Bulletin CRID-TROPHID

Center for Research and Integrated Development of Tropical Health and Infectious Diseases
Faculty of Medicine Universitas Indonesia

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Secretariat:

1st floor Library
Faculty of Medicine Universitas Indonesia
Salemba Raya 6, Jakarta 10430
Phone/fax: 3922825
E-mail: phki_fkui@yahoo.com
website: tropic-infection.ui.ac.id

Annual Report on CRID-TROPHID Activity

Infectious disease is still one of the top causes of death in Indonesia. According to Basic Health Research (Riskesdas) 2007, 28.1% death was caused by infectious diseases. Tuberculosis, typhoid, malaria, and pneumonia are some of many diseases plaguing Indonesia. Therefore, more efforts are still needed to attain better understanding toward tropical and infectious diseases, especially on their prevention and treatment. In concordance with Universitas Indonesia's (UI) Strategic Plan 2008-2013 (Renstra), which is to gain an internationally reputable academic standard and produce high-qualified graduates, who are capable of participating in achieving welfare for mankind, Centre for Research and Integrated Development of Tropical Health and Infectious Diseases (CRID-TROPHID) was established.

During 2010, CRID-TROPHID main activity was internationalization of UI by developing integrated research centre for tropical health and infectious diseases. The activity aimed to develop a study group in tropical and infectious disease which involves various disciplines and becomes the centre for national and international partnership. Another aim is to develop an international standard education program on infectious and tropical diseases through IT & computer-mediated learning, the latest teaching method.

This activity was done in several steps. The first one was mapping of the potential resources related to tropical and infectious diseases in UI. Meetings with related department in FMUI and other related faculty or unit had been conducted. Coordination with other faculties is performed in continuance in order to complete resource mapping.

Making a business plan was the second step. Two meetings with person in charge of Thematic had been arranged. However, the roadmap of the business plan is still in progress. This takes slower than the expected deadline, which is June 2010.

Research grants had been given to 3 staff members. They were selected by a team of jury, which consists of dr. Anis Karuniawati, PhD, SpMK(K), dr. Muchtaruddin Mansyur, SpOk, PhD, dr. Rer. Physiol. Septelia Inawati Wanandi, and dr. Elisna Syahruddin, SpP(K). The proposal presentation took place on November 5th 2010, while the scoring took place on November 8th 2010. The receiver of the grants are: dr. Ahmad Fuady, with research title "Care seeking behavior and primary health service contributing to prevalence of pulmonary tuberculosis in Jakarta, Indonesia", dr. Yulia Rosa with "Surveillans Multidrug Resistant Organism in ICU FKUI/RSCM", and dr. Rahayussalim, SpOT(K) with "The Effect of Bacteria from Spondilitis Material Isolate to The Growth of Adult Stem Cell Taken From Illiac Bone Marrow".

Information dissemination was done by publishing three issues of CRID-TROPHID bulletin. The bulletin contains scientific articles related to tropical and infectious diseases, and also articles about CRID-TROPHID itself. The bulletin shall still be published three times annually.

In regards of creating international partnership, five guest-lectures had been held. On August 4th 2010, Prof. dr. Hans Jurgen Magert gave a lecture on the topic of "Human Regulatory Peptides/Proteins with Pathophysiological Relevance in Infectious Diseases" and on October 23rd 2010, dr. Ling Moi Lin gave a lecture on "Infection Control and Patient Safety". Other lectures include "Globalisation and Infectious Diseases : Challenges and Opportunities" by Prof. Jeremy Farrar, "Development of Therapeutic Proteins and Predictive Markers for Sepsis and Systemic Inflammation" by Yow-Pin Lim, MD, and "Surveillance of Emerging Diseases and Networks" by Jean-Jacques Bernatas, MD.

