

adenitis who were admitted to our tuberculosis center during a period of 10 years.

RESULTS: Our 10-year study of 1112 children with lymphadenopathy showed that tuberculous adenitis was encountered in 87 children (7.8%). The disease was present at all ages but was found more frequently between the ages of 10 and 18 years (39.1%). The most common location was the anterior cervical space in 43 children (49.4%), followed by the axillary and supraclavicular areas. Systemic clinical signs (fever, weight loss, tiredness, night sweats) were encountered by 69 children (79.3%). Granulomatous infection was confirmed in 19 children (21.8%) who had abnormal chest radiograph findings. The diagnosis of tuberculous lymphadenitis was based on histological demonstration of caseating epithelioid cell granulomas in the specimen obtained by excision biopsy in 56 cases (64.3%). Tuberculin skin-test results were positive in 76 cases (87.3%). Positive family history of tuberculosis was discovered in 72 cases (82.7%).

CONCLUSIONS: In most cases, the diagnosis was established on the basis of the specific histopathological aspect, tuberculin skin-test result, positive family history of tuberculosis, and the abnormal chest radiograph findings.

SURVEILLANCE OF INFLUENZA IN CHILDREN YOUNGER THAN 5 YEARS IN A TERTIARY CARE HOSPITAL IN BANGKOK, THAILAND

Submitted by Piyarat Suntarattiwong

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INTRODUCTION: Influenza is a common febrile illness with a significant impact on the pediatric population. Few data regarding influenza in young children have come from tropical resource-limited countries.

OBJECTIVE: We aimed to study epidemiological data, clinical manifestations, influenza rapid tests, and oseltamivir treatment in children with influenza.

METHODS: We conducted influenza surveillance at Queen Sirikit National Institute of Child Health, a tertiary care children's hospital in Bangkok, Thailand. From July 5, 2004, to July 3, 2005, 2 groups of patients aged 0 to 5 years were enrolled: (1) patients diagnosed with lower respiratory tract infec-

tions (ie, viral croup, bronchitis, bronchiolitis, and pneumonia) and (2) patients diagnosed with influenza-like illness on the basis of World Health Organization criteria. Subjects must have had symptoms for <5 days. We collected nasal swabs to perform influenza A antigen tests by rapid-test kit and nasopharyngeal swab to perform viral cultures. Clinical signs and symptoms were recorded. Oseltamivir (Tamiflu) was given to the patients with positive rapid-test results, and parents agreed to receive an antiviral agent. Other treatment was provided by attending physicians as the routine standard of care.

RESULTS: We enrolled 495 patients, 49 (9.9%) of which had influenza virus. The virus was isolated year-round with 2 peaks (Fig 1). Fever and myalgia were symptoms with a statistically significant difference between patients with and without influenza infection. The rapid test for influenza A showed 51% sensitivity and 98% specificity compared with viral culture. Eighteen (37%) of 49 patients received oseltamivir treatment. The oseltamivir-treated patients had, on average, 1.12, 0.41, and 0.55 days' shorter oxygen duration, hospital stay, and time to improvement, respectively, but there was no statistically significant difference.

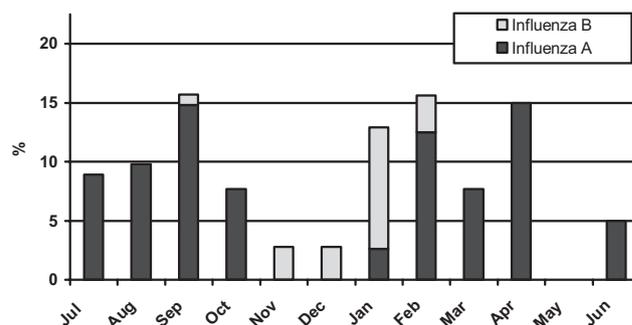


FIGURE 1. Percentage of influenza A and B cases according to month.

CONCLUSIONS: Influenza in young children in Thailand can be found in 10% of patients with lower respiratory tract and influenza-like illness. Two peaks occurred during July to October and January to April. Rapid-test kits have moderate sensitivity but high specificity. Benefit from oseltamivir treatment was observed but not statistically significant.

LITERATURE REVIEW OF ROTAVIRUS PREVALENCE IN AFRICA

Submitted by Zainab Waggie

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INTRODUCTION: Diarrhea kills 1.6 million children younger than 5 years annually, with rotavirus causing

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

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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

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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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