

NEONATAL TREATMENT OF CONGENITAL CYTOMEGALOVIRUS INFECTION IN FRANCE

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Introduction

Cytomegalovirus (CMV) infection is the world's leading congenital viral infection, causing a variety of disabilities ranging from deafness to severe psychomotor retardation or death.

Currently, there is no codified care for infected newborns in France. Proposals from consensus conferences and studies published in the literature are used as a support for health professionals.

These writings advocate therapeutic abstention when no symptoms are observed or when they are mild. The initiation of antiviral treatment is possible when the child already presents moderate to severe

symptoms that may progress and lead to disabilities. In the latter case, management will aim to stabilize clinical signs and prevent the appearance of signs at a distance from birth (such as deafness, which occurs on average at 27 months).

We thus aimed to investigate the current status of care for CMV-infected newborns in France.

Materials and Methods

Since 2016, an online reporting system for congenital CMV infections has been in place. This computer declaration is made via the Voozanoo platform of EPICONCEPT. This multicenter study throughout the country (15 centers in metropolitan France and overseas) was carried out retrospectively from the anonymous declarative National Center data base for the 2016-2019 period.

Definition of cases

adapted from classification by Rawlinson et al 2017:

Asymptomatic: Absence of clinical signs.

- Without any sign of any kind
- Isolated biological sign(s): polyglobulia, hyperbilirubinemia, anemia, metabolic acidosis, monocytosis, neutropenia
- Isolated growth retardation (IUGR) and/or prematurity (without other clinical signs)

Mild: Presence of one or two of the following clinical signs: petechiae, hepatomegaly, hepatitis or biological signs (thrombocytopenia, increased transaminases), discrete deafness (>21dB).

Moderate: Mild symptoms + 1 or more of the following clinical signs: pneumopathy, enterocolitis, fever.

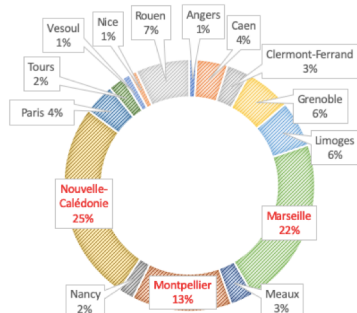
Severe:

- Unilateral deafness (<21dB), chorioretinitis, splenomegaly.
- Neurological signs: bilateral deafness, tone disorder, hypotonia, white matter abnormalities, microcephaly, ventriculomegaly...

Results

Study population :

Geographical distribution



Treatment status

41 were treated (18/77 or 23% asymptomatic and 23/24 symptomatic) with either ganciclovir or valganciclovir.

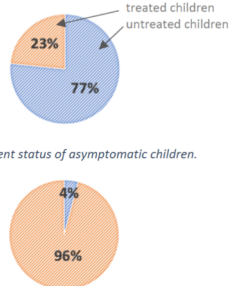


Figure 4: Treatment status of asymptomatic children.

Figure 5: Treatment status of symptomatic children.

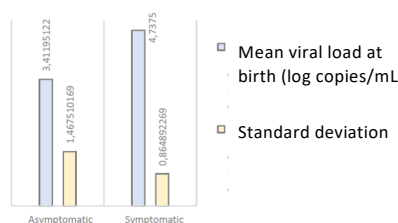
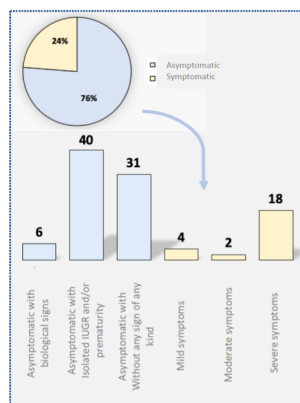
Concordance between French management and the consensus (treatment of moderate to severe symptoms) proposed in 2017 in the Lancet.

Calculation of the observed general agreement: (Yellow boxes = concordant)

		Prise en charge observée			
Prise en charge théorique selon le consensus	GENERAL	Asymptomatiques et symptomatiques légers non traités	Asymptomatiques et symptomatiques légers traités	Symptomatiques modérées et sévères non traités	Symptomatiques modérées et sévères traités
	Asymptomatiques et symptomatiques légers non traités	47	16	0	0
	Symptomatiques modérées et sévères traités	0	0	1	16

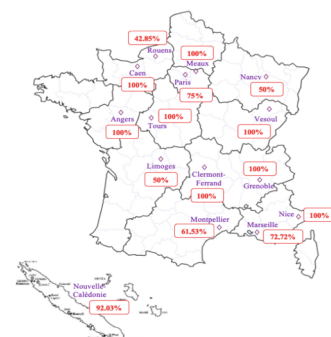
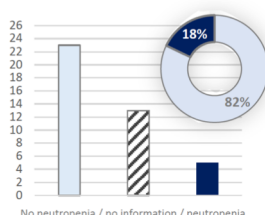
$$\text{Concordance observed} = \frac{47 + 16}{80} = 78,75\%$$

101 newborns, 24 symptomatic, 77 asymptomatic



	Number of newborns
Symptomatic Children	24
Untreated children	1
Mild symptoms	1
Treated children	23
Mild symptoms	3
Moderate symptoms	2
Severe symptoms	18
Total	24

Adverse events: 28/41 were documented for the occurrence of adverse reactions, 18% (5/28) of them developed neutropenia, 4 of which were asymptomatic.



The overall observed agreement is 79.20% (from 42% to 100% depending on the centers). We noted a French deviation from the recommendations made by this consensus, because 22% of asymptomatic children (13/58) were treated in the absence of clinical signs. And no difference ($p=0,29$) between viral loads of treated and untreated asymptomatic children

Conclusion

Well-coded recommendations for the management of congenital CMV infections in France appear necessary. The children's follow-up data will make it possible to determine the value of the treatment and the prognostic value of the viral load at birth.