CMV During Pregnancy and Hearing Loss: A Perspective from the Sound Booth

By Heidi S. Neuburger, MS, MA, Indiana University Audiologist

It was a busy day in the audiology clinic, but my 10AM patient made me pause. I reviewed the medical records for this adorable 2 1/2 year old. His mother, a daycare provider, had contracted cytomegalovirus (CMV) early in her pregnancy. Unfortunately, there is nothing unusual about this. You can get CMV by contact with bodily fluids from a person who carries the virus. If mommy is caring for toddlers, either at home or in her place of work, she is at very high risk for coming into contact with diapers, runny noses, table tops and toys that may be infected with the virus. As many as 38% of toddlers who go to day care may have CMV, and they can pass it to other children, their families, or care givers.

The symptoms of CMV can be mild, or there may not even be any at all. Symptoms can include a little sore throat, fever, swollen glands and fatigue for a few days. But when mommy catches CMV during a pregnancy, there can be serious consequences to the baby in the womb. Congenital CMV infection occurs in 1 out every 100 to 150 babies that are born to mothers with CMV, although only about 1 in 5 of these kids will have long term health problems. (CDC.org)

In this case, the medical record showed that my patient did indeed test positive for the CMV virus at birth. The virus crossed the placenta, from mother to the developing fetus, causing the infection. But to the relief of all, in spite of a positive diagnosis of the presence of the virus in the baby at birth, there did not appear to be symptoms other than a little jaundice, which returned to normal within a couple of weeks. The family breathed a sigh of relief. Yet – here they were. The toddler (now 32 months old) was not talking at all. In fact, he was lagging farther and farther behind his peers developmentally.

After 40 minutes in the sound booth with this little boy I was able to confirm that he had a severe hearing loss in both ears. The fact that he had passed his newborn hearing screen suggested that the hearing loss had been getting worse over time. And a hearing loss of this degree surely had something to do with his delayed language development, and other possible developmental delays.

What can we learn from this challenging outcome? What could have been done?
For October's National Audiology Awareness and Protect Your Hearing Month, I thought it was particularly timely to focus on the lesson learned from this little boy's situation. More often than not, when a baby is exposed to CMV in the womb, especially early in the pregnancy, there will not be birth defects. In fact most babies will be born without symptoms or obvious defects. In one study (Naing et al, 2015) 18% of children born positive for CMV were without symptoms at birth, but later had a delayed onset of hearing loss. I would have liked to have seen a heightened level of suspicion that hearing loss may emerge with this child, because of his congenital CMV diagnosis. It may not be possible to stop the onset or worsening of this hearing loss, but repeat testing of his hearing every 4 to 6 months would have gone a long way toward early identification of the hearing loss, and earlier intervention with hearing aids and speech/language therapy.

Hearing loss is just one of the potential effects of CMV infection during pregnancy. To learn more about the broader range of effects, how to test for CMV, and how you can prevent infection, visit the CMV and Pregnancy fact sheet: https://mothertobaby.org/fact-sheets/cytomegalovirus-cmv-pregnancy/. And remember: a MotherToBaby expert is just an email, text message, live chat, or phone call away!

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