

Abstract

Background. Pneumococcus is the most important pathogen of bacterial pneumonia, bacteremia, meningitis, otitis media and sinusitis in human. Advisory Committee for Immunization Practice in the U.S.A. has recommended that the 23-valent pneumococcus capsular polysaccharide vaccine should be given to peoples older than 65 years and those between 2 and 65 years with some debilitated illnesses. After the disastrous earthquake in 1999 in Taiwan, about one thousand doses of pneumococcus vaccine were donated by the pharmaceutical company in 2000 to those living in areas suffering most from the earthquake. This study was aimed to evaluate the long-term protective efficacy of the vaccination from 2002 to 2004.

Methods. In May 2000, a total of 1377 elderly peoples living in institutes for chronic care was enrolled and received 23-valent pneumococcus vaccines. The mean age is 75.0 ± 11.3 years. Another 997 peoples living in institutes for chronic care were also enrolled to serve as a control. Their age averaged 75.4 ± 9.3 years. Their relevant records of hospitalization and outpatient visit between 2002 and 2004 were collected from the database system of the Bureau of National Health Insurance, Taiwan.

Results. From the year 2002 to 2004, the yearly hospitalization rate for pneumonia in the vaccination group was significantly lower than that in the control group (8.7% vs. 10.1%, $P = 0.046$). The rate of outpatient visits and the incidence of sepsis were not significantly different between the two groups.

Conclusion. Pneumococcus capsular polysaccharide vaccine may be effective to decrease the hospitalization rate for pneumonia in the elderly. Such a protective effect may persist for at least 4 years after the vaccination.

Key words: pneumococcus, vaccine, elderly, pneumonia.