano

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mayor, el cual presento un cuadro similar a mononucleosis infecciosa. La infección por CMV presenta un amplio espectro clínico, se debe considerar en pacientes la transmisión prenatal de CMV dentro del diagnóstico diferencial de malformaciones oculares.

Introduction

Human cytomegalovirus (CMV) is an icosahedral virus belonging to the sub-family *Betaherpesvirinae*. Generally, infection with this virus is asymptomatic in immunocompetent subjects.[1–3] Clinical manifestations, if any, are usually similar to those of infectious mononucleosis syndrome.[4–8]

CMV infection takes on particular importance during pregnancy owing to a risk of congenital infection, which generally occurs in the first or second trimester of pregnancy. Although congenital CMV infection is one of the most common infections worldwide, it has been proposed that in-utero transmission is low and only causes clinical manifestations in 1%–2% of infected fetuses, adverse effects may consist of fetal malformations and even fetal death,[7,9,10] eye sequelae attributed to congenital CMV infection are uncommon[7,11] and the clinical spectrum of eye malformations depends on the gestational age at which the infection occurs in the fetus.[12–14] Although the vast majority of infected fetuses will be found to be asymptomatic at the time of birth, they may eventually develop at least one related complication. Therefore, CMV infection currently represents one of the most significant causes of congenital infection worldwide.[3,7,8,10]

The objective of this article is to report the case of two siblings who had different clinical manifestations after being infected by CMV.

Case report 1

A healthy 5-year-old boy. He had clear nasal discharge, a dry cough and a persistent fever of 38.5 °C, regardless of activities, for three days despite being administered antipyretic drugs; subsequently he had petechiae and purpura on the lower limbs (Fig. 1), arthralgia in the knees and ankles, and bilateral conjunctival hyperaemia. A physical examination revealed a pharynx with hyperaemia, grade 4 tonsillar hypertrophy and crypts covered with a whitish exudate, as well as cervical lymphadenopathies in front of and behind the ears that were in excess of 2 cm, non-tender and soft in consistency. The abdomen was palpated: splenic pole, liver at 1.5 cm below the right costal margin, non-tender. Laboratory studies showed 12,000 leukocytes at the expense of 3000 (40%) neutrophils and 24,500 (49%) lymphocytes, hemoglobin 14.3, haematocrit 42.2, platelets 155,000, prothrombin time 13.20, partial thromboplastin time 41.5 and thrombin time 23.1, with no other abnormalities. Anti-CMV immunoglobulins were reported as an IgG level of 46.2, an IgM level of 3.42 (reference 06.0) and a CMV viral load greater than 14,000 copies. Treatment was started with valganciclovir at a dose of 12 mg/kg/day for six weeks, and gradual clinical improvement was observed. Once his treatment had been completed, a new viral load was obtained and found to be negative.

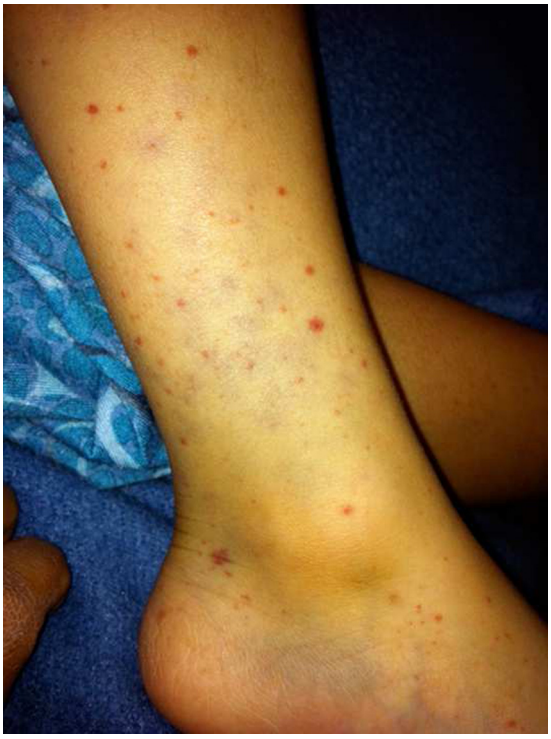

Figure 1 Purpuric–petechial exanthema of the right lower limb.

Case report 2

A 9-month-old girl, the boy's younger sister, with congenital microphthalmia in her right eye. Given her older brother's condition, although she was asymptomatic, she underwent anti-CMV immunoglobulin determinations that reported an IgG level of 56, an IgM level of 6.1 and a CMV viral load of 4500 copies. Like her older brother, the patient received treatment with valganciclovir 12 mg/kg/day for 6 weeks. She was referred to the ophthalmology department, where it was decided to perform an eye excision. The final histopathology report for the excision was cystic microphthalmia.

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