

Abstract

Streptococcus pneumoniae infection causes many invasive diseases of human such septicemia, meningitis, pneumonia, etc. It is a common pathogen throughout the world. The surveillance on the invasive *S. pneumoniae* infection was start from January 2002 to December 2002 in Taiwan area. A total of 623 isolates and patient's data were collected from a collaboration of 28 local hospitals within the infectious disease reporting system. 546 cases was qualified by the definition of invasiveness, that is, bacteria were isolated from blood, cerebrospinal fluid, or from usually sterile parts of body. A majority of the cases were either under 5 years of age(24.18%) or older than 65 years(36.26%). Sex ratio for male and female was 2.15 to 1. This disease occurred more frequently in winter and spring. The mortality rate was 13.75% from our results. The most frequently isolated serotypes of *S. pneumoniae* were type 14 (19.05%), 23F (14.47%), 3(13.92%), 19F(12.82%), 6B (8.06%), 9V(4.21%) and 4 (2.38%), by the order of decreasing frequency of the isolation. However, there are some differences in the distribution of serotypes between adults and children. Serotypes usually found in the adults were type 3 (17.93%),14 (15.76%),19F (13.59%),23F (12.23%),6B (6.25%),9V (3.86%), and 4(3.26%)by decreasing order. Serotypes usually found in the children were type 14 (29.03%),23F (16.77%),6B (13.55%), 19F(11.61%),3(5.81%)and 9V(4.52%), by decreasing order. At present time, 23 polyvalent vaccines in the commercial markets seems to cover 86.81% of the serotypes of *S. pneumoniae* in Taiwan. They covered the serotypes in the elder people are slightly higher(88.38%).At that time, there are a 7 polyvalent protein conjugate vaccines in the commercial markets, They covered the serotypes in under 2 years of age is 81.13%.

These are the preliminary data of *Streptococcus pneumoniae* infection in Taiwan. Our data provide clinical physicians and epidemiologists a current situation of serotyping and antibiotic resistance. The results will provide our policy-makers a national immunization project in future.

Keywords : Invasive ; *Streptococcus pneumonuiae* ; serotype ; PFGE