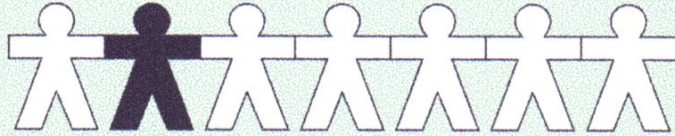




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Portuguese registry on congenital CMV infection Preliminary results

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Introduction

- Human cytomegalovirus (HCMV) is the leading cause of congenital infection worldwide.
- Despite its high frequency, there is no consensus on prenatal screening as there is no vaccine and the other preventive measures are universal.
- Diagnosis of congenital infection is possible in two situations: symptomatic infection or screening in asymptomatic newborn of a mother with proven infection

The figure for Portugal

- Prenatal screening for CMV is not advised during pregnancy. Nevertheless, it could be performed in a preconception screening setting
- Many pregnant women are screened at the end of pregnancy, because of cord blood stem cells collection
- Otherwise, CMV serology is done in the mother for investigation of foetal problem. If foetal infection is suspected, amniocentesis is performed

The figure for Portugal

- CMV PCR or cell culture are done in the urine or the blood of the newborn in the presence of symptoms or signs suggesting CMV infection or in face of documented primary infection in the mother
- The real incidence in Portugal is unknown but previous studies based on Guthrie cards shown it may be as high as 1% *

*Lopo S. et al "Infecção Congénita pelo vírus citomegálico - Resultados preliminares de estudo prospetivo". Rev Port D Infec, Out-Dez 2004: 14-17.

*Paixão P. et al. "Prevalence of human cytomegalovirus congenital infection in Portuguese newborns". Eurosurveillance, 2009, 14(9):13-15.

National surveillance

In 2006, a national surveillance of HCMV congenital cases began, through the Portuguese Paediatric Surveillance Unit of the Portuguese Society of Paediatrics (PPSU).

Aims

1. To assess the epidemiology of congenital infection and to study the outcome of infected children
2. To prepare a standard way to diagnosis and follow-up these children.

Methods and patients

Study design:

Voluntary, active, national epidemiologic surveillance

At the time of diagnosis, PPSU monthly report card is sent, reporting the case. Clinical and laboratory data, as well as follow-up data, are sent to the coordinator of the surveillance

Inclusion criteria: cases confirmed by urine culture or PCR detection in the first three weeks of life

Definitions

Primary infection is defined as a seroconversion at any time during pregnancy or positive IgM and IgG with low avidity

Congenital infection is considered symptomatic if any signal suggestive of infection was found in the newborn infant even if not visible on examination, namely cerebral calcifications, and vasculitis.

Aim of the communication

To present the preliminary results of the first 42 months of the study

Results

January 2006 to June 2009

Notifiers	13
Registered cases	36
Estimated incidence	0.098/1000LB.

Results

Type of maternal infection

Primary	17
Recurrent	10
Unknown	9

Results

Newborn infection

Symptomatic	18
Assymptomatic	18

Results

Congenital infection	Type of maternal infection		
	Primary	Recurrent	Unknown
Symptomatic	6/17 (35.3%)*	7/10 (70%)**	5/9
Assymptomatic	11/17 (64.7%)*	3/10 (30%)**	4/9

Follow-up

n=11*

On follow-up

At birth	Symptomatic	Assymptomatic
Symptomatic (4)	2	2
Assymptomatic (7)	1**	6

*Age - median 6 months (6-36+)

** Hepatomegalia at 12 months

Follow-up

Symptomatic at birth n=4

At birth	On follow-up
IUGR	Assymptomatic
Sepsis like syndrome, hepatitis, colestase, anaemia, thrombocytopenia, coriorretinitis, hepatoespelnomegaly	Assymptomatic
IUGR, Ventricular dilation and ventricular asymmetry	Microcephaly, hypotonia, CP, strabismus
Anaemia, colestasis, hepatitis, thrombocytopenia, hepatoesplenomegalia	Hypotonia

Discussion

- An incidence far below prior studies in Portugal was found
- Follow-up is known for eleven children only, making any conclusion on the evolution impossible
- There is a high number of asymptomatic newborn infants born to mothers with primary infection

Discussion

- Data suggest an important role of recurrent infection during pregnancy on symptomatic infections in newborns (recurrence was expected to cause mainly asymptomatic congenital infection)
- There may be a bias in this reading, because, due to the low reporting, the study is not really population based – capture and recapture is needed

Conclusion

There is a non-expected low number of reported cases

Three causes are possible:

- Failure in reporting diagnosed cases - possible
- Missed diagnosis of symptomatic cases – non-probable
- Higher than expected percentage of asymptomatic cases even in primary infection - such is suggested by these results

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