



Early diagnosis of maternal cytomegalovirus for improved management and reduced risk of fetal transmission and complications

Cytomegalovirus (CMV) is a common virus that can infect people of all ages, including pregnant women. Babies born with a cytomegalovirus infection, or congenital cytomegalovirus (cCMV), can be at higher risk for serious complications. Accordingly, cCMV is the leading cause of non-genetic hearing loss and neurodevelopmental disabilities in children. The highest risk of fetal infection is among mothers experiencing a primary infection (new infection) during the first and second trimesters of pregnancy, however, transmission can occur if a pre-existing infection is reactivated during pregnancy.

Diagnosis of cCMV can be complex, as newborn presentation can range in severity. It is estimated that 90% of babies born with cCMV will be asymptomatic and suffer no health impairments or visible delays. However, some asymptomatic newborns may have complications, including hearing loss, mild vision loss and/or communication delays. Lastly, babies born with symptoms of cCMV are at higher risk for severe and potentially devastating complication, including vision and hearing loss, microcephaly, enlarged spleen and liver, and in some cases, death.

While currently no standard exists for universal CMV screening during pregnancy, and in many countries, routine CMV screening during pregnancy is not recommended, it is likely that CMV prevalence and impact are underestimated due to lack of newborn screening. Thus, an integrated care team at National Reference Center for Herpesvirus, University Hospital Center, in Limoges, France sought to implement a universal CMV screening program for pregnant mothers to improve early diagnosis and treatment.

Since inception of their Universal CMV screening program in 2020, the number of pregnant women identified with a CMV infection has increased by 16 (from 10 CMV positive women to 26), representing a 2.6-fold increase in earlier identification. This has corresponded to a 23% reduction (from 50% to 27%) in cCMV transmission from CMV-positive pregnant mothers to their babies, including full mitigation of 11 transmissions attributable to early identification and treatment.

For their efforts and outcomes, this integrated clinical care team was awarded the UNIVANTS of Healthcare Excellence award recognition of Distinction. Congratulations to Sébastien Hantz, *Professor, Bacteriology-Virology-Hygiene*, Perrine Coste-Mazeau, *Doctor, Obstetric department* Sophie Alain, *NRC for Herpesvirus*, Elodie Ribot, *NRC for Herpesvirus*, Melissa Mayeras, *NRC for Herpesvirus*.

For more information on this best practice and others, please visit www.univantsHCE.com.



From L to R: Perrine Coste-Mazeau, Sébastien Hantz and Sophie Alain