Monthly Newsletter
April 2014

ANSORP *NOW*

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Dear ANSORP Investigators

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

This is the 2014 April 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

- A prospective, hospital-based, multicenter surveillance on antimicrobial resistance and serotypes of *Streptococcus pneumoniae* in hospitalized patients over 50 years with invasive pneumococcal diseases or pneumonia in Asia
  (PI : Jae-Hoon Song, Korea ; sponsored by Pfizer)
  - The study has been started since Dec 2013 (Nov 2012 in Korea) and is supposed to be completed by Nov 2015.
  - Seven countries (Korea, China, Indonesia, Malaysia, Philippines, Singapore, and Thailand) are participating in the study.
- 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)
  - The study has been started since Oct 2013 and is supposed to be competed by Sep 2015.
  - Ten centers in seven countries (Korea, China, Japan, Taiwan, Thailand, Sri Lanka, and India) are participating in the study.
- Capacity assessment of antimicrobial stewardship in the Asia Pacific
  (PI : David Lye & Li Yang Hsu, Singapore ; sponsored by APFID)
  - Online questionnaire survey on antimicrobial stewardship in hospitals in Asian countries (including both ANSORP centers and non-ANSORP centers) will be performed from May and supposed to be completed by Aug 2014.

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Publication of APFID in April 2014

Treatment failure due to induction of ciprofloxacin resistance during combination therapy with colistin and ciprofloxacin in multidrug-resistant *Pseudomonas aeruginosa* bacteraemia

Int J Antimicrob Agents. 2014 Apr;43(4):391-3

Kim J, Kang CI, Baek JY, Cho SY, Kim SH, Ko KS, Chung DR, Peck KR, Song JH

SUMMARY

Nosocomial infections caused by multidrug-resistant (MDR) or extensively drug-resistant (XDR) *Pseudomonas aeruginosa* strains compromise the selection of appropriate antibiotics. Although combination therapy has been considered for severely ill patients as well as for MDR/XDR infections, the benefit may not justify it as a general practice. Here we report on an immunocompromised patient with skin and soft-tissue infection caused by MDR *P. aeruginosa* who experienced treatment failure due to induction of ciprofloxacin resistance during combination therapy with colistin and ciprofloxacin.

Phenotypic and genotypinc analyses of two consecutive isolates of carbapenem-resistant *P. aeruginosa* obtained from the patient showed thatthe MexEF-OprN efflux pump system might be involved in the clinical *P. aeruginosa* strain's high-level resistance to ciprofloxacin.

Treatment failure in this patient suggests that addition of active ciprofloxacin and colistin therapy may not effectively prevent the induction of fluoroquinolone resistance in MDR *P. aeruginosa* bacteraemia. Induction of antimicrobial resistnace is worrisome because treatment options for MDR/XDR *P. aeruginosa* infection are severely limited.

Interesting papers

Transferable vancomycin resistance in a community-associated MRSA lineage

N Engl J Med. 2014 Apr 17;370(16):1524-31

Rossi F1, Diaz L, Wollam A, Panesso D, Zhou Y, Rincon S, Narechania A, Xing G, Di Gioia TS, Doi A, Tran TT, Reyes J, Munita JM, Carvajal LP, Hernandez-Roldan A, Brandão D, van der Heijden IM, Murray BE, Planet PJ, Weinstock GM, Arias CA.

ABSTRACT

We report the case of a patient from Brazil with a bloodstream infection caused by a strain of methicillin-resistant Staphylococcus aureus (MRSA) that was susceptible to vancomycin (designated BR-VSSA) but that acquired the vanA gene cluster during antibiotic therapy and became resistant to vancomycin (designated BR-VRSA). Both strains belong to the sequence type (ST) 8 community-associated genetic lineage that carries the staphylococcal chromosomal cassette mec (SCCmec) type IVa and the S. aureus protein A gene (spa) type t292 and are phylogenetically related to MRSA lineage USA300. A conjugative plasmid of 55,706 bp (pBRZ01) carrying the vanA cluster was identified and readily transferred to other staphylococci. The pBRZ01 plasmid harbors DNA sequences that are typical of the plasmid-associated replication genes rep24 or rep21 described in community-associated MRSA strains from Australia (pWBG745). The presence and dissemination of community-associated MRSA containing vanA could become a serious public health concern.

Persistence and complex evolution of fluoroquinolone-resistant *Streptococcus pneumoniae* clone

Emerg Infect Dis. 2014 May;20(5):799-805

Ben-David D, Schwaber MJ, Adler A, Masarwa S, Edgar R, Navon-Venezia S, Schwartz D, Porat N, Kotlovsky T, Polivkin N, Weinberg I, Lazary A, Ohana N, Dagan R.

ABSTRACT

Prolonged outbreaks of multidrug-resistant *Streptococcus pneumoniae* in health care facilities are uncommon. We found persistent transmission of a fluroquinolone-resistant *S. pneumoniae* clone during 2006-2011 in a post-acute care facility in Israel, despite mandatory vaccination and fluoroquinolone restriction. Capsular switch and multiple antimicrobial nonsusceptibility mutations occurred within this single clone. The persistent transmission of fluoroquinolone-resistant S. pneumoniae during a 5-year period underscores the importance of long-term care facilities as potential reservoirs of multidrug-resistant streptococci.

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