Effectiveness and safety of prenatal valacyclovir for congenital cytomegalovirus infection

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Objective. The main aim was to investigate the safety and effectiveness of prenatal valacyclovir therapy in pregnancies with maternal or congenital CMV infection.

Materials and Methods. The inclusion criteria were pregnancies with confirmed maternal CMV infection. The primary outcome was the incidence of congenital CMV infection. The secondary outcomes were symptomatic and asymptomatic infection, perinatal death, termination of pregnancy, anomalies detected at follow-up ultrasound, fetal MRI imaging or at birth, severe and mild to moderate symptoms due to congenital CMV infection, neurologic, visual, hearing symptoms and adverse events related to valacyclovir.

Results. When stratifying the analysis according to the gestational age at maternal infection, the risk of vertical transmission was significantly lower in pregnancies receiving valaciclovir following first trimester infection (pooled OR 0.30, 95%CI 0.16-0.59, I2 = 0%, p = 0.001).

Pregnancies treated with valaciclovir therapy had an increased likelihood of asymptomatic congenital CMV infection, when compared to those not receiving valacyclovir (pooled OR 2.98, 95%CI 1.18-7.55, I2 = 0%, p = 0.021), while there was no significant difference between the two groups in the risk of perinatal death (p = 0.923), termination of pregnancy (p = 0.089), anomalies detected at follow-up imaging assessment during pregnancy or at birth (p = 0.934) and symptoms due to CMV infection in the newborn.

Conclusions. Prenatal valaciclovir administration in pregnancies with maternal CMV infection reduces the risk of congenital CMV infection. Further evidence is needed to elucidate whether valaciclovir can affect the course of the infection in the fetus and the risk of adverse perinatal outcome.