analesdepediatría

www.analesdepediatria.org

SPANISH ASSOCIATION OF PAEDIATRICS

The Spanish Society of Paediatric Infectious Diseases guidelines on the prevention, diagnosis and treatment of neonatal herpes simplex infections☆

Working Group on Neonatal Infection by Herpes Simplex Virus of the Sociedad Española de Infectología Pediátrica◊

Received 24 December 2017; accepted 3 January 2018
Available online 7 June 2018

KEYWORDS
Neonatal infection;
Herpes simplex virus;
Mother-to-child transmission prevention

Abstract Neonatal herpes simplex virus infections are rare, but are associated with significant morbidity and mortality. Most newborns acquire herpes simplex virus infection in the peripartum period. For peripartum transmission to occur, women must be shedding the virus in their genital tracts symptomatically or asymptomatically around the time of delivery. There are evidence-based interventions in pregnancy to prevent the transmission to the newborn. Caesarean section should be performed in the presence of herpetic lesions, and antiviral prophylaxis in the last weeks of pregnancy is recommended to suppress genital tract herpes simplex virus at the time of delivery. The diagnosis and early treatment of neonatal herpes simplex virus infections require a high index of suspicion, especially in the absence of skin lesions. It is recommended to rule out herpes simplex virus infections in those newborns with mucocutaneous lesions, central nervous system involvement, or septic appearance. The prognosis of newborns with skin, eye, and/or mouth disease in the high-dose acyclovir era is very good. Antiviral treatment not only improves mortality rates in disseminated and central nervous system disease, but also improves the rates of long-term neurodevelopmental impairment in the cases of disseminated disease. Interestingly, a 6-month suppressive course of oral acyclovir following the acute infection has improved the neurodevelopmental prognosis in patients with CNS involvement.

☆ Please cite this article as: Grupo de Trabajo de Infección Neonatal por virus herpes simplex de la Sociedad Española de Infectología Pediátrica. Guía de la Sociedad Española de Infectología Pediátrica sobre prevención, diagnóstico y tratamiento de la infección neonatal por virus herpes simplex. An Pediatr (Barc). 2018;89:64.e1-64.e10.

* Corresponding author.

PALABRAS CLAVE
Infección neonatal;
Virus herpes simplex;
Prevención de la transmisión maternoinfantil

Guía de la Sociedad Española de Infectología Pediátrica sobre prevención, diagnóstico y tratamiento de la infección neonatal por virus herpes simplex

Resumen La infección herpética neonatal es una entidad muy poco frecuente pero que se asocia a una alta morbimortalidad. La mayor parte de los neonatos afectos adquieren la infección por virus herpes simplex en el periodo periparto. Para que ocurra esta transmisión es necesaria la excreción viral genital, con o sin síntomas, alrededor del momento del parto. Existen intervenciones basadas en la evidencia para prevenir la transmisión del virus herpes simplex al recién nacido. La realización de una cesárea en presencia de lesiones herpéticas, y la disminución de la excreción viral administrando en las últimas semanas del embarazo tratamiento antiviral a gestantes con herpes genital activo, son las mejores medidas preventivas de las que se dispone. El diagnóstico y tratamiento precoz del herpes neonatal requiere de un alto índice de sospecha, sobre todo en ausencia de lesiones cutáneas. Se recomienda descartar la infección por herpes neonatal en aquellos recién nacidos con lesiones cutaneomucosas, afectación del sistema nervioso central o cuadro séptico de origen no aclarado. El pronóstico de los neonatos con enfermedad cutánea en la era del aciclovir a dosis altas es excelente. El tratamiento antiviral disminuye la mortalidad de las formas diseminadas y con afectación exclusiva del sistema nervioso central, pero también mejora el pronóstico neurológico en los casos de enfermedad diseminada. De forma notable, la introducción del tratamiento supresor con aciclovir oral durante los meses siguientes a la infección aguda ha mejorado el pronóstico neurológico en los pacientes con afectación del sistema nervioso central.

Introduction

Infection by herpes simplex virus type 1 (HSV-1) and type 2 (HSV-2) is highly prevalent worldwide and encompasses a broad range of pathology. Up to 67% of the global population is infected by one of these two viruses.[1]

The first episode of genital infection is labelled *primary genital herpes (GH)* and may be caused by HSV-1 or HSV-2. When an additional episode is caused by the other type, it is referred to as *non-primary first episode GH*. New episodes by the same type of the virus are known as *recurrent GH*.

These viruses may be vertically transmitted to the newborn. Neonatal herpes infection (neonatal herpes [NH]) is rare, but it must be diagnosed correctly and treated at an early stage. In recent years, there have been advances in the diagnosis and treatment of this disease, so this document provides and updated guideline for its multidisciplinary management.

Epidemiology

Genital herpes

The type involved most frequently in GH worldwide is HSV-2. The prevalence of HSV-1 is increasing in many countries, such as the United States, where it is now the most frequent cause of new cases of GH.[2]

In Spain, the incidence of genital infections by HSV has increased in recent years.[3] Type 2 has been historically the type isolated most frequently from genital samples,[4] a trend that continues today.[3,5] The seroprevalence of HSV-2 infection in adults is 5–10%.[3,5]

The risk factors for GH include: female sex, low socioeconomic status, genital coinfection, years of sexual activity and large number of sexual partners. Based on data from the medical literature of the United States, the overall risk of having a first episode of GH during pregnancy is 4%.[6] Also, of all pregnant women with a previous history of symptomatic GH by HSV-2, 75% have at least one episode of recurrent GH during pregnancy.[7] The risk of recurrence is lower in women with GH caused by HSV-1.

The identification of NH is frequently challenging. In up to 80% of cases of mother-to-child vertical transmission, there is no previous history of GH,[6] although genital viral shedding around the time of delivery, whether symptomatic or asymptomatic, is necessary for transmission. Between 0.2% and 0.39% of pregnant women shed HSV in the genital region during the peripartum period, independently of their personal history of GH, and this prevalence increases to 0.77–1.4% in women with a history of recurrent GH.[7] Viral shedding usually lasts 2 or 3 weeks after a primary GH episode, although it can persist for up to 2 or 3 months, is shorter in non-primary GH episodes, and intermittent in recurrent episodes.

Neonatal herpes

Neonatal herpes is rare in developed countries, with an incidence that ranges between 1.65 and 3.2 cases per 100 000 live births in European countries like the Netherlands or Switzerland.[7] In other countries there has been a recent increase in incidence, for instance, the incidence in the United Kingdom recently reached 17.5 cases per 100 000 births.[8] For reasons that remain unclear, the incidence of NH has historically been greater in the United States