COMPARISON OF PEDIATRIC LOGISTIC ORGAN DYSFUNCTION (PELOD) SCORE AND PEDIATRIC RISK OF MORTALITY (PRISM) III AS A MORTALITY PREDICTOR IN PATIENTS WITH DENGUE SHOCK SYNDROME

Submitted by Henny R. Iskandar
Henny R. Iskandar, Dharma Mulyo, Praptiwi Agnes, Yuliatmoko Suryatin
Pediatric Intensive Care Unit, Children’s and Maternity Harapan Kita Hospital, Jakarta, Indonesia

INTRODUCTION: The mortality rate for dengue shock syndrome (DSS) in the PICU at Children’s and Maternity Harapan Kita Hospital is still high (13.2%).

OBJECTIVE: We evaluated performance of the Pediatric Logistic Organ Dysfunction (PELOD) score compared with the Pediatric Risk of Mortality III (PRISM III) for predicting mortality in our PICU.

METHODS: A total of 42 patients (48% boys, 52% girls) admitted to the PICU from January to December 2006 were enrolled onto the study. Diagnosis of DSS was made according to 1997 World Health Organization criteria and confirmed with serologic-positive dengue blot taken on the fifth day of fever (93% secondary infection and 7% primary infection). PELOD and PRISM scores were evaluated on the first day.

RESULTS: From 42 admissions, 1 was excluded for insufficient data. Median age of the children was 7 years. Death occurred in 11.9% of the patients with DSS. Analysis showed that the mean PELOD score was 7.2 (Mann-Whitney U test between survivors and nonsurvivors was significant at \( P < .001 \)) compared with the PRISM III (mean score was significant also at \( P < .008 \)). The receiver operating characteristic curves for the PELOD and PRISM III were 0.954 and 0.868, respectively.

CONCLUSIONS: PELOD and PRISM III scores showed a good discrimination for predicting mortality in patients with DSS in our PICU.

MIDDLE-EAR FLUID STREPTOCOCCUS PNEUMONIAE SUSCEPTIBILITY AND SEROTYPE AND DISTRIBUTION IN MEXICAN CHILDREN WITH ACUTE OTITIS MEDIA

Submitted by Claudia Lopez-Enriquez
Claudia Lopez-Enriquez\(^a\), A. Blanco-Montero\(^a\), L. E. Espinosa-Monteros\(^b\), R. Rodriguez\(^c\), C. De La Torre\(^d\), D. Gomez-Barreto\(^b\)
\(^a\)Hospital Español de Mexico, Mexico City, Mexico; \(^b\)Hospital General Manuel Gea Gonzalez, Mexico City, Mexico; \(^c\)Secretaría de Salud, Cuauhtémoc, Mexico; \(^d\)Hospital Infantil de Mexico Federico Gomez, Mexico City, Mexico

INTRODUCTION: Acute otitis media (AOM) is the most common microbial respiratory tract infection in early childhood: Streptococcus pneumoniae is a common pathogen isolated from patients with AOM. The American Academy of Pediatrics advises immunization with a 7-valent pneumococcal conjugate vaccine for children with recurrent AOM.

OBJECTIVE: We aimed to establish the most common S pneumoniae serotypes present in the middle-ear fluid of Mexican children with AOM and to analyze antimicrobial susceptibility patterns and assess the potential protection provided by the new conjugated S pneumoniae vaccines.

METHODS: During 2002 and 2003, 72 S Pneumoniae isolates were obtained from 138 Mexican children with AOM. Serotyping distribution was performed by the quellung reaction with antisera from Statens Serum Institute (Copenhagen, Denmark). Tests for susceptibility were performed by using the agar-dilution method according to Clinical and Laboratory Standards Institute protocol for 18 antibiotics.

RESULTS: The most common S pneumoniae serotypes isolated were 6B and 19F (16.67% each) and 6A, 14, and 23F (15.27% each). The overall rate of resistance (defined as the rate of intermediate resistance plus the rate of resistance) for penicillin was 65.38% (intermediate and resistant categories were 29.17% and 36.11%, respectively), for cefotaxime was 19.45%, for azithromycin and erythromycin was 23.61%, for trimethoprim/sulfamethoxazole was 61.11%, for amoxicillin was 5.5%, and for clindamycin was 12.5%. With amoxicillin/clavulanate, ceftriaxone, imipenem, meropenem, teicoplanin, telithromycin, and vancomycin, we found susceptibility for 100% of the isolates. The most common resistant serotypes were 19F and 23F.

CONCLUSIONS: The serotype distribution of S pneumoniae that causes pediatric AOM in Mexico is similar to that reported from developed countries. The current heptavalent pneumococcal conjugate vaccine covers 63.89% of AOM episodes in Mexican children.

ROLE OF THROMBOMODULIN IN DETECTION OF ENDOTHELIAL CELL DESTRUCTION AFTER INFECTION WITH FALCIPARUM AND TERTIAN MALARIA

Submitted by Max Mantik
Max Mantik, Tonny Rampengan, Mariane Kilis, Josef Tuda
Department of Pediatrics, Faculty of Medicine, Sam Ratulangi University, Manado, Indonesia

INTRODUCTION: Thrombomodulin is an endothelial cell receptor for thrombin. In tropical and tertian malaria, thrombomodulin is secreted after endothelial cell
Thrombomodulin, a protein involved in blood clotting, was measured in patients with tropical or tertian malaria to assess its role in endothelial cell destruction. The study involved 30 patients with tropical malaria and 2 patients with tertian malaria. Thrombomodulin levels were determined using an enzyme-linked immunosorbent assay. For patients with tropical malaria, the thrombomodulin level was found to be significantly higher compared to tertian malaria. This suggests that thrombomodulin levels can be used to detect endothelial cell destruction in malaria, particularly in tropical malaria.

