

CURRENT ABSTRACTS

TREATMENT OF MELIOIDOSIS IN CHILDREN: A FOLLOW-UP STUDY

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Melioidosis, is an infection caused by *Burkholderia pseudomallei*. The recommended antibiotic treatment of severe melioidosis in the acute phase is ceftazidime with or without trimethoprim-sulfamethoxazole (TP/SMX), followed by oral maintenance therapy with the combination of TMP/SMX, doxycycline and chloramphenicol for a total duration of 20 weeks. Oral amoxicillin-clavulanate has been shown to be associated with a higher relapse rate than the combination of TMP/SMX, doxycycline and chloramphenicol in a randomized trial. There were no data concerning recommended oral treatment, duration of treatment and relapse rate of melioidosis in children.

The objective of our study is to evaluate the long term outcome of melioidosis in children in term of clinical response to antibiotic treatment and relapse rate.

The type of infections, antibiotic treatment, clinical response and outcomes of children who were diagnosed as melioidosis at Srinagarind during 1994-1999 were reviewed. Patients who survived were followed-up at the Infectious Diseases Clinic, Srinagarind hospital. Patients who were lost to follow-up before 31, October, 1999 were followed-up by confidential mails questioning about their health status and episode of illness similar to their previous problem.

There were 19 patients, 10 males, 9 females. The age range from 1-14 year-old (mean 7.1 year-old, median 5 year-old). Six patients had severe infections (septicemia 4 cases, severe localized 2 cases), 13 patients had localized infections. Ceftazidime and TMP/SMX were used for the acute treatment of severe melioidosis. For the oral treatment of localized infection and oral maintenance treatment of severe infection, TMP/SMX alone or in combination with doxycycline in children older than 8 year-old were used. No serious adverse reactions occurred. Seventeen patients could be followed-up. The duration of follow-up ranged from 3 to 67 months (mean 38.8 months, median 43 months). One patient with septicemia died. One patient with localized skin infection gave the history of possible

relapse. TMP/SMX alone or in combination with doxycycline is safe and effective for the oral treatment of melioidosis in children.

INVASIVE PNEUMOCOCCAL INFECTIONS IN CHILDREN OF CENTRAL TAIWAN

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We conducted a retrospective study on 72 children who were admitted to a medical center in central Taiwan due to invasive pneumococcal infections which were diagnosed between January 1990 and April 2000. Ancillary diagnostic tests, including Gram stain smears and latex agglutination tests, were applied in this study and the sensitivities were 86.2% and 54.3% respectively. Of these patients, 28 had meningitis and 44 had other invasive diseases. Forty-one strains (56.9%) of *Streptococcus pneumoniae* showed reduced susceptibility to penicillin. The mortality rate was 20.8% overall, 32.1% for meningitis, and 13.6% for other invasive diseases, respectively. Ten (52.6%) of the patients who survived from meningitis had long-term sequelae. Statistical analysis showed that the initial presentation of coma, shock, and low cerebrospinal fluid (CSF) leukocyte counts (<50/cumm) were associated with mortality in meningitis. The presence of underlying diseases, shock, coma, and respiratory distress requiring mechanical ventilation were associated with fatal non-meningitic invasive diseases. The patient with shock and high alanine aminotransferase (ALT) levels (>100 U/L) were associated with a rapidly fatal outcome. The outcome of invasive pneumococcal diseases, whether meningitis or not, was not associated with penicillin susceptibility.]

RESPIRATORY SYNCYTIAL VIRUS INFECTION IN KUALA LUMPUR, MALAYSIA: IS THERE A SEASONAL VARIATION?

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Respiratory syncytial virus (RSV) is the most important cause of lower respiratory tract infection (LRTI) in young children. Seasonal winter outbreaks

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of RSV infection are well recognized in the temperate regions but its seasonal variation in the tropics is less marked. We set out to determine if there is a seasonal variation in the incidence of RSV infection in young children admitted with LRTI in Kuala Lumpur and its association with local meteorological parameters.

All children aged less than 2 years admitted with LRTI namely bronchiolitis and pneumonia between 1983-1997 were included. Nasopharyngeal samples were collected and examined for RSV by immunofluorescence. Seasonal variation was determined by analyzing the RSV positive isolation rate per 100 cases of LRTI per month using non-parametric testing. Correlation with local meteorological parameters was performed using Spearman correlation test on rank of data of 2 independent variables.

RSV was isolated in 1255 (22%) of 5691 children. Seasonal variation of RSV infection was evident and peaked during the months of November, December and January ($T = 53.7$, $p < 0.001$). This seasonal variation was also evident for both bronchiolitis and pneumonia categories ($T = 42.8$ and 56.9 respectively, < 0.001). The seasonal variation of RSV infection appeared to have a correlation with the number of rain days per month ($r = 0.26$, $p = 0.01$) and an inverse correlation with the monthly mean temperature ($r = -0.38$, $p < 0.001$).

A seasonal variation in the incidence of RSV infection is evident in the tropics with peaks in the month of November, December and January. This information provides the guide to when RSV monoclonal antibody prophylaxis be administered to high risk infants in the tropics.