

ANSORP Pneumococcus Project

Minutes of the Investigator Meeting

**Prospective, hospital-based, multinational surveillance
on antimicrobial resistance and serotypes of *Streptococcus
pneumoniae* and disease burden of pneumococcal infections in
Asian countries in the era of pneumococcal conjugate vaccine**

**November 28, 2008
Grand Hyatt Taipei, Taiwan**

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I. Participants

Country	Name	Center
Korea	Dr. Jae-Hoon Song	Samsung Medical Center Organizer, Asian Network for Surveillance of Resistant Pathogens (ANSORP)
Korea	Dr. Doo Ryeon Chung	Samsung Medical Center
Korea	Dr. So Hyun Kim	Asian-Pacific Research Foundation for Infectious Disease (ARFID) Project Manager, ANSORP
Hong Kong	Dr. Thomas So	Princess Margaret Hospital
Taiwan	Dr. Cheng-Hsun Chiu	Chang-Gung Memorial Hospital
	Dr. Lin-Hui Su	Chang-Gung Memorial Hospital
India	Dr. M. K. Lalitha	Madras Medical Mission
Malaysia	Dr. Rohani Md Yasin	Institute for Medical Research
Saudi Arabia	Dr. Atef Shibl	King Saud University Hospital

II. Meeting agenda

Moderator: Dr. Jae-Hoon Song (Organizer, ANSORP)

Times (approx)	Discussion Topic	Contributor
3:00 pm	Welcome & Introduction	Dr. Jae-Hoon Song (Organizer, ANSORP)
3:15 pm	Overview of the current status of the project	Dr. Doo Ryeon Chung (Korea)
3:30 pm	The current status of the project in each country	Local organizer in each country
	Korea	Dr. So Hyun Kim (Korea)
	Saudi Arabia	Dr. Atef Shibl (Saudi Arabia)
	Malaysia	Dr. Rohani Md Yasin (Malaysia)
	India	Dr. M. K. Lalitha (India)
	Hong Kong	Dr. Thomas So (Hong Kong)
4:30 pm	The current status of the project in China, Taiwan, Thailand, Philippines, Sri Lanka, Vietnam, and Japan	Dr. Doo Ryeon Chung (Korea)
5:00 pm	Discussion	Dr. Jae-Hoon Song (Korea)
6:00 pm	Dinner	

III. Introduction

Streptococcus pneumoniae has been the most important pathogen causing various local and invasive infections. Increasing resistance to penicillin among pneumococcal isolates has been widely reported in most countries during the last decade. In particular, penicillin resistance rate in Asian countries is much higher, as we have already reported surveillance results through earlier ANSORP studies. Resistance to erythromycin also has been increasing worldwide, and the highest resistance rate has been noted in Asian countries. Such an increasing antimicrobial resistance in *S. pneumoniae* has led to a significant change in use of antimicrobial agents for the treatment of pneumococcal diseases, and this has resulted in another contribution to global crisis in antimicrobial resistance by selective pressure.

Although *S. pneumoniae* has 90 serotypes, the serotypes in invasive isolates are limited to a small number. Especially, a limited number of serotypes account for most infections with drug-resistant strains. PCV7 (heptavalent pneumococcal conjugate vaccine) was introduced into the routine infant immunization program in the USA in 2000, and was licensed in Europe in 2001. More recently, several European countries, including Norway, France, Germany, the Netherlands, Spain and the UK, have introduced or are planning to introduce PCV into their routine childhood immunization programs. Recently, it was also introduced into the Asian countries. A great impact of PCV7 on invasive pneumococcal infections has been well-demonstrated through active surveillance in the USA. Pneumococcal colonization also has changed after the introduction of PCV7, both in serotype distribution and in patterns of antibiotic resistance. The frequency of non-vaccine strains has increased, and the proportion of non-vaccine isolates that are not susceptible to penicillin has tripled. However, there has been no report on these issues in Asian countries.

Therefore, the aims of the current study are to investigate the seroepidemiology of pneumococcal diseases and investigate the current status in antimicrobial resistance of *S. pneumoniae* in Asian countries in the beginning of PCV era.

IV. Meeting summary

The objectives of the Investigator Meeting were to:

- check the current status of the project
- discuss current problems and solutions
- make future plans.

[Overview of the current status of the project]

- This study is prospective, multicenter, hospital-based, active surveillance study on *S. pneumoniae* in Asian countries with focus on seroepidemiology and antimicrobial resistance. A total of 92 centers in 13 countries are participating in this project as of November 22.
- Among the 92 centers participating in this project, 61 centers (66%) have been activated as of November 22.
- The target number of cases is 2700 in total and the total number of cases enrolled was 1161 (43%) as of November 22.
- The major source of the *S. pneumoniae* isolates was sputum (70.4%), followed by blood (17.1%) and CSF (3.8%).
- The major infections caused by *S. pneumoniae* were pneumonia (84.5%), bacteremia (4.8%), meningitis (2.8%), and otitis media (1.6%).
- The most prevalent serotypes were 19F (21.6%), 23F (11.4%), 6B (7.6%), and 14 (7.3%) with differences in proportions of each serotype among countries and 53.6% of the *S. pneumoniae* isolates were PCV7 serotypes.

[Discussion]

- Since enrollment status is only 43% and only 66% of the participating centers have been activated as of November 22, **extending the study period to July 2009** and motivating investigators for active case enrollment were proposed.
- At the meeting, it was reemphasized that cases of all ages and both invasive and non-invasive infections need to be included in the study enrollment. However, nasopharyngeal carriage isolates should be excluded.
- The proportion of children under 5 years of age was 24% and it was suggested to enroll more cases of children under 5 years of age.

Please find attached appendix, the presentation files for the Investigator Meeting, for further detailed information on the current status and interim results of the project.