

A COMPARATIVE CLINICAL STUDY OF INVASIVE PNEUMOCOCCAL DISEASE CAUSED BY PENICILLIN-RESISTANT AND PENICILLIN-SENSITIVE *STREPTOCOCCUS PNEUMONIAE* IN THAILAND

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Objectives: This study focused on determining the clinical difference between invasive pneumococcal disease (IPD) caused by penicillin-resistant and penicillin-sensitive *Streptococcus pneumoniae*.

Methods: Patients with invasive pneumococcal diseases seen during January 1996-December 2007 at 3 hospitals were studied. Comparison of clinical epidemiology between those with penicillin-resistant *Streptococcus pneumoniae* (PRSP) and penicillin-sensitive *Streptococcus pneumoniae* (PSSP) strain were done.

Results: There were 69 patients with IPD, 25 were infected with PRSP and 44 with PSSP strains during the period of study. Sex, mean age, underlying diseases and seasonal variation did not statistically differ between the two groups. The clinical efficacy determined by duration until defervescence, duration of hospitalization and clinical outcome did not have statistical difference in both groups. Minimum inhibitory concentration (MIC) of antibiotics of pneumococcal isolates were examined. PRSP isolates had resistance to cephalosporins and meropenem 15.8% and 38.9% respectively, but all of them were sensitive to vancomycin. The predominant serogroups in PRSP isolates were 23 and 19 while in the PSSP group were serogroups 6 and 14.

Conclusions: There were no significant differences in clinical epidemiology of IPD in both PRSP and PSSP group.

Keywords: *invasive pneumococcal disease, clinical study, penicillin-resistant Streptococcus pneumoniae*