Monthly Newsletter
June 2013

ANSORP *NOW*

CONTENTS :

Dear ANSORP Investigators

Greetings from Seoul !
I hope all ANSORP investigators are doing well.

This is the 2013 June issue of ANSORP NOW. It provides update information and current status of ANSORP activities. "ANSORP NOW" is a monthly newsletter, delivered to all ANSORP investigators by e-mail and website of APFID (www.apfid.org).

Please read this ANSORP NOW carefully to update our international collaboration. If you have any ideas, opinions, or issues that can be shared with other ANSORP investigators, please send us e-mails or FAX.

I always appreciate your active participation in the ANSORP activities.

Jae-Hoon Song, MD, PhD
Organizer, ANSORP
Founder & Chairman, APFID

Current status of ANSORP studies in 2013

ANSORP will perform the following projects soon.

- A prospective, hospital-based, multicenter surveillance on antimicrobial resistance and serotypes of *S. pneumoniae* in hospitalized patients over 50 years with invasive pneumococcal diseases or pneumonia in Asia
  (PI : Jae-Hoon Song, Korea ; sponsored by Pfizer)
  - Contract review is underway.

- A multicenter, multinational serosurvey study for pertussis among children 10-18 years old in Asia
  (PIs : Cheng-Hsun Chiu, Taiwan & Yae-Jean Kim, Korea ;
  sponsored by Sanofi-Pasteur)
  - Contract process is underway.
  - The study is expected to be started from July or August and IRB approval process in each participating center is underway.

- Capacity assessment of antimicrobial stewardship in the Asia Pacific
  (PI : David Lye & Li Yang Hsu, Singapore ; sponsored by APFID)
  - Questionnaire has been translated into each language and review and revision of the translated questionnaire are underway.
  - Online questionnaire survey on antimicrobial stewardship in hospitals in Asian countries (including both ANSORP centers and non-ANSORP centers) will be performed soon.

Contact Information

Jae-Hoon Song, MD, PhD
Organizer, ANSORP / Chairman, APFID
Samsung Medical Center
Tel: 82-2-3410-0320, FAX: 82-2-3410-0041
E-mail: ansorp@gmail.com or
songjh@skku.edu

Doo Ryeon Chung, MD, PhD
Coordinator, ANSORP
Samsung Medical Center
Tel: 82-2-3410-0323, FAX: 82-2-3410-0041
E-mail: iddrchung@gmail.com or
drchung@skku.edu

So Hyun Kim, DVM, PhD
Project Manager, ANSORP
Asia Pacific Foundation for Infectious Diseases
Tel: 82-2-3410-6826, FAX: 82-2-3410-6667
E-mail: shkim@ansorp.org or
shkim.ansorp@gmail.com

Interesting papers

Emergence of ST398 as a community and healthcare-associated methicillin-susceptible *Staphylococcus aureus* in Northern Manhattan

Clin Infect Dis. 2013 May 31. [Epub ahead of print]

Uhlemann AC, Hafer C, Miko B, Sowash M, Sullivan S, Shu Q, Lowy FD

ABSTRACT

The methicillin-susceptible *Staphylococcus aureus* clone ST398 has increasingly been identified as a pathogen in diverse geographic settings yet its epidemiology remains incompletely understood. In this case-control study of MSSA infections we identified ST398-MSSA as both, a major community- and hospital-associated MSSA pathogen in the Dominican neighborhood of Northern Manhattan.

Evolution of community- and healthcare-associated methicillin-resistant *Staphylococcus aureus*

Infect Genet Evol. 2013 May 3. [Epub ahead of print]

Uhlemann AC, Otto M, Lowy FD, Deleo FR

ABSTRACT

Staphylococcus aureus is a prominent cause of human infections globally. The high prevalence of infections is compounded by antibiotic resistance-a significant problem for treatment. Methicillin-resistant *S. aureus* (MRSA) is endemic in hospitals and healthcare facilities worldwide, and is an increasingly common cause of community-associated bacterial infections in industrialized countries. Although much focus is placed on the role of *S. aureus* as a human pathogen, it is in fact a human commensal organism that has had a relatively long coexistence with the human host. Many *S. aureus* infections can be explained by host susceptibility or other predisposing risk factors. On the other hand, the emergence/re-emergence of successful *S. aureus* clones (referred to as epidemic waves) suggests a rapid bacterial adaption and evolution, which includes the emergence of antibiotic resistance and increased virulence and/or transmissibility. It is within this context that we review our understanding of selected *S. aureus* epidemic waves, and highlight the use of genome sequencing as a means to better understand the evolution of each lineage.

Targeted versus universal decolonization to prevent ICU infection

N Engl J Med. 2013 Jun 13;368(24):2255-65

Huang SS et al.; CDC Prevention Epicenters Program; AHRQ DECIDE Network and Healthcare-Associated Infections Program.

ABSTRACT

BACKGROUND: Both targeted decolonization and universal decolonization of patients in intensive care units (ICUs) are candidate strategies to prevent healthcare-associated infections, particularly those caused by MRSA**.**

METHODS: We conducted a pragmatic, cluster-randomized trial. Hospitals were randomly assigned to one of three strategies, with all adult ICUs in a given hospital assigned to the same strategy. Group 1 implemented MRSA screening and isolation; group 2, targeted decolonization (i.e., screening, isolation, and decolonization of MRSA carriers); and group 3, universal decolonization (i.e., no screening, and decolonization of all patients). Proportional-hazards models were used to assess differences in infection reductions across the study groups, with clustering according to hospital.

RESULTS: A total of 43 hospitals (including 74 ICUs and 74,256 patients during the intervention period) underwent randomization. In the intervention period versus the baseline period, modeled hazard ratios for MRSA clinical isolates were 0.92 for screening and isolation (crude rate, 3.2 vs. 3.4 isolates per 1000 days), 0.75 for targeted decolonization (3.2 vs. 4.3 isolates per 1000 days), and 0.63 for universal decolonization (2.1 vs. 3.4 isolates per 1000 days) (P=0.01 for test of all groups being equal). In the intervention versus baseline periods, hazard ratios for bloodstream infection with any pathogen in the three groups were 0.99 (crude rate, 4.1 vs. 4.2 infections per 1000 days), 0.78 (3.7 vs. 4.8 infections per 1000 days), and 0.56 (3.6 vs. 6.1 infections per 1000 days), respectively (P<0.001 for test of all groups being equal). Universal decolonization resulted in a significantly greater reduction in the rate of all bloodstream infections than either targeted decolonization or screening and isolation. One bloodstream infection was prevented per 54 patients who underwent decolonization. The reductions in rates of MRSA bloodstream infection were similar to those of all bloodstream infections, but the difference was not significant. Adverse events, which occurred in 7 patients, were mild and related to chlorhexidine.

CONCLUSIONS: In routine ICU practice, universal decolonization was more effective than targeted decolonization or screening and isolation in reducing rates of MRSA clinical isolates and bloodstream infection from any pathogen.

If you need PDF version of the papers, please contact ANSORP Project Manager (Dr. So Hyun Kim, shkim@ansorp.org).

We always appreciate your active contribution to ANSORP activities.
If you have any questions, or issues that can be shared with other ANSORP investigators, please let us know them at any time.