**CONCLUSIONS:** Thrombomodulin levels can be used to detect endothelial cell destruction in malaria; the thrombomodulin level is significantly higher in patients with tropical malaria compared to those with tertian malaria. Thrombomodulin levels can be used to predict the severity of tropical malaria.

---

**ROTASCORE STUDY: EPIDEMIOLOGICAL OBSERVATIONAL STUDY OF ACUTE GASTROENTERITIS WITH OR WITHOUT ROTAVIRUS IN GREEK CHILDREN YOUNGER THAN 5 YEARS**

Submitted by Vassiliki Papaevangelou
Vassiliki Papaevangelou, Ioannis Kavalioti, Heleni Kokori, Lito Mantagou, Georgios Trimi, Vithelem Papadopoulou, Georgios Niotakis, Nikolea Nikolaokopoulou, Andreas Konstantopoulos

Second Pediatric Department, Children's Hospital Aghia Sophia, Athens University, Athens, Greece; Pediatric Department, Thessaloniki Hospital of Infectious Diseases, Thessaloniki, Greece; Second Pediatric Department, Venizelio Hospital, Heraklion, Crete, Greece; Pediatric Department, Patras University, University Hospital of Rio, Patras, Greece; First Pediatric Department, Aghia Sophia Children's Hospital, Athens University, Athens, Greece

**INTRODUCTION:** Pediatric rotavirus gastroenteritis (PRG) is the most frequent cause of severe acute gastroenteritis in children up to 5 years of age worldwide. The objective of this study was to determine the proportion of PRG and compare its clinical burden to that of AGE caused by other pathogens.

**METHODS:** The study was conducted in 4 hospital emergency units (HEUs) and 50 private pediatric clinics between January and May 2006. Children up to 5 years of age were included. A rapid stool immunochromatographic test for rotavirus antigen detection was performed. Symptom-severity scores were calculated by using the Clark scale.

**RESULTS:** Seven hundred and six children participated in the study (median age: 20 months; 385 boys [54.5%]); 273 patients (38.6%) visited HEUs, and 433 (61.4%) visited private clinics. The proportion of PRG was 29% (95% confidence interval [CI]: 25.9%–32.6%) in the total study group, 18.3% (95% CI: 14.9%–22.3%) in private clinics, 45.7% (95% CI: 40.0%–51.7%) in HEUs, and 49.1% in hospitalized patients (95% CI: 42.3%–55.7%). Most children with PRG (71.7%) were between 6 months and 3 years old. Behavioral changes and signs of dehydration, weight loss, fever at ≥38°C, diarrhea, and vomiting were more prevalent with PRG (P < .01). In children with PRG, a higher incidence of moderate or severe gastroenteritis (P = .013 and .021, respectively), hospitalization (P = .011), and need for a clinical reevaluation (P = .012) was observed, as was longer hospitalization (5.14 ± 3.18 vs 3.69 ± 2.25 days; P = .039).

**CONCLUSIONS:** PRG was responsible for nearly half the patients with AGE who visited HEUs or required hospitalization. Vaccination against rotavirus would help prevent this frequent and often severe disease.

---

**DIAGNOSIS OF TUBERCULOSIS LYPHADENITIS IN CHILDREN**

Submitted by Ileana Puiu
Ileana Puiu, Polixenia Stancu, Dumitru Bulucea, Carmen Niculescu, Veronica Elena Nicolescu, Felicia Stoian

Pediatrics Clinic, Tuberculosis Center, Emergency Clinical Hospital, University of Medicine and Pharmacy, Craiova, Romania

**INTRODUCTION:** Tuberculosis represents a major health problem, and the most frequent cause of extrapulmonary tuberculosis is tuberculous lymphadenitis.

**OBJECTIVE:** The aim of this study was to determine the relative contribution of tuberculous lymphadenitis as a cause of persistent cervical lymphadenopathy.

**METHODS:** Our study included 87 children (aged 6 months to 18 years) suffering from tuberculous lymph-
ROLE OF THROMBOMODULIN IN DETECTION OF ENDOTHELIAL CELL DESTRUCTION AFTER INFECTION WITH FALCIPARUM AND TERTIAN MALARIA
Max Mantik, Tonny Rampengan, Mariane Kilis and Josef Tuda

Pediatrics 2008;121;S129
DOI: 10.1542/peds.2007-2022

Updated Information & Services
including high resolution figures, can be found at:
/content/121/Supplement_2/S129.3

Subspecialty Collections
This article, along with others on similar topics, appears in the following collection(s):
Infectious Disease
/cgi/collection/infectious_diseases_sub

Permissions & Licensing
Information about reproducing this article in parts (figures, tables) or in its entirety can be found online at:
/site/misc/Permissions.xhtml

Reprints
Information about ordering reprints can be found online:
/site/misc/reprints.xhtml

PEDIATRICS is the official journal of the American Academy of Pediatrics. A monthly publication, it has been published continuously since 1948. PEDIATRICS is owned, published, and trademarked by the American Academy of Pediatrics, 141 Northwest Point Boulevard, Elk Grove Village, Illinois, 60007. Copyright © 2008 by the American Academy of Pediatrics. All rights reserved. Print ISSN: 0031-4005. Online ISSN: 1098-4275.
ROLE OF THROMBOMODULIN IN DETECTION OF ENDOTHELIAL CELL DESTRUCTION AFTER INFECTION WITH FALCIPARUM AND TERTIAN MALARIA
Max Mantik, Tonny Rampengan, Mariane Kilis and Josef Tuda

Pediatrics 2008;121;S129
DOI: 10.1542/peds.2007-2022PPP

The online version of this article, along with updated information and services, is located on the World Wide Web at:
/content/121/Supplement_2/S129.3