RISK FACTORS ASSOCIATED WITH SEVERE NEUTROPENIA IN CHILDREN WITH CONGENITAL CYTOMEGALOVIRUS INFECTION TREATED WITH GANCICLOVIR/VALGANCICLOVIR

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Introduction: Neutropenia is a common adverse event associated with ganciclovir and valganciclovir treatment in children with congenital cytomegalovirus infection (cCMV). Severe neutropenia (below 500 cells/mm3) often leads to treatment discontinuation, as it puts the patient at risk of invasive bacterial infection.

Methods: A multicenter study was performed within the European cCMVnet registry, including patients from Spain, Greece, Italy and Portugal. Severe neutropenia during antiviral treatment was defined as an absolute neutrophil count below 500 cells/mm3. Management with antiviral treatment was according to national and international guidelines

Results: 147 children (86 (58.5%) females) with cCMV who received antivirals were included. 21 (14.3%) of them presented with severe neutropenia during treatment with ganciclovir and/or valganciclovir (Table 1). Severe neutropenia was associated with female sex (p=0.05), preterm birth (p=0.009) and birthweight <1500 grs (p=0.001). Notably, 57% of children with very low birthweight developed severe neutropenia. Severe neutropenia was also associated with length of ganciclovir treatment (p=0.041) but not with the duration of valganciclovir. Severe neutropenia was not associated gestational age at maternal CMV infection, abnormalities in cranial ultrasonography, chorioretinitis, and neutrophil count at birth.

Conclusions: In children with cCMV the development of severe neutropenia during ganciclovir/valganciclovir treatment was associated with female sex and prematurity. Neutropenia was also associated with days of treatment with ganciclovir but not with valganciclovir. Baseline neutrophil count was not associated with treatment-induced neutropenia.