Travel grants had also been given to faculty staffs. For example, dr. Ahmad Fuady and dra. Betty Ernawati, PhD who received the grants to go to Erasmus University to participate in several activities and scientific presentations. The other staff who received the grant is dr. Erni Nelwan, SpPD, delegate who participated in The International Conference on Opportunistic Pathogen, in New Delhi, 27-30 September 2010. In the conference, she presented the clinical aspects and treatment outcomes of Candida infection in Indonesian HIV patients. Dr. Yenny Djuardi also received a grant to participate in 59th Annual Meeting American Society of Tropical Medicine and Hygiene on 3-7 November 2010. Moreover, four staffs member were chosen to participate in 6th Malaysia Indonesia Brunei Medical Sciences Conference 2010. They received funding from sources other than DIKTI, but it is still considered as part of CRID TROPHID activity. They were dr. Leonardus Nainggolan, Sp.PD-KPTI, dr. Erlina Burhan SpP(K), dr. Febriana Catur Iswanti, and dr. Retno Kadarsih Soemanto. Each brought their own topics to be presented in the event.

Publication awards were given to seven laureates, four nationals and three internationals awards. The selecting team consisted of dr. Anis Karuniawati, PhD, Sp.MK(K), dr. Muchtaruddin Mansyur, SpOk, PhD, dr. Rer. Physiol. Septelia Inawati Wanandi, and dr. Elisna Syahruddin, SpP(K). The four national publication award laureates were: dr. Tjahyani Mirawati Soediro, PhD, with publication titled "Antibody anti-H5N1 Detection in Poultry Farmers and Workers in Poultry Collection Facilities in Indonesia", Mardiastuti H. Wahid with "Development of Multiplex-PCR Assay for Rapid Detection of Candida spp", dr. Andi Yasmon with "A second Geneperation of RT-PCR Assay for Detection of Human Immunodeficiency Virus Type 1 (HIV-1) infection", and dr. Ari Fahrial Syam, SpPD-KGEH with "A comparison of 5 or 7 Days on Rabeprazole Triple Therapy for Eradication of Helicobacter pylori". For the international publication awards, the laureates were: Dr. dr. Taniawati Supali with "Relationship between Different Species of Helmints and Atopy: A Study in Population Living in Helminth-endemic Area in Sulawesi, Indonesia", dr. Apriliatno Eddy Wiria with "Regulatory T Cells in Human Geohelminth Infection Suppress Immune Responses to BCG and Plasmodium falciparum", and dr. Trevino Pakasi Aristakus with "Zinc and Vitamin A Supplementation Fails to Reduce Sputum Conversion Time in Severely Malnourished Pulmonary Tuberculosis Patients in Indonesia".

A community laboratory was planned to be built in Klinik Dokter Keluarga (Family Doctor Clinic) FMUI in Kayu Putih, and the specification for equipment required had been submitted. The equipments were already ordered, and we are currently waiting for the delivery.

Last year, the database collection and information system management had reached the collecting phase. Several information technology vendors had submitted their proposition, and will be selected by the means of tender system. Currently, CRID-TROPHID has website address http://tropic-infection.ui.ac.id.

In order to develop educational program in the field of tropical and infectious disease, IT Based Tropical and Infectious Module-Organizing Competition was held during April 14th until June 25th 2010. The competition winner was announced on June 25th 2010, eleven module drafts were selected and three of them will be finalized for application. The outcome of these activities includes the widening of UI network of partnership with related institution and universities, and the increasing recognition of UI speakers, both nationally and internationally.

Globalisation and Infectious Diseases : Challenges and Opportunities

Jeremy Farrar during the lecture (Secretariate)

In 1918, the largest and most devastating outbreak of a highly virulent influenza A H1N1 occurred. This disease spread throughout the world and killed 20-40 million people. Due to this event, a concern raised about the ongoing circulation of avian H5N1 influenza virus and the potential pandemic that the recent virus H1N1 in 2009 might cause.

Considering the potential death that 1918-like influenza pandemic might cause, the spread of drug resistance, the still growing HIV/AIDS epidemic, and the epic and unpredictable changes in many parts of developing world's society and environment into account, global and more importantly regional investment must be prioritized. Both investments in the infrastructure of scientific and healthcare infrastructure as well as consideration of new clinical science paradigm are utmost importance in addressing the global health challenges of the 21st century.

In this lecture Professor Jeremy Farrar FRCP FRCP (Ed) FMedSci DPhil OBE, stressed that international cooperation, collaboration, and data sharing are necessary, and can only be achieved if trust is engendered among scientists by long term shared work in an equal scientific partnership between the north and the south. This kind of partnership can not be generated fast and occurs only when the developed countries feel threatened by something that the developing world might be spreading to them. The information and benefits from those researches have to be equally shared and flow in the necessary directions. Remarkable explosions in the molecular and other sciences occured in the last twenty years.

In the lecture in which Udayana, Airlangga, Hasanudin, Tanjung Pura, Muhamadiyah Malang, Brawijaya and Andalas University attended by the means of video conference, Jeremy noted that as we continue to neglect (and create increasingly, unnecessary bureaucracy and complication) patient-oriented research and public health, a real threat exist that these area will be the one which will hold back the phenomenal opportunities that result from the basic scientific revolution. Mass scientific data, such as SNP, cellular responses, cytokines, and proteomics, can now be delivered within minutes. However, unless we can rationalize the data and give the context of human being to them, as well as the environment and community where they live in, such remarkable scientific progress will not bring any benefit to those who need it the most.

The neglect of clinical and public health bit of clinical science has taken place for too long; we also failed to build sufficient long term equal scientific partnership between the north and the south. A great opportunity exists in revitalizing health research fully integrated with the basic and social science and building strong international collaborations with the centre located in the area where the need is greatest.

To conclude the meeting that was attended by more than 500 people, Jeremy stated that the opportunities that might arise from such collaborations and networks are not to be undermined, but like all effort great deal of work, in order to attain success, is needed, and they might not be the answer to everything.

Development of Therapeutic Proteins and Predictive Markers for Sepsis and Systemic Inflammation

Yow-Pin Lim during the lecture. (Secretariate)

It is a common knowledge that inflammation is a necessary defense mechanism of the body to ward off harmful stimuli, such as bacterial or viral infections, and to participate in the process of wound or injury healing. In spite of its importance, certain circumstances, such as infections, intoxications, or trauma, might trigger overwhelming inflammatory response, in which various cytokines are activated and degrading enzymes are secreted, leading to multiple organs dysfunction, where the lungs, kidneys, and heart fail to function. The endpoint of this cascade of event is the death of the host.

In this lecture, Yow-Pin Lim, MD, PhD highlighted several terms that are used in defining a clinical parameter of such events. Severe inflammatory response syndrome (SIRS), for one, is defined as a clinical response to a variety of condition (e.g. infection, trauma, burn, and injury). To establish the term as a diagnosis, at least two out of these symptoms: fever > 38 °C, heart rate > 90/minute, abnormal WBC, respiratory rate > 20/minute, or pCO2 > 32 mmHg, should be present. Sepsis, on the other hand, is SIRS with identified bacterial infection. Blood culture should yield positive result in order to establish such diagnosis.

Severe sepsis is sepsis accompanied by multiple organs dysfunction, in which hypoperfusion and hypotension occur. Septic shock is a term to define a severe sepsis accompanied by cardiovascular dysfunction, which is characterized by unresponsiveness to fluid resuscitation.

Sepsis can be considered as an underestimated killer. In USA, the incidence rate reaches 300/100 000 people, with a mortality rate of around 30-50%. Worldwide, more than eighteen million people suffer from sepsis annually. What is more worrying is the fact that the incidence is predicted to increase over the next decade due to the aging population and immunosuppressive therapy.

Up to now, there is no significant progress in sepsis diagnostic, no ideal diagnostic marker currently available, and over the last 30 years, thirty experimental drugs have failed in the phase III trial. Only one FDA approved drug available, the anticoagulant activated human protein (aPC), with limited efficacy and indication.

Inter-alpha inhibitor (IAIP) is a natural circulating blood protein. This protein is a key element in innate immunity, and is capable of modulating host response by inhibiting protease, blocking complement activation, and down-regulating pro-inflammatory cytokines. The level of IAIP is normally high and depleted during systemic inflammation.

In the presentation, held in Pratista room, attended by more than 100 people, Yow underline several studies regarding IAIP. A study by Lim, et al, showed that decreased plasma IAIP levels correlate with the severity of the disease and rate of mortality, in which the less IAIP level is, the higher the mortality rate goes, and the more severe the disease gets. In another study by Koraka and Lim, et al, IAIP levels correlate with disease severity in dengue viral infection, where the patients with dengue shock syndrome had the lowest IAIP level compared to healthy controls and patients with dengue hemorrhagic fever. In neonates, this protein can be used as a sepsis biomarker with the sensitivity of 90% and specificity of 99%.

During sepsis, imbalance of protease/inhibitors occurs. The level of protease increases due to the activation of inflammatory cells, while the level of protease inhibitor decreases due to secretion in the urine and lower liver biosynthesis. In this case, IAIP therapy aims to correct the imbalance that occurs by replacing the depleting protease inhibitors.

In animal models, by using the cecal ligation and puncture (CLP) model in rat, the administration of IAIP after 1 hour, even delayed 10 hours after CLP, the survival rate is much higher than control. In LPS challenged two days old rat pups, administration of IAIP shows higher percentage of survival. Other model, the E. coli and Group B Streptococcus in neonatal rat model, also shows higher percentage of survival in groups that were administered with IAIP, in comparison to those which were injected by human serum albumin (HSA). When anthrax toxin is used, administration of IAIP before the challenge also increases the survival rate. In rats challenged with anthrax bacteria, administration of IAIP and antibiotic (moxifloxacin) yields the highest survival rate compare to IAIP or antibiotic alone, and to control.

A human study involving 60 patients with SIRS and multiple organ dysfunction syndrome (MODS) shows improvement of inflammatory cytockines, heart rate, respiratory rate, WBC, and body temperature. MODS and mortality rate are also reduced. In the future, the trial for this therapy is scheduled to enter its phase III trial in 2013. Product development is also expected to finish in around 2013-2015.

Surveillance of Emerging Diseases and Networks : "The Whole is (Still) More Than Its Part"

Jean Jacques (left) and Trevino Pakasi, answering questions during lectures. (Secretariate)

Buehler defines surveillance as processes to collect, manage, analyze, interpret, and report information about the status of specific diseases or their antecedents in a specific population. Its objectives include describing the epidemiology of health problem in term of time, place, and person, monitoring, and planning of public health interventions; and research.

Emerging diseases itself can be decribed in three definitions: the emergence of new human pathogen such as emergence of pathogen from commensal species (S. aureus that become MRSA), the existence of human pathogens in new area, and the emergence of knowledge in diseases in which pathogen is identified in specific human disease.

Network itself can be defined as how nodes and vertices connect each other or how variables related/connected and the description of its connection. Another definition is method for modelling infectious diseases based on contacts patterns.

Surveillance is not a new term in medicine. Since 14th century, surveillance has been being performed. One of important roles played was eradication of smallpox in 1970s. During 1980s, introduction of computerized system made the data aggregation and analysis easier. In 2003, global surveillance network The Global Outbreak Alert and Response Network/WHO (GOARN/WHO), formed in 2000, identified SARS outbreak and showed how fragile our world to new outbreak. Other surveillance networks, both at national level (US-CDC in United States of America and InVS in France) and regional level also exist. By using surveillance, public health significance of any detected diseases will be considered, giving notification to the authority in order to make further action.

Jean-Jacques Bernatas, MD, MPhil gave three prominent examples of surveilance network in his lecture. First is Surveillance and Investigation of Endemic Situations in South-East Asia (SISEA/Pasteur), an organization aimed to develop surveillance and response capabilities in the face of emerging pathogenic agents with epidemic potential in South-East Asia. The objective of this network is to contribute to the improvement of detection and handling of epidemic situation in the regions by strengthening the national reference laboratories, identifying epidemic, and building capability to make response of outbreak at national and regional levels in collaboration with WHO. Its nodes include healthcare facility on Vietnam, Laos, China, and Cambodia within the Pasteur Institute international network and national health authority. Its vertices include national report to national health authorities and regular workshop. Several findings and outcome are outlined, including the knowledge of respiratory viruses pattern circulation in South East Asia, the emergence of knowledge of meiloidosis in Cambodia, alert and control of Japanese encephalitis in South Vietnam, and the strengthening of national surveillance system (such as implementation of ALRI surveillance activity in Cambodia and Laos with the main outcome of improvement of patient care management).

Second is Mekong Basin Disease Surveillance (MBDS). This network aimed to strengthen national and Mekong sub-regional capabilities in disease surveillance and response to outbreaks of prioritized diseases so that they can be effectively controlled. Its nodes are health care facilities that are involved in cross-border activities, while their vertices are weekly reports, training sessions, and workshops. This network schedules cross-border information exchange that include the cases of H1N1, AFP, SARS, cholera/severe diarrhea, tetanus, meningitis, diphtheria, PHEIC, lepstospirosis, chikungunya, dengue fever, typhoid fever, measles, malaria, pneumonia, HIV/AIDS, and tuberculosis.

The third network is the TB surveillance network. This network is an integrative part of Directly Observed Treatment Short-course Strategy (DOTS) which its objective includes the evaluation of activities, assessment of the diseases burden, and monitoring the HIV co-infections and drug resistance. Its nodes include local/regional tuberculosis centers and laboratories (on national level) and National Tuberculosis Program (NTP) on the international level. Its vertices include quarterly case and treatment outcome report, laboratory quality control, and anti-tuberculosis drugs management and supply. Its finding includes estimation of the disease burden, triggering research for DOTS evaluation, and implementation according to specific context and constrains.

The lecture, attended held in Pratista Hall, highligheted several weakneses and strenghts of the current system. Distributed system improves the sensitivity and specificity in identifying new cases and potency of outbreak since cases can be investigated in multiple centers. Current system also allows the exchange of technique, procedures, and quality control. Large size of the sample provides consistent findings. The weaknesses include the quality of the system in which completeness of the surveillance is lacking occassionally. Another weakness is lack of appropriate data usage for comprehensive response in due time.

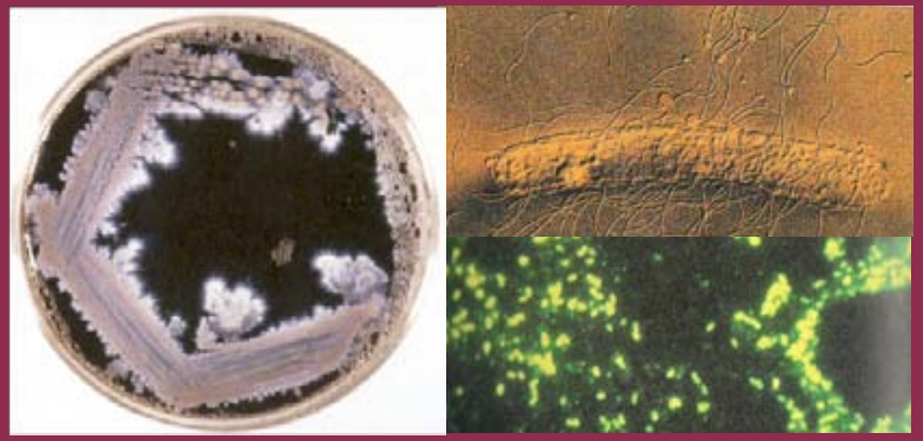
In the future, opportunity such as IT development is not to be undermined. The current network (such as TB and MDBS) relies on web-based reporting system. Development in economy and politics, as well as international cooperation is necessary. Awareness of global threats (SARS and AI) as well as the extraordinary adaptability of the human pathogens should be increased. Important threats should be underlined as well: many networks sometimes give conflicting information with others; political or economical problems might hamper the exchange of important information or sensitive regarding certain diseases; and when biological materials are being shared, the ownership of the strain collected is a source of dispute.

At the meeting attended by 80 people, it can be concluded that surveillance network helps the success of programs such as TB control. Dense and fluid network is needed so that quick response to any events can be performed. In the future, adding more vertices to network might results in multiplication of interactions, increasing the sensitivity and specificity to possibilities of outbreak.

ARTICLE

Microbiological Aspect of Legionella Infection

Anis Karuniawati
Department of Microbiology
Faculty of Medicine Universitas Indonesia



Clockwise from upper right: *Legionella pneumophila* magnified 10.000 times (*Willey JM, LM Sherwood, CJ Woolverton. Prescott, Harley, Klein's Microbiology. 7th edition. McGraw-Hill International Edition. 2008. P950*); *Legionella pneumophila* stained by using fluorescent antibody (*Nester EW, DG Anderson, CE Roberts, Jr, MT Nester. Microbiology a Human Perspective. 5th edition. McGraw-Hill International Edition. 2007. P597*); *Legionella pneumophila* cultured on buffered charcoal yeast extract agar (*Bauwman RW. Microbiology. International edition. Pearson Benjamin Cummings. 2004. p590*)

Legionella was first identified in 1976 during an outbreak at an American Legion Convention in Philadelphia. Since then, it has been recognized as a relatively common cause of both community-acquired and hospital-acquired pneumonia. Legionellosis refers to the two clinical syndromes: Legionnaires' disease, which is the potentially fatal pneumonia and pontiac fever, an acute, febrile, mild, and self-limited illness.

The pathogen, was identified as Legionella pnuemophila, belongs to the family Legionellaceae. The genus Legionella has at least 50 species comprising 70 distinct serogroups. Legionella pneumophila is the first and the most common species described as the etiologic agent of legionnares' disease. There are 16 serogroups of L.pneumophila and the serogroup 1 is the most important serogroup (causes 70% of Legionella infections). Legionella non-pneumophila, which are also reported as the cause of human infection, are L.micdadei, L.bozemanii, L.dumoffii, L.longbeachae.

Legionella enters the lung of a person by aerosol or aspiration. Both the virulent and non-virulent strains are phagocytized by alveolar macrophages and remain intact inside the phagocytes. However, only virulent strains can multiply inside the phagocytes and inhibit the fusion of phagosome and lysosomes. This leads to death of the macrophages and the release of large numbers of bacteria from the cell. The bacteria can then infect other macrophages, thereby amplifying bacterial concentration within the lungs. Some genes allow the organism to bypass the endocytic pathways of both protozoan and human cells, although not all species investigated have this ability.

The incidence of Legionnaires' disease depends upon the degree of water reservoir contamination, the intensity of patient exposure to that water, and the susceptibility of the host. Some sources of infection are reported: cooling tower systems, hot and cold-water systems, hot tubs, natural spa pools, thermal springs, humidifiers respiratory equipment, potting mixes and compost.

In the United States between 1980 and 1998, an average of 356 cases were reported to CDC each year, with no trend this is a fraction of the 8,000 to 18,000 cases estimated to occur each year.2 In the Indonesia, cases of Legionnaires' disease occurred in Bali in 1996 and Karawaci Tangerang in 1999. Raharjo reported that in 2001 there were 90% of workers involved in cleaning and servicing cooling towers, who had positive titers of Legionella pneumophila.3 He used ELISA method as diagnostic kit. In the following year he found that 68 out of 213 serum specimens of workers had positive titers of antibody Legionella.

Diagnostic methods currently used to identify Legionella infections are isolation of the bacteria on culture media, antibody titer of paired serum, detection of antigens in urine, detection of the bacteria in tissue or body fluids by immunofluorescens microscopy and detection of bacterial DNA using polymerase chain reaction (PCR).

Culture method remains the most specific procedure for the detection of Legionella from human specimens or environmental sampel and is considered as the gold standard. However, a number of factors limit the sensitivity of culture. Isolation of Legionella is carried out using selective medium and require long incubation periodes. The recovery rates in environmental samples (ex.water of cooling tower) are often low, since the sample centifugation or filtration (to concentrate the bacteria) may entail a variable degree of bacterial loss. PCR methods are attractive alternative to detect these bacteria which pose problems of the conventional culture methods. Currently, department of microbiology FMUI has developed the duplex PCR-methods to detect the DNA of Legionella sp. and Legionella pneumophilla in human sputum and water sample of cooling tower.

ARTICLE

Observing Bacterial Mapping and Sensitivity to Antibiotic in Cipto Mangunkusumo Hospital

Tony Loho
Departement of Clinical Pathology
Faculty of Medicine Universitas Indonesia - Ciptomangunkusumo Hospital

Tony Loho (*Media Aesculapius*)

Antibiotic resistance has become a common phenomenon these days. If we look further, doctors have big contribution in this phenomenon. There are still many doctors directly give antibiotic to every fever cases, though no evidence of bacterial infection found.

There are many possibilities of disease in one patient. Full assessment need to be done before doctor start a certain treatment to patient. If the patient shows signs of sepsis and symptoms of infection, the physician should give broad spectrum antibiotic such as meropenem or imipenem from carbapenem group after taking microbiology culture before giving the antibiotic. After patient's condition improves, variant of antibiotic can be reduced step by step, match with result from culture and bacterial sensitivity test.

But in patient with stable condition or without signs and symptoms of sepsis, the physician can think more deeply. If that patient comes with a fever which is suspected caused by bacterial infection, antibiotic is the proper therapy. But in patient with fever caused by viral infection like dengue or rubella, antibiotic can be postponed until bacterial infection proved.

Waiting for result of microbiology culture, physician can give empiric therapy such as suggested antibiotic. Empiric therapy is done based on data analysis from previous period about most common bactery as infection's etiology in patients at that hospital and antibiotic which is still sensitive to that bactery. If patient's condition is improving with that antibiotic and there culture result is available, antibiotic can be changed with other antibiotics which match the bacterial sensitivity test.

In spite of carefulessness in chossing antibiotic, it is not the sole factor which contribute to development of antibiotic resistancy. Sometimes antibiotic choosen is right, but duration of preparation is either too long or too short. It should be avoided because such might inflict losses on doctor and patient. Antibiotic should be stoped if infection has already been eradicated from patient. Disapearence of signs and symptoms, norlmalcy of infection marker laboratorium parameters, such as white blood cells count, white blood cells differential count, and C-reactive protein (CRP), can be used as cutting point of antibiotic termination. However, this understanding is still poorly known, or neglected, by many doctors. Doctors still consider lengthening antibiotic therapy as the best way to prevent the patient from getting worse. This habit should be avoided because bacterial selection will happen, sensitive bacteries will die but resistant bacteries still exist, creating antibiotic resistancy. In addition, normal floras in bowel and skin which are not target of that antibiotic can get impact. Those sensitive normal floras might become resistant after long duration of antibiotic use. Antibiotic's adverse effect can arise too.

Booming of that two things makes Department of Clinical Pathology Cipto Mangunkusumo Hospital has initiative to publish data collection about bacteries and their resistancy pattern in Cipto Mangunkusumo Hospital. Study was started from 2007, but book launching can be held in beginning of 2010 because it have many obstacles during production. Hope that book can be practical clinic guideline for the doctors in antibiotic's choosing for patients. It may not come so far that antibiotic with high resistancy level still used ad first line therapy for patients.

Another unique thing was found during study is difference about bacterial variants and their resistancy level in every room in Cipto Mangunkusumo Hospital. Such as too often application of meropenem in certain intensive care unit (ICU) until nowadays sensitivity level of meropenem just 33%. But, meropenem still has become one of sensitive antibiotics in other room.

This data are needed by the doctors in order to make them more aware in choosing antibiotic for patients so antibiotic resistancy can be controlled. In addition, diminuation of antibiotic resistancy in one hospital indirectly increases patient's safety in that hospital. Hope with launching and distribution of this book for every departments in Cipto Mangunkusumo hospital, doctors can be more wise in choosing farmacologic therapy for patients so bacterial resistancy will decrease

ACTIVITY NOTIFICATION

GUEST LECTURE

GUEST LECTURE ON HEPATITIS C

Date / Time : March 11th 2011 / 09.00-11.00 WIB
Speakers:

Topic : The molecular mechanisms of hepatitis C virus-associated predisposition of diabetes mellitus
Hak Hotta, M.D., Ph.D. Professor
Division of Microbiology, Director Center for Infectious Diseases, Kobe University Garduate School of Medicine

Topic : Epidemiology of Hepatitis C in Indonesia
dr. Rino Gani, Sp.PD, KGEH

Venue: Senat Akademik Fakultas Room

GUEST LECTURE ON SEPSIS

Date / Time : March 8th / 11.00-13.30 WIB
Speakers:

Topic : Sepsis Management
Michael L Town, MD
Board member of CLSI (Clinical Laboratories Standard Institute)

Topic : Basic Concept and Pathology of Sepsis
dr. Kie Chen, Sp.PD, KPTI

Venue: Department of Internal Medicine Lecture Hall, Cipto Mangunkusumo Hospital

GRANTS

Travel Grants

PHKI CRID-TROPHID is giving 5 (five) travel grants to FMUI Staff for research presentation or becoming a speaker in a conference abroad in 2011, each grant worth Rp 10.000.000 .
Requirements:

1. Related to tropical health or infectious diseases
2. Letter of assigment from the Dean of FMUI
3. Travel report
4. Airlines tickets and other accomodation receipt (original)
5. Limit of travel: November 15th 2011

Teaching Grants

PHKI CRID-TROPHID is giving grants to FMUI Staffs who compile module related to tropical health and infectious diseases
Type of Module:
1. Student Centered e-Learning Environment (SCeLE)
2. Credit Earning Module
3. Elective Posting Module

Total sum of the grant is Rp 90.000.000 for all winner (the allocation is decided later).The deadline for application is April 1st 2011

Research Grants

PHKI CRID-TROPHID is giving grants to FMUI Staffs who are doing research related to Tropical Health and Infectious diseases by adding one winnder during the Dean's Award.
Total sum of the grant
Rp 75.000.000
Requirement:
1. Research related to tropical health and infectious diseases
2. Research period and completion has to be on 2011
3. The deadline for proposal submission is concordant with Dean's Award

Publication Awards

PHKI-CRID TROPHID is giving awards to FMUI staffs who publish their research related to tropical health and infectious diseases.
Type of Publication:
National: 5 laureates ;Rp 1.000.000 each
International: 5 laureates; Rp 10.000.000 each
Requirements
1. Research related to Tropical Health and Infectious Disease
2. Published on 2011
3. Deadline for publication submission is October 21st
Selection will be done in November 2011

For further information, please contact PHKI CRID-TROPHID secretariate
Office: 1st floor Library, Salemba 6, Jakarta 10430
Phone: 3922825
E-mail: phki_fkui@yahoo.com