

## **Congenital CMV infection: screening to be organized in France!<sup>1</sup>**

**Press release from the French Academy of Medicine**

**October 8, 2024**

Congenital cytomegalovirus (cCMV) infection is a fetal infection that can cause serious after-effects for the unborn child. Screening during pregnancy is currently the subject of numerous debates. The most vulnerable women are those who have never been infected with cytomegalovirus (CMV) (50% of the population of women aged 15 to 45), and will have a primary infection, particularly those who have already had a child: most often under 3 years, attending a community, and through contact with whom 10% of these mothers are likely to become infected for the first time just before or at the beginning of their new pregnancy. When infected during this period, the rate of transmission of the infection to the embryo is 30%.

Around four out of 1,000 newborns in France (some 2,900 per year) are therefore infected with CMV during their intra-uterine life, and of these, around 18% (about 500 per year) will develop medium- and long-term sequelae: hearing loss, balance disorders, motor deficits, mental retardation, constituting the leading cause of congenital neurosensory handicaps in our country, apart from genetic anomalies (1). CMV-related deafness affects 1/2,000 children in the population; 90% of them have vestibular damage, and 50% develop worsening deafness over time (2). These impairments, of varying degrees, can potentially lead to lifelong disabilities, all too often with serious consequences for the family; they induce significant costs for society, which has a duty to cover them.

However, early maternal serological screening can diagnose a first-time CMV infection in previously seronegative mothers. If positive, testing for CMV in amniotic fluid can lead to a diagnosis of fetal infection, and prompt initiation of an antiviral treatment of the mother to reduce fetal viral load and prevent CMV damage to fetal tissues. Without this early maternal screening, the diagnosis of fetal CMV infection is made late during pregnancy, on the basis of suggestive ultrasound signs (microcephaly, brain lesions) or symptoms at birth, the delay in diagnosis having given way to replication of the virus inducing fetal damage.

Recent data demonstrate the effectiveness of early treatment with VALACICLOVIR® in preventing fetal infection, and, as a result, reducing the risk of severe disabling forms of the disease (3). This treatment reduces the risk of viral transmission by 70% and offers an excellent benefit/risk ratio for both mother and fetus. The results of this randomized, double-blind, placebo-controlled therapeutic trial led a European group to support systematic screening for

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<sup>1</sup> Press release from the Academy's Rapid Communication Platform.

CMV in early pregnancy by presenting a panel of arguments and recommendations (4). Italy has recently implemented these recommendations (5).

Early maternal serological screening can diagnose a first-time CMV infection in previously seronegative mothers. If positive, CMV in the amniotic fluid can be used to diagnose fetal infection and prompt antiviral treatment of the mother to reduce the fetal viral load and prevent the CMV from affecting fetal tissue. Without this early maternal screening, the diagnosis of fetal CMV infection is made late in pregnancy, on the presence of suggestive ultrasound signs (microcephaly, brain damage) or symptoms at birth, the delay in diagnosis having given way to replication of the virus inducing fetal damage.

In France, such screening could be organized, since the commercial serological techniques available and used routinely are standardized, automated and accessible throughout the country. Networks of biologists and gynecologists-obstetricians, as well as the CMV reference centers, are able to organize themselves to expand and support the implementation of CMV screening, already partly in place in some regions, including Ile de France.

A recent opinion (6) from the High Council of Public Health, ruling out systematic early detection of CMV infection in early pregnancy, fails to include, in particular, in the analysis of the costs incurred by the Society, the provision of lifelong care of disabled children.

According to the legal provision (7) whereby “the State may set up a program to systematically screen pregnant women for cytomegalovirus (CMV), after advice of the “French National Authority for Health (HAS)”, the French Ministry of Health has just asked the HAS to give its opinion.

**Faced with the observation of serious congenital CMV infections, that can be easily prevented with effective antiviral treatment well tolerated by both mother and fetus, the French Academy of Medicine renews its recommendation (8) that:**

- this public health problem be taken into account in all its dimensions, including ethical ones, and that, in particular, all the costs incurred by lifelong disabilities, borne by families and Society, be included in the analysis of the benefit/risk ratio of screening;
- CMV screening resources be put in place, including anti-CMV IgG and IgM testing in the first trimester and follow-up of seronegative women, based on a decision-making algorithm as recommended by the French National College of Gynecologists and Obstetricians;
- cohort studies to monitor the impact of the measure be developed, in particular based on the national health data system.

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