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Congenital Toxoplasmosis and Congenital Cytomegalovirus Infection

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Congenital Toxoplasmosis and Congenital Cytomegalovirus Infection

Jorge M. Quiñonez, MD

INTRODUCTION

Although congenital infections traditionally have been grouped together under the acronym TORCH (Toxoplasmosis, “Other,” Rubella, Cytomegalovirus [CMV], and Herpes simplex virus), this term promotes the idea that congenital infections are indistinguishable from each other. Although they share common clinical features, these infections have distinctive features that generally can be used to distinguish one infection from another on clinical grounds. It is of utmost importance for pediatricians to be aware of the prominent features of each congenital infection rather than considering them as a group.¹

It is still common in pediatric nurseries and wards in the United States to find the request “TORCH titers” written on the chart of a patient in whom a congenital infection is under consideration. This term is erroneous, as there are specific serologic and diagnostic tests for each of these congenital infections. The appropriate tests should be requested based on clinical suspicion for which infectious agent is most likely involved.

It is also important to remember that most congenital infections arise from primary maternal infections that are subclinical or have no specific symptoms, and therefore the maternal history is not helpful in identifying newborns at risk. This makes prenatal care of extreme importance, especially awareness of maternal immunologic status against the most common pathogens implicated in congenital infections.

This manual will discuss two of the most important and common infections acquired in utero by newborns—toxoplasmosis and CMV. Although these infections share similar features, there are striking differences that in most cases allow differentiation from one another. CMV is the most common congenital infection seen in the United States; therefore, pediatricians must be familiar with its clinical presentation, diagnosis, and sequelae. Although toxoplasmosis is less common in the United States than other parts of the world, it presents a significant clinical challenge when encountered. In both of these infections,

the majority of infected patients are asymptomatic at birth, and failure to diagnose the condition increases the potential of developing sequelae later in childhood or adolescence that can carry significant challenges to the patient’s quality of life.

CONGENITAL TOXOPLASMOSIS

CASE 1 PRESENTATION

A 2-hour-old male newborn, product of a complicated vaginal delivery at 39 weeks gestational age (by dates), is admitted to the routine care nursery. He was born to a 23-year-old mother with her first pregnancy. The mother had only 1 prenatal care visit but otherwise reported an uneventful pregnancy. The infant is examined initially by a nurse, who records the patient’s head circumference as above the 95th percentile for his age. In addition, she observes a petechial rash. She does not notify a physician immediately of these findings. A physician is called to evaluate the patient when the same nurse finds him having a generalized tonic-clonic seizure. The seizure lasts approximately 3 minutes and stops without intervention. The physical examination at that point shows a patient with diffuse petechiae and moderate jaundice, a palpable spleen, and a palpable liver approximately 3 cm below the right costal margin.

- What is the initial diagnostic plan for this newborn?
- Are there any imaging studies needed?

DIFFERENTIAL DIAGNOSIS

This patient exhibits findings (hepatosplenomegaly, petechial rash) that may be seen with several congenital infections. When symptomatic, however, each of the infections usually includes unique clinical features as well. The presence of macrocephaly in a newborn who is adequately sized for gestational age, as in this case, is highly suggestive of *Toxoplasma gondii* congenital infection. Symptomatic congenital CMV infection is perhaps the clinical entity that most closely resembles congenital