CONGENITAL INFECTION WITH CMV IN THE PEDIATRIC PATHOLOGY

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Summary

Discovered in early XXth century, the cytomegalovirus is the most frequent cause for mother to fetus infection. The multiple forms of manifestation of this congenital infection are characterized by a large palette starting with asymptomatic forms up to varied clinical manifestations. A number of 65 cases have been analyzed (new born and sucklings) suspected from the anamnestical / clinical point of view of congenital infection with CMV, hospitalized in the Clinic II of Pediatrics Timisoara. For 27 cases, the infection has been confirmed from the serological point of view by dosing the specific antibodies of the type IgG and IgM. The authors analyze the casuistry from the epidemiologic, clinical, paraclinical and evolutive (neurosensorial consequences) point of view. From the epidemiologic point of view the incidence of the infection with CMV has obviously prevailed in suckling, with a slight predominance in male subjects, with no significant difference as to their origin (rural/urban).

The conclusions of the research as to the clinical manifestation, paraclinical investigation and in particular as to the evolution from the nerosensorial point of view of the casuistry have determined the authors to conclude that the infection with CMV represents nowadays a significant issue of public health in mother-child couple.

Key words: Cytomegalovirus, neurosensorial consequences, children.

Introduction

Discovered at the beginning of the XX century, the citomegalic virus represents the most frequent fetomaternal infection cause. According to the data in the specialized literature, the prevalence of the congenital infection is of 0, 2 – 2, 4 % and the fetopathy consequent situates on the first place within the frame of the fetomaternal infections.

Although the possibility of evolution may be variable in both forms of disease, the evolution towards decease in the symptomatic forms (25-30% of the children) as well as of the installation of some serious consequences (70-80% in the symptomatic forms, respectively 15% in the asymptomatic ones) draws the attention on this infection.

Scope of the study

The scope of this study is that in emphasizing some aspects regarding the frequency of the infection, the diagnostic ages, complications and consequences produced by the citomegalic virus, virus known as having aggressive potential on the young tissues, in formation.

Material and Method

There was performed a study with a number of 65 cases (new-born and nursling) anamnestically / clinically suspected of congenital infection with CMV hospitalized in the Clinic II Pediatrics Timisoara for a period of 2 years (January 2005 – January 2007).

The new-born and the nursling were analyzed with regard to the data regarding:

- sex
- provenience medium
- the form of disease from the clinically point of view (symptomatic and asymptomatic)
- laboratory examinations: evidencing atc.Anti CMV of type IgG, Ig.M by means of the method ELISSA.
- complementary clinical investigations: audiometry in biannual prospective way in the first year and then annually applied to all of the 27 children that formed part of the study, the average mean of the last examination being 39 months.

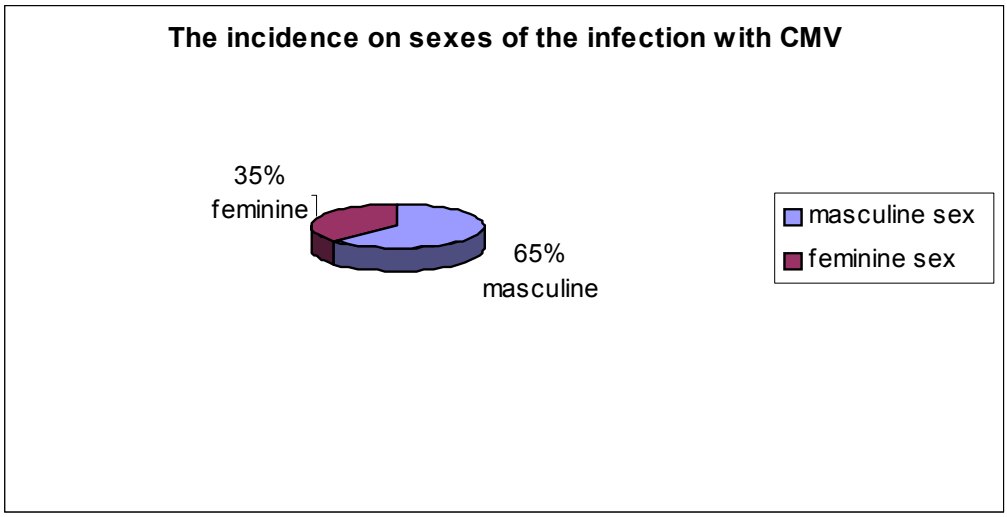
The loss of neurosensorial hearing has been defined as the air conduction threshold, >25dB, with auditory brain stem response (ABR) >20dB, on and audiogram correlated with the normal values for a child normally developed for the respective age. Progressive loss of hearing has been defined as neurosensorial decrease of hearing with 10dB or more, for any ABR frequency or threshold, documented by two different evaluations.

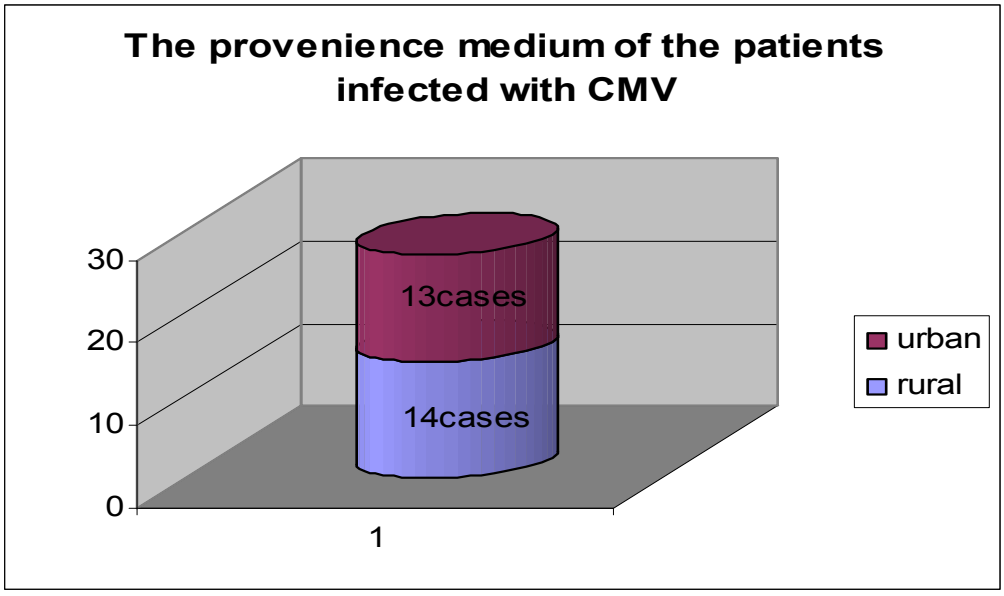
Results and conclusions

Among the 65 studied cases, the infection with the citomegalic virus was confirmed at a number of 27 children (40%) by dosing atc anti CMV of type IgG and IgM.

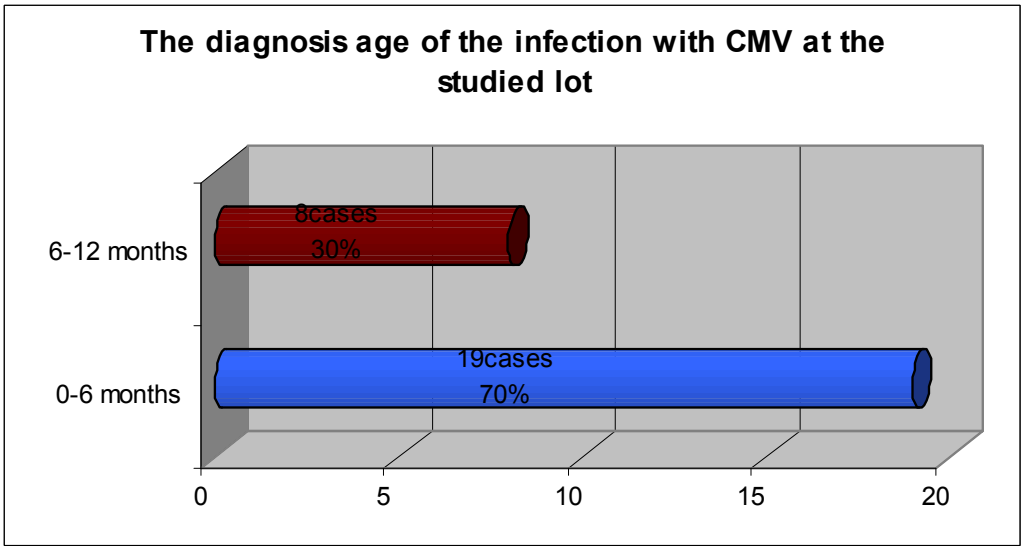
Children diagnosed with congenital infection in different phases of evolution had a greater incidence over the masculine sex (65%) compared to the feminine sex (35%).

With regard to the medium of provenience of the patients I have noticed an incidence equal in the rural and the urban one.

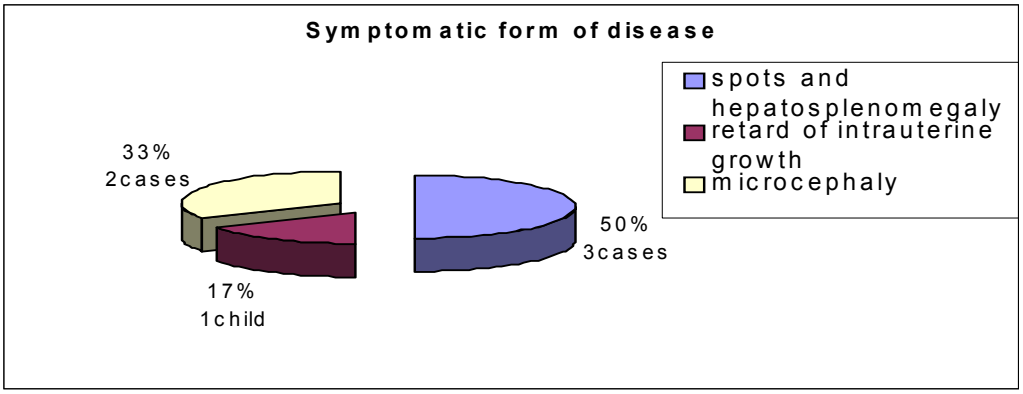




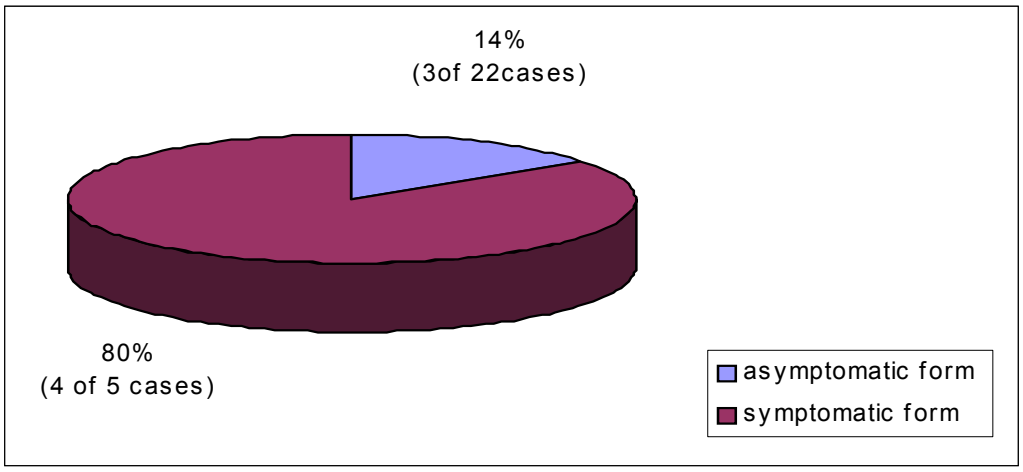
From the point of view of the age to which was established the infection diagnostic with CMV, a greater balance has distinguished at the age group of 0-6 months (19 cases) followed by the age group 6-12 (8 cases).



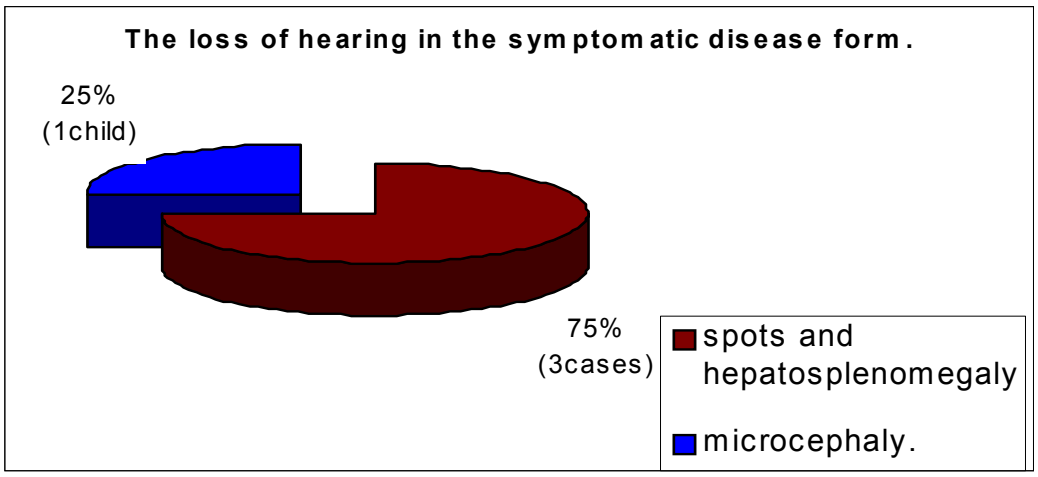
The clinical manifestations found at the studied patients were polymorphic, dependent of the patient's age, symptomatic form (19%) or asymptomatic of disease (81%). Symptomatic form of disease was suspected by the presence of some suggestive clinical signs including: spots and hepatosplenomegaly – 3 cases, retard of intrauterine growth – 1 child, microcephaly –2 cases.



Following the audiometric evaluations, the loss of the hearing appeared at 14% (3 of 22) of the children with asymptomatic form of disease and 80% (4 of 5) at those with symptomatic form of disease



Among the symptomatic form of disease of the infection with CMV, the loss of hearing during the analysis appeared to all of the children with spots and hepatosplenomegaly (3 cases) and 1 child with microcephaly.



Conclusions

1. The results of this study show that the congenital infection with CMV represents a problem of public health that due to the polymorphic clinical expression can determine diagnostic confusions.
2. It is necessary an early diagnosis of the infection with CMV before the installation of the after- effects phase.
3. The disease disseminated at birth, proved by the presence of the hepatosplenomegaly spots, intrauterine retard growth, microcephaly, represents an important factor in losing the hearing at the children.
4. The infection with CMV is underdiagnosed at the current moment, which is why it is necessary an active localization of the cases and the performance of some centralized statistic information.

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