Abstract

Streptococcus pneumoniae is one of the major causes of serious community acquired infection disease in children. It is the leading pathogen associated with pneumonia, bacteremia and meningitis. In recent years, there are many studies regarding S. pneumoniae epidemiologic surveillance, antibiotic resistance, serotype and genotype in Taiwan. We had one the highest levels of antibiotic resistance pneumococcus in the world and some novel 23F and 19F clones.

This study was conducted to continue investigate the invasive and colonization S. pneumoniae isolates, including the epidemiological surveillance, antibiotic resistance and serotype. From Jan. through Dec. 2004, pneumococcal isolates from 17 patients with invasive disease and 76 colonization strains. The major age distribution was 2 to 5-year-old. The most common invasive disease in the order was pneumonia, bacteremia and meningitis. The all mortality rate was 6%. The most prevalent serotype encountered in the invasive isolates was 14 follow by 23F, 19F, 6B and 3. The antibiotic susceptibility data revealed penicillin resistance was 82.4%; cefuroxime resistance was 64.7%; cefotaxime resistance was 47.1%; erythromycin resistance was 100%, but all isolates sensitive to vancomycin.

Among the 76 colonization strains, the most prevalent serotype was 19F follow by 6B, 23F 14, and 3. The antibiotic susceptibility data showed penicillin resistance was 71.1%; cefuroxime resistance was 72.4%; cefotaxime resistance was 47.4%; erythromycin resistance was 89.5%.

According to the results of this study, there was remarkable epidemiological data, and antibiotic resistance rate, which different from western countries. In Taiwan, S. pneumoniae isolates should be tested for their resistance profile as there were more likely to harbor multi-drugs resistance. Control of pneumococcal infection with the conjugated vaccine should also be considered. We suggested continue surveillance of S. pneumoniae isolates in Taiwan was necessary.

Keywords: Streptococcus pneumoniae；colonization；antibiotic resistance；serotype.