

600 000 of those deaths. Eighty-five percent of these deaths occur in sub-Saharan Africa and southeast Asia.

OBJECTIVE: We aimed to review rotavirus prevalence studies of children in Africa from 1975 to 2006.

METHODS: Three multilingual Medline searches (limited to humans) were performed: "RV," country/Africa, and epidemiology/diarrhea. Additional inclusion criteria included children <5 years of age, conducted over >3 months, and including >50 children. Data were analyzed in 4 periods.

RESULTS: Of the initial 189 studies identified, 75 in 18 countries met the additional inclusion criteria (Table 1). More than half of the studies were hospital based. In all studies the most common serotypes were G1 (25%), G4 (16%), G2 (13%), G3 (12%), P[8] (37%), P[6] (35%), and P[4] (11%). From 1996 to 2006 the common serotypes were G1 (22%), G4 (17%), G2 (13%), G3 (13%), P[6] (37%), P[8] (35%), and P[4] (11%).

TABLE 1. Results of 75 Studies on Rotavirus Prevalence in Children <5 Years Old in Africa

	All Studies	1976–1985	1986–1995	1996–2006
Total No. of studies	75	12	39	24
Duration, mo	12 (8.0–15.5)	12 (8.0–12.5)	12 (8.0–12.5)	14 (11–24)
Rotavirus-positive, %	26	25	25	30
Studies with serotyping, n	18	0	2	16
Rotavirus-positive with serotyping, %	24	—	5	67

— indicates that data were not available.

CONCLUSIONS: The current prevalence rate is 30% (range: 17%–38%). Present serotypes include G1 through G4, G8, G9, P[8], P[6], and P[4]. Rotavirus diarrhea represents a significant disease burden. Current rotavirus prevalence studies are important, because there are effective rotavirus vaccines available to prevent mortality and severe disease.

ASSOCIATION OF CYTOKINE-RELATED GENE EXPRESSION WITH DENGUE INFECTION SEVERITY

Submitted by Woraman Waidab

Woraman Waidab, Kanya Suphapeetiporn, Chalurmporn Srichomthong, Siraprapa Tongkobpetch, Chitsanu Pancharoen, Vorasuk Shotelersuk, Usa Thisyakorn

King Chulalongkorn Memorial Hospital, Bangkok, Thailand

INTRODUCTION: Dengue is the most prevalent mosquito-borne viral disease and one of the most serious infectious diseases worldwide. Infection by any of the serotypes of dengue viruses (DEN-1–DEN-4) may result in different severities ranging from a relatively benign fever, called dengue fever (DF), to fatal dengue shock syndrome. The pathogenesis of dengue hemorrhagic fever (DHF) and dengue shock syndrome is thought to be mediated by various host factors. Previous reports have suggested an involvement of immunoresponse media-

tors as well as apoptosis-related molecules in the severity of dengue infection.

OBJECTIVE: Our aim was to elucidate the cellular gene responses to dengue viral infection at the transcriptional level and to correlate expression levels with disease activity and/or clinical manifestation.

METHODS: Expression levels of interleukin 8 (IL-8), IL-1 β , matrix metalloproteinase 9 (MMP-9), and Fas in peripheral blood cells were assayed for 10 children with DF, 10 children with DHF, and 5 healthy controls by using real-time reverse-transcription quantitative polymerase chain reaction.

RESULTS: Expression levels of IL-8, IL-1 β , MMP-9, and Fas were higher in children who developed DHF than in those with DF.

CONCLUSIONS: The messenger RNA expression levels of IL-8, IL-1 β , MMP-9, and Fas were significantly elevated in children with DHF, which suggests that these mediators are involved in the pathogenesis. The messenger RNA expression level might serve as a predictor of dengue disease activity. Reverse-transcription polymerase chain reaction has a potential to be another rapid and useful tool in assessing disease severity, leading to a proper therapeutic plan.

HIGH SEROPREVALENCE OF HUMAN METAPNEUMOVIRUS INFECTION IN CHILDREN IN THE CHONGQING, CHINA, AREA

Submitted by Xiaodong Zhao

Xiaodong Zhao, Zhang Qin
Division of Immunology, Children's Hospital, Chongqing Medical University, Chongqing, China

INTRODUCTION: Human metapneumovirus (hMPV), first isolated in 2001 in the Netherlands, was identified as a respiratory etiologic agent in a variety of regions. A number of reports have described evidence of hMPV infection on mainland China. However, the description of the seroepidemiology of hMPV infection remains limited.

OBJECTIVE: We aimed to define the seropositivity of hMPV immunoglobulin G (IgG) antibodies in different age groups of children in Chongqing, China.

METHODS: The specificity of the enzyme-linked immunosorbent assay was first validated by using respiratory syncytial virus (RSV)-infected cell lysates subtracted sera and Western blotting based on anti-hMPV animal serum. This assay was subsequently used to determine the presence of IgG antibodies to hMPV and RSV in 325 serum samples from children aged 0 to 6 years.

RESULTS: There was no cross-reaction between the hMPV and RSV enzyme-linked immunosorbent assays observed in our system. Seropositivity of anti-hMPV IgG antibodies in children aged 0 to 5 months was 74.5%,

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Woraman Waidab, Kanya Suphapeetiporn, Chalurmporn Srichomthong, Siraprapa
Tongkobpetch, Chitsanu Pancharoen, Vorasuk Shotelersuk and Usa Thisyakorn

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