
Congenital cytomegalovirus infection – Pre-study survey

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One of the many goals of the CPSP is to raise awareness and educate paediatricians about important conditions that may present in their patient populations. The program aims to support paediatricians in their diagnostic efforts so they will be able to both recognize and confirm the diagnosis of unusual, high-impact conditions. Education about diagnostic methods is particularly important when recommended diagnostic techniques have changed with the advent of new technology or new knowledge about the disease in question.

As the CPSP planned to embark on a new surveillance study of congenital cytomegalovirus (CMV) infection, one of the investigators' concerns was that paediatricians who see these cases infrequently may not be certain of the most appropriate diagnostic tests to perform. As the diagnosis is time sensitive, requiring isolation of the virus from the newborn in the first three weeks of life, it is critically important that front-line caregivers be aware of the most sensitive diagnostic method. Thus, an important goal of the study is to raise awareness of the most appropriate method for making the diagnosis of congenital CMV infection. Before the study began, a survey of current practice was undertaken as an educational and assessment tool.

The 2,472 participants were sent a one-time, single-question survey in January 2005, before the congenital CMV study began in March. Thirty-two percent (32%, n=786) of the participants responded and the results were encouraging. When asked to choose their preferred diagnostic test for a newborn with congenital CMV infection, the majority (69%) correctly chose a urine specimen or a throat swab for CMV culture or polymerase chain reaction (PCR). However, another 25% indicated serology as their preferred diagnostic test.

The survey results were published as a CPSP Highlight in the August 2005 issue of Paediatrics & Child Health. The publication emphasized two important points:

- 1) The isolation of the virus or detection of viral DNA using PCR is a very sensitive and specific method of diagnosis, because there are massive quantities of CMV being excreted in the urine and saliva. CMV serology in the newborn is a poor way of identifying congenital CMV infection.
- 2) Although the presence of IgM is very specific for fetal and newborn infection, it is not very sensitive. Because the overwhelming infection occurs early on in gestation, the fetus does not mount a significant immune response and, in fact, develops immune tolerance for the virus.

Participants were encouraged to torch the serological TORCH screen, as detection of the virus is always best.

A follow-up survey is planned at the completion of the study to determine the educational benefit of CPSP participation for paediatricians.

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