Monthly Newsletter
April 2013

ANSORP *NOW*

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Dear ANSORP Investigators

Greetings from Seoul !
I hope all ANSORP investigators are doing well and wish you and your family the New Year filled with joy and happiness.

This is the 2013 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

Report of the APEC Health Working Group meeting in Surabaya, Indonesia

The APEC Health Working Group (HWG) meeting was held in Surabaya, Indonesia from April 11 to 12, 2013. Dr. So Hyun Kim, ANSORP Project Manage, attended the HWG meeting to present the progress of two APEC projects entitled ***"Enhancing health security in APEC – International campaign program to control antimicrobial resistance in the Asia-Pacific"*** and ***"Strengthening health security – APEC symposium on strategies to control and prevent antimicrobial resistance"***, which were approved by APEC in June and September 2012, respectively.

The project to organize APEC symposium was successfully performed by organization of APEC symposium on strategies to control antimicrobial resistance (AMR) on March 15, 2013 in conjunction with ISAAR 2013. Also, APEC member economies were very interested in and actively supported the project to develop and implement an international campaign project to increase awareness on AMR and appropriate use of antibiotics. International campaign, "Campaign 4" which is tentative, will be launched later this year.

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Interesting papers

Human Infection with a Novel Avian-Origin Influenza A (H7N9) Virus

N Engl J Med. 2013 Apr 11. [Epub ahead of print]

Gao R, Cao B, Hu Y, Feng Z, Wang D, Hu W, Chen J, Jie Z, Qiu H, Xu K, Xu X, Lu H, Zhu W, Gao Z, Xiang N, Shen Y, He Z, Gu Y, Zhang Z, Yang Y, Zhao X, Zhou L, Li X, Zou S, Zhang Y, Li X, Yang L, Guo J, Dong J, Li Q, Dong L, Zhu Y, Bai T, Wang S, Hao P, Yang W, Zhang Y, Han J, Yu H, Li D, Gao GF, Wu G, Wang Y, Yuan Z, Shu Y.

ABSTRACT

Background Infection of poultry with influenza A subtype H7 viruses occurs worldwide, but the introduction of this subtype to humans in Asia has not been observed previously. In March 2013, three urban residents of Shanghai or Anhui, China, presented with rapidly progressing lower respiratory tract infections and were found to be infected with a novel reassortant avian-origin influenza A (H7N9) virus. Methods We obtained and analyzed clinical, epidemiologic, and virologic data from these patients. Respiratory specimens were tested for influenza and other respiratory viruses by means of real-time reverse-transcriptase-polymerase-chain-reaction assays, viral culturing, and sequence analyses. Results A novel reassortant avian-origin influenza A (H7N9) virus was isolated from respiratory specimens obtained from all three patients and was identified as H7N9. Sequencing analyses revealed that all the genes from these three viruses were of avian origin, with six internal genes from avian influenza A (H9N2) viruses. Substitution Q226L (H3 numbering) at the 210-loop in the hemagglutinin (HA) gene was found in the A/Anhui/1/2013 and A/Shanghai/2/2013 virus but not in the A/Shanghai/1/2013 virus. A T160A mutation was identified at the 150-loop in the HA gene of all three viruses. A deletion of five amino acids in the neuraminidase (NA) stalk region was found in all three viruses. All three patients presented with fever, cough, and dyspnea. Two of the patients had a history of recent exposure to poultry. Chest radiography revealed diffuse opacities and consolidation. Complications included acute respiratory distress syndrome and multiorgan failure. All three patients died. Conclusions Novel reassortant H7N9 viruses were associated with severe and fatal respiratory disease in three patients. (Funded by the National Basic Research Program of China and others.).

Global Concerns Regarding Novel Influenza A (H7N9) Virus Infections.

N Engl J Med. 2013 Apr 11. [Epub ahead of print]

Uyeki TM, Cox NJ.

ABSTRACT

Severe disease in humans caused by a novel influenza A virus that is distinct from circulating human influenza A viruses is a seminal event. It might herald sporadic human infections from an animal source - e.g., highly pathogenic avian influenza (HPAI) A (H5N1) virus; or it might signal the start of an influenza pandemic - e.g., influenza A(H1N1)pdm09 virus. Therefore, the discovery of novel influenza A (H7N9) virus infections in three critically ill patients reported in the Journal by Gao and colleagues is of major public health significance.

Background and Rationale for Revised Clinical and Laboratory Standards Institute Interpretive Criteria (Breakpoints) for *Enterobacteriaceae* and *Pseudomonas aeruginosa*: I. Cephalosporins and Aztreonam

Clin Infect Dis. 2013 May;56(9):1301-9

Dudley MN, Ambrose PG, Bhavnani SM, Craig WA, Ferraro MJ, Jones RN; Antimicrobial Susceptibility Testing Subcommittee of the Clinical and Laboratory Standards Institute.

ABSTRACT

Widespread resistance in *Enterobacteriaceae* and *Pseudomonas aeruginosa* to cephalosporin and monobactam antibiotics due to extended-spectrum β-lactamases (ESBLs) has resulted in the need for reassessment of the interpretative criteria (breakpoints) established for these agents more than 2 decades ago. Following extensive evaluation, the Clinical and Laboratory Standards Institute recently adopted and published new breakpoints for these agents for use in clinical laboratories and provided updated recommendations for use of the ESBL screening test. This paper summarizes the background and supportive rationale for new interpretative criteria for cephalosporins and aztreonam for testing *Enterobacteriaceae*.

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.