



5th International Congress on

INFECTIOUS DISEASES

March 01-02, 2018 Berlin, Germany

Scientific Tracks & Abstracts Day 1

Infection Congress 2018

Sessions:

Day 1 March 01, 2018

Sessions: Host and Pathogen Interactions | Infection pathogen Biology | Infection prevention & Control | Healthcare Infectious Diseases | Epidemiology - Infectious Diseases

Session Chair

Peter Timms

University of the Sunshine Coast, Australia

Session Co-Chair

Zlatko Dembic

Norway

Session Introduction

Title: Knowing to design: Costs of and benefits from nosocomial infections for hospitals

Jean-Pierre Marissal, Cathollic University of Lille Faculté de Gestion, France

Title: Bovine spongiform encephalopathy (mad cow disease) is probably caused by Bovine spongiform encephalopathy (mad cow disease) is probably caused by Acinetobacter bacteria and not by prions

Alan Ebringer, King's College London, UK

Title: Consequences of *H. pylori* infection and its VacA cytotoxin on mitochondria and mitochondrial DNA: Impact on gastric pathogenesis

Eliette Touati, Institut Pasteur, France

Title: State of the art antimicrobial stewardship in immunocompromized hosts

Alla Paskovaty, Memorial Sloan Kettering Cancer Center, USA

Title: Pharmacoproteomics of *Aspergillus fumigatus* for identification of novel molecular targets having application immunodiagnosis and therapy

Rambir Singh, Bundelkhand University, India

Title: Title: Knowledge and practices concerning multi-drug resistance tuberculosis among health workers and TB patients in Enugu, South-East, Nigeria

Omotowo Babatunde, University of Nigeria, Nigeria

Title: Pharmacoproteomics of *Aspergillus fumigatus* for identification of novel molecular targets having application immunodiagnosis and therapy

Rambir Singh, Bundelkhand University, India

Title: Epidemiological studies on tuberculosis and ethnopharmacological methods of its control among tribals of Anuppur district, Madhya Pradesh, India

Poonam Sharma, Indira Gandhi National Tribal University, India

Title: YRF: Prevention of cholera outbreak in chorkor, Accra-Ghana.

Seth Omari Mensah, Kharkov national Medical University, Ukraine

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Knowing to design: Costs of and benefits from nosocomial infections for hospitals

Jean-Pierre Marissal
Institut Catholique de Lille, France

Background: The basic conditions for any process of financial incentives or penalties to favor the investment of hospitals in the prevention of nosocomial infections are accuracy and fairness, because these two conditions have a strong influence on the acceptability and the effectiveness of such a process. Accuracy and fairness mostly refer to the methods used to assess the economic impact of nosocomial infections for hospitals, which concern both the measurement of the prolongation of stay and the estimation of the costs or benefits induced by nosocomial infections.

Objective: We present a framework owing to assess major aspects of the costs and benefits related to the existence of episodes of nosocomial infection for hospitals. This framework is used to compute the costs and benefits of nosocomial infections by *Clostridium difficile* for two hospital structures, to help thinking systems of financial rewards and penalties to reduce nosocomial infections.

Data & Methods: We use the properties of DRG-based payment systems to derive indicators of cost for hospitals, including an estimation of the productivity losses due to a nosocomial infection. The empirical test is based on a multi-state modelling based on Markov processes and bootstrapping aimed at estimating individual prolongation of stay at hospital due to *Clostridium difficile* infections.

Results: We show that the definition of economic indicators of costs or benefits for hospitals is made possible in the context of DRG-based payment systems. We point out potential inefficiencies of the current payment systems that a relevant reward/payment system should overcome. Finally, we show how the statistical methods used in the measurement of the prolongation of the hospital stay due to nosocomial infections pose potential problems in terms of fairness of rewards/penalties systems.

Conclusion: We analyse the existence of productivity gains in the case of deaths as a proof of the incompleteness of the DRG-related payment systems, and discuss the methodological issues associated with the statistical methods used to control for temporality bias.

Biography

Jean-Pierre Marissal completed his PhD in Microeconomics and works as a Health Economist at Catholic Institute of Lille, and the depending hospital structures. He gives lectures on microeconomics at the same academic institution.

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Bovine spongiform encephalopathy (mad cow disease) is probably caused by *Acinetobacter* bacteria and not by prions

Alan Ebringer

King's College London, UK

Previous studies have shown that there is molecular mimicry between *Streptococcus* and cardiac collagens in rheumatic fever. In early 1990's the British government asked whether there was a role for molecular mimicry in bovine spongiform encephalopathy (BSE), also known as mad cow disease. A cursory review of the literature showed that molecular mimicry was present between the soil and nasal microbe *Acinetobacter* and myelin, the covering of nerves. The government, through DEFRA (Department of Environment, Food and Rural Affairs) then gave a £250,000 grant to King's College and access to BSE materials to investigate this problem. A pilot study showed that elevated levels of antibodies to the soil and nasal microbe *Acinetobacter* was found in 29 BSE animals compared to sera from 76 control animals ($p < 0.001$). A second larger study involving 128 BSE compared to 127 controls, confirmed that elevated levels of antibodies to *Acinetobacter* were present in BSE animals ($p < 0.001$) but not to 6 other bacteria. It appeared that feeding cattle with abattoir materials (meat-and-bone meal) caused either contamination with *Acinetobacter* or with prions and the government banned the use of meat-and-bone meal supplements which led to the disappearance of BSE in British cattle. However a review of the definition of transmissible spongiform encephalopathies (TSE) revealed that the Pasteur Effect, namely the production of experimental allergic encephalomyelitis (EAE) in experimental animals had not been considered when injecting saline brain homogenates in BSE research studies. The bio-assay is based on a wrong assumption that injecting saline brain homogenates will not cause damage to the healthy, test experimental animals. The concept that prions are infectious particles may require revision.

Biography

Alan Ebringer is Professor of Immunology at King's College London and has published over 300 papers in scientific literature. His main interests are immunology of ankylosing spondylitis, rheumatoid arthritis and bovine spongiform encephalopathy (BSE "mad cow disease"). His group has suggested that BSE is caused by *Acinetobacter* bacteria.

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Consequences of *H. pylori* infection and its VacA cytotoxin on mitochondria and mitochondrial DNA: Impact on gastric pathogenesis

Eliette Touati

Institut Pasteur, France

Statement of the Problem: Mitochondria alterations and mitochondrial DNA (mtDNA) instabilities are a hallmark of cancer. Mitochondria represent strategic targets for pathogens also including *Helicobacter pylori*. This bacterium is a major risk factor for gastric cancer. Up to now, the cytotoxin VacA is the only one *H. pylori* factor known to target and damage mitochondria.

Methodology & Theoretical Orientation: By in vitro infection of gastric epithelial cells with wild-type and VacA-deficient *H. pylori* strains, treatment of cells with purified VacA proteins and infection of a mouse model, we show that *H. pylori* deregulates mitochondria by two novel mechanisms, both rather associated with host cell survival. First, early upon infection VacA induces transient increase of mitochondrial translocases and a dramatic accumulation of the mitochondrial DNA replication and maintenance factors POLG and TFAM. These events occur when VacA is not detected intracellularly, therefore do not require the direct interaction of the cytotoxin with the organelle. They occur independently of the VacA vacuolating activity. In vivo, these alterations coincide with the evolution of gastric lesions towards severity, concomitantly with the induction of mtDNA mutations and depletion of mtDNA content. Second, *H. pylori* also induces VacA-independent alteration of mitochondrial replication and import components, suggesting the involvement of additional *H. pylori* activities in mitochondria-mediated effects.

Conclusions & Significance: Our findings reveal a novel and early inducer effect of *H. pylori* infection on mitochondrial translocases and the mtDNA replication/transcription machinery components POLG and TFAM. Moreover, we show that VacA does not account for all consequences of *H. pylori* infection at mitochondria, pointing to the involvement of other bacterial activities, yet to be determined. These effects of *H. pylori* infection are also relevant in vivo, suggesting that mitochondrial alterations impact *H. pylori*-induced gastric inflammation and pathogenicity.

Recent Publications

1. Chatre L, Fernandes J, Michel V, et al (2017) *Helicobacter pylori* targets mitochondrial import and components of mitochondrial DNA replication machinery through an alternative VacA-dependent and a VacA-independent mechanisms. *Scientific Reports* 7: 15901.
2. Majlessi L, Fadel Sayes F, Bureau JF, et al (2017) Colonization with *Helicobacter* is concomitant with modified gut microbiota and drastic failure of the immune control of *Mycobacterium tuberculosis*. *Mucosal Immunology* 10:1178-1189.
3. Matak P, Heinis M, Mathieu J, et al (2015) Myeloid HIF-1 is protective in *H. pylori* mediated gastritis. *J of Immunology* 194:3259-3266.
4. Fernandes J, Michel V, Carmolingo-Ponce M, et al (2014) Circulating mitochondrial DNA level as a potential non-invasive biomarker to the early detection of gastric cancer. *Cancer Epidemiology, Biomarkers and Prevention* 23:2430-2438.
5. Correia M, Casal S, Vinagre J, Seruca R, Figueiredo C, Touati E and Machado J C (2014) *H. pylori* cholesterol uptake impacts resistance to docosahexaenoic acid. *Int. J of Medical Microbiology*, 304: 314-320

Biography

Eliette Touati is currently working as a Senior Researcher at the Institut Pasteur in Paris. Her present work is dedicated to the study of the relationships between *H. pylori* infection and gastric cancer, focusing on the regulation of the host DNA damage and repair response. She works on translational projects to characterize gastric cancer biomarkers with the goal to develop non-invasive tests for the early detection/prevention of patients.

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State of the art antimicrobial stewardship in immunocompromized hosts

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Infections cause significant morbidity and mortality in patients with hematologic or solid tumor malignancies. Susceptibility to infection can occur from the malignancy itself, but the primary risk factor is immunosuppression from cancer treatment (e.g., cytotoxic chemotherapy, radiation, combined modality). Administration of broad antimicrobial therapy for empirical treatment of febrile neutropenia is recommended by national guidelines. This strategy however needs to be balanced against the desire to continue broad-spectrum therapy for prolonged durations during the patient's hospitalization. Overuse of antibiotics leads to antimicrobial resistance, higher healthcare costs, and poor health outcomes due to antimicrobial side effects. Immunocompromized patients are at high risk for being colonized with multidrug resistant organisms, and are at high risk for morbidity and mortality due to such organisms. In addition, cancer patients are at higher risk for drug-related toxicity, due to drug-drug interactions between certain antimicrobials, cancer chemotherapy and supportive therapy.

To mitigate the overuse of antibiotics, multidisciplinary approach to antimicrobial stewardship needs to be employed. Modern antimicrobial stewardship programs use tactics such as, pre-prescribing review and approval and/or de-escalation: either by changing the antimicrobial agent to something narrower or by stopping an antimicrobial combination or both. To aid in the process, successful stewardship allows collaboration between several departments: Hospital administration, Microbiology, Pharmacy, Departments of Medicine, Oncology and Infection control, Information Technology among a few. Innovative approaches in molecular diagnostics allow antimicrobial stewardship to intervene earlier and with higher success rate. Current technology allows for alerts during prescribing process, allowing for real-time antimicrobial stewardship interventions.

Immunocompromized patients present unique challenges for antimicrobial stewardship. This lecture identifies those challenges and presents various strategies that employ up-to-date technology and diagnostics to aid in the endeavor.

Biography

Dr. Paskovaty, holds Doctor of Pharmacy degree from a prestigious American University, Albany College of Pharmacy and has been employed for over 15 years as an antimicrobial stewardship coordinