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DISORDERS OF THE BRAIN REVEALED BY MAGNETIC RESONANCE IMAGING (MRI) IN INFANTS WITH SEVERE CONGENITAL CYTOMEGALY

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Aim: The aim of the study was to analyze the type of brain abnormalities in children with severe congenital cytomegaly, using MRI scan.

Material and methods: Seventeen infants congenitally infected by cytomegalovirus (CMV) hospitalized from 2002 to 2009 yrs were involved in the study. Congenital CMV infection was diagnosed on the basis of clinical signs and symptoms confirmed by detection of DNA CMV in urine and specific antibodies (IgM, IgG) in serum during the first weeks of life. In all MRI of the brain was performed. The mean period of observation was 17 months (ranged from 5 to 60).

Results: MRI findings: different types of malformations of cortical development (agyria, pachygyria, polymicrogyria, subependymal heterotopia) and focal cortical dysplasia in 17 (100%), delayed myelinization in 6 (35,3%), white matter lesions in 7 (41,2%), thin corpus callosum in 5 (30,0%), brain atrophy in 8 (47,0%), cerebellar hypoplasia in 3 (17,6%), ventriculomegaly in 15 (88,2%), schizencephaly in 2 (11,7%) infants. Other findings in CNS visualized by computer tomography: intracranial calcifications in 5 (30,0%), microcephaly in 10 (60,0%). Late sequelae: various degrees of psychomotor retardation 7 (41,2%), epilepsy 8 (47,0%), cerebral palsy 8 (47,0%).

Conclusions:

1. Cortical dysplasia revealed in all infants as a result of cerebral migration defect indicate on fetal CMV infection during the first half of gestation.
2. Cortical malformations and other disorders of the brain were responsible for epilepsy, cerebral palsy and developmental delay.
3. MRI is the method of choice in evaluating brain lesions in children with cytomegaly.

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GROUP B STREPTOCOCCUS - FREQUENTLY RISK FACTOR FOR EARLY NEONATAL INFECTION

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Background: Neonatal infection is an important cause of neonatal mortality and morbidity. Group B Streptococcus agalactiae (GBS) during pregnancy and/or labor is one of the main risk factor for neonatal infection, which can be an early or a late, severe one.

Aim: To reduce neonatal morbidity and mortality

Objectives: To study maternal and neonatal GBS incidence, to establish the need for perinatal treatment, to reduce the newborn care costs.

Material and method: A retrospective study in Polizu Maternity between 2006-2009, in collaboration with "I. Cantacuzino" Institute for bacteriological serotyping. 14 538 newborns were included in this study.

Results: GBS morbidity is raising from 2006 to 2009. One third of newborns from GBS mothers were also infected. About 1% of them were treated for a severe infection - sepsis.

Conclusions: The incidence of GBS infection in pregnant women and newborns is raising. Early diagnosis and treatment in perinatal period can explain the reduction of neonatal mortality.

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TLR2 AND TLR4 POLYMORPHISMS IN KAWASAKI DISEASE

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Kawasaki disease (KD) is a febrile acute systemic vasculitis in childhood, primarily affecting coronary arteries. Different causes are discussed including infectious agents, cofactors, and genetic predisposition. We tested the hypothesis that polymorphisms of TLR2 and TLR4, key mediators of the innate immune system influence coronary artery involvement in KD patients. 15 patients

with KD in childhood were reevaluated in young adulthood including the analysis of TLR2 and TLR4 regarding expression pattern, stimulation effects and polymorphisms (SNP) compared to an age- and sex related control group.

Heterozygote Genotype for TLR2 SNP was found in two KD patients, one also positive for TLR4 SNP, both had no acute or late cardiac symptoms. The expression pattern on the surface of monocytes showed no difference between the KD and control group, nor in the KD patients with or without cardiac pathology. Stimulation via TLR2 and TLR4 also showed no significant influence on p38 and ERK phosphorylation and cytokine induction.

We can conclude that there is no disturbance in the innate immune system of previous patients with KD, but a modest positive effect of TLR2 and TLR4 SNPs on coronary involvement can be discussed.

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ACUTE BRONCHIOLITIS IN A PAEDIATRIC DEPARTMENT: MULTIPLE-CASE STUDY

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Background and objective: Acute viral bronchiolitis is an important cause of severe low respiratory tract infection in infants worldwide, with significant burden on the healthcare systems. The aim of the study was the analysis of factors with impact on acute bronchiolitis cases characteristics admitted in a Paediatric Department.

Methods: Descriptive multiple-case study. All cases of acute bronchiolitis presenting to an Emergency Department of a tertiary care unit for a 12 months were included. The database included as variables: age, sex, risk factors, seasonal variation, clinical aspects, duration of hospitalization, and treatment. Multivariable statistics by regression analysis were used.

Results: During the studied interval, 237 children with acute bronchiolitis were examined in the Emergency Department and 183 (77,21%) were admitted. The mean duration of the hospitalization

was 5,3 days. 75% of the hospitalized children were younger than 12 months of age and among those, infants between 3 and 6 month (33,5%) were more often affected. 64,55% of the children were males. The risk factors identified were: prematurity, pre-existing heart or lung diseases, parental smoking, and low socioeconomic conditions. All children had moderate to severe respiratory symptoms (wheezing, expiratory dyspnoea, and cough), poor feeding and 15% of them had evidence of respiratory distress at admission. There was a large spectrum of medication administered (i.e. bronchodilators, inhaled/systemic corticotherapy, antileukotriens) at the studied group.

Conclusions: Acute viral bronchiolitis is an important cause of hospitalization in children. Although hospitalized children had favourable outcome, large variations in treatment mandate the reinforcement of current guidelines and protocols.

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ALTERNATING IBUPROFEN AND ACETAMINOPHEN IN THE TREATMENT OF FEBRILE HOSPITALIZED CHILDREN AGED 9-24 MONTHS. URMIA IRAN

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Introduction: Recently, studies reported the emergence and increasing popularity of the alternative use of acetaminophen and ibuprofen. The aim of the present study was to compare the clinical effectiveness of acetaminophen alone with an alternative regimen of acetaminophen and ibuprofen in hospitalized infant with fever of non bacterial origin and 9-24 month old age.

Material & methods: In this clinical trial study, Patients were randomly separated into two groups according to their admission. Eligible cases were febrile hospitalized patients aged between 9month and 24 months; whose rectal temperature was $\geq 38.5^{\circ}\text{C}$. Infants of case group received 15 ml/ kg of acetaminophen alternating with 10 ml/ kg of ibuprofen every four hour. Infants of control group received 15 ml/ kg of acetaminophen every four hour. Temperature data of patients of two group were collected 2, 4, 5 7, 8 hour after drug administration and were compared. The study was completed when each group received 35 cases.