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CMV-related hearing loss: prevent, alleviate, or cure it while still in the womb!

Congenital cytomegalovirus infection (cCMV) is the main infectious cause of congenital and early childhood hearing loss after genetic causes. Although no figures are available for Germany, it can be estimated from countries with similar infection rates and population structures that between 1,500 and 4,500 newborns are born with cCMV infection each year, between 5 and 10% of whom have hearing loss. cCMV infection thus accounts for a significant proportion of early childhood hearing loss.

The new S2k medical guideline on cCMV infection now brings real progress in this area. It shows how cCMV infection can be prevented, detected early, and—if necessary—treated. Advances in prevention, prenatal diagnosis, and treatment of the infection have contributed significantly to the changes in recent years. Primary infections (PI), which account for a large proportion of the severe disease burden of the infection in the first trimester of pregnancy, can now be detected at an early stage. Antiviral therapy to prevent transmission or infection of the fetus is highly effective. This approach is now to be made available to approximately 50–60% of all pregnant women in Germany if a primary infection is detected. In the case of non-primary infections (NPI), on the other hand, the focus is on treating the newborn. Although severe cases are rather the exception here, sensorineural hearing loss is no less common.

Universal newborn hearing screening is crucial for detecting half of all cases of sensorineural hearing loss that occur at birth: if hearing loss is suspected, this is one of the most important symptoms for which cCMV testing should be performed, using PCR detection of CMV DNA in urine or saliva. If this is already done in the maternity or pediatric clinic, further diagnostics should be carried out immediately and, if necessary, therapy should be initiated within the first four weeks of life. Pediatric audiological confirmation diagnostics are of great importance here: newborns with cCMV infection should be prioritized. If unilateral or bilateral sensorineural hearing loss is confirmed, antiviral therapy of the newborn is indicated, usually with valganciclovir. The recommendations in the guideline for the treatment of newborns are based on numerous highly informative studies: in around half of the children, they were successful in the form of improved hearing or stabilization by halting or preventing progression. In addition to the well-established, earliest possible provision of hearing aids, antiviral therapy thus opens up a fundamentally new treatment for congenital hearing loss.

Long-term pediatric audiological follow-up care is necessary to ensure adequate provision of hearing aids and to detect progression or late-onset hearing loss at an early stage.

The presentation refers to the recently published S2k guideline “Prevention, Diagnosis, and Treatment of CMV Infection in Pregnant Women and Congenital CMV Infection in Newborns and Children” (https://register.awmf.org/de/leitlinien/detail/093-003).