

	Admiss.	5 days	10 days
CRP	+	+	-
ESR	+	+	+
WBC	+	+	+/-
PCT	+	+	-

[Children with bronchopneumonia]

	Admiss.	5 days	10 days
CRP	3	5	0
ESR	2	4	3
WBC	2	9	3
PCT	2	4	0

[Children with bronchiolitis]

Key words Procalcitonin, C reactive protein, lower respiratory infection

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**EVALUATION OF MENINGITIS
COMPLICATIONS IN CHILDREN ADMITTED
EMERGENCY ROOM OF GHAEM&IMAM REZA
HOSPITAL.MASHAD IRAN**

G. Khademi

*Mashad University of Medical Science, Mashad,
Iran*

Introduction: Meningitis is one of the most important emergencies in children. During the treatment of meningitis, acute complications such as hyponatremia subdural effusions, seizure and a prolonged fever may occur and cause irreparable sequels. Knowing these complications and there proper treatment can improve the prognosis of disease, therefore we decided to evaluate meningitis acute complications in study in one year period.

Method: In this study 108 suspected meningitis cases in children who were admitted in children department of Imam Reza and Ghaem Hospitals were investigated. The data were collected using questionnaire and analyzed using SPSS.

Materials and results: Among the patients who were the suspected of meningitis the number of male patients(62%) was more than female patients(38%).Frequency of the disease in 3 to24 months old children was more than others(41%). The patients mostly presented with fever and seizure, Among the patients who were studied 57 of them were diagnosed as CNS infection an among them only 8 cases had positive cultures.

The most common organism were Hemophilus influenza(28%). Hyponatremia (31 cases) is the most common complication followed by seizure(16 cases) and prolonged fever (one case) in patients with CNS infection.28% of patients with bacterial meningitis had subdural effusions in CTScan.

The mean of HB value was sufficiently lower in patients with bacterial meningitis in comparison with patients with viral meningo encephalitis.

Conclusion: During the treatment of meningitis hyponatremia and seizure after treatment and subdural effusions should be considered.

Keywords: Meningitis, complication, children

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**PANDEMIC INFLUENZA A (H1N1) INFECTION
IN PEDIATRIC POPULATION: A MULTICENTRIC
STUDY IN NORTH-EASTERN ITALY**

C. Chillemi, M.E. Cavicchiolo, S. Bressan,
G. Perilongo, L. Da Dalt, The Veneto Region
Pediatric Units' Directors Study Group

*Department of Pediatrics, University of Padua,
Padua, Italy*

The rapid increase of new cases of pandemic influenza A (H1N1) in Italy in the autumn 2009 was alarming and limited data were available on disease characteristics and outcomes of children who required hospital admission.

Objective: To describe clinical characteristics, treatment and outcome of children hospitalized for H1N1 pandemic influenza in the nineteen Pediatric Units of the Veneto Region (North-Eastern Italy, ~800.000 inhabitants 0-17 years).

Methods: Retrospective study including children consecutively admitted from November 2009 to February 2010 for H1N1 influenza confirmed on reverse-transcriptase polymerase-chain-reaction assay.

Results: Clinical, laboratory, and radiographic data of 200 children were reviewed. The median age was 4.15 years (range 0-17.5). At least one underlying medical condition was found in 43.5% of patients. Fever and cough were the most frequent symptoms (92.5% and 64.5% respectively). In 81% of patients chest radiograph findings were consistent with pneumonia. Eleven (5.5 %) were admitted to an intensive care unit (ICU) and 5 (2.5%) required

mechanical ventilation. Only 1 patient admitted to ICU was previously healthy. Antiviral therapy was administered in 103 patients (51.5%) after a median of 2 days from onset of symptoms. Secondary bacterial infection was identified in 8/200 (4%). The median length of hospital stay was 4 days (range 1-72). Death occurred in 2 patients (1%), who both had severe prior medical conditions.

Conclusion: Pandemic H1N1 influenza rarely requires hospitalization and, in hospitalized children, it mainly appears to cause a mild disease. The presence of pre-existing conditions is the most significant risk factor for severe disease.

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POPULATION PHARMACOKINETICS ANALYSIS OF MOTAVIZUMAB IN CHILDREN AT RISK FOR RESPIRATORY SYNCYTIAL VIRUS INFECTION

L. Zhao, L. Roskos, P. Griffin, G.A. Losonsky, J.R. Groothuis, B. Jallal, **G. Robbie**

MedImmune, LLC, Gaithersburg, MD, USA

Aims: To develop a population pharmacokinetics (PK) model and evaluate the impact of demographic covariates on PK of motavizumab in young children.

Methods: Motavizumab serum concentrations from 6 pediatric (n=4316) studies and an adult study (n=30) were modeled simultaneously using nonlinear mixed-effects modeling. Children ≤ 24 months received up to 5 monthly doses of motavizumab 3 or 15 mg/kg. The structural PK model with different random effect assignments was evaluated first followed by assessment of effect of chronologic age (CA), gestational age (GA), body weight (BW), sex, race, and presence of CLD on motavizumab clearance (CL) and volume of distribution (V₂) using NONMEM.

Results: Motavizumab serum PK best fit a two-compartment model; CL and V₂ increased with BW. CL and V₂ were related to the sum of GA and CA and were described using an asymptotic-exponential model. Covariate analysis identified 7% lower motavizumab serum CL in infants without CLD compared with infants with CLD. V₂ was 23% lower in Hispanic infants compared with other races. After accounting for demographic covariates, there was 25% inter-individual variability in CL and 23% residual variability in motavizumab concentrations.

Conclusions: Population PK analysis of motavizumab concentrations demonstrated increased clearance with CA and BW. Motavizumab serum concentrations were similar across a range of GA, CA and BW confirming appropriateness of BW-based dosing. Given the inter-individual variability in motavizumab concentrations, the marginally lower clearance in patients without CLD and slightly lower volume of distribution in Hispanic patients are not expected to be clinically significant.

Sponsored by MedImmune.

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OCCURRENCE OF BACTERIAL INFECTIONS WITH RESPIRATORY DISEASES AT CHILDREN AGE

S. Smugreska, V. Tomik, S. Todorovska, V. Tasik
Paediatrics, PZU Dr. Svetlana Smugreska, Skopje, FYR Macedonia

Introduction: The most common factors for the occurrence of respiratory infections at children age are the viral infections in 79% of the occasions, bacterial infections occur in 21% of the occasions. Bacterial infections appear very rarely at routine microbiological inspection of throat and nose and most frequently the saliva remains sterile.

Aim: To authorize the use of antibiotics in antituberculous with respiratory infections of established bacterial isolate.

Method and Results: The data is compiled from medical records statistically observed in the period from 2002-2006. Microbiology had served: mouth and nose saliva, less frequently tracheal aspirates. 3.400 children have been treated, out of which 870 children have positive bacteriologic nose saliva. Of those 870 children: 470 have *Moraxella catharalis*; 150 have *Streptococcus pneumoniae*; 117 have *Haemophilus influenzae*; 88 have *Haemophilus* species; 45 have A group of *Streptococcus pyogenes* e. t. c. Positive throat saliva appears in 77 children, the most common bacteria are: A group of *Streptococcus pyogenes* appears with 42 children; *Haemophilus influenzae* appears with 7 children; *Haemophilus* species with 5 children; *Streptococcus pneumoniae* appears with 23 children. Positive bacteriologic finding of tracheal aspirate appears with 15 children and the most frequent bacteria are *Streptococcus pneumoniae*; *Haemophilus influenzae*; *Moraxella catharalis*; and *Klebsiella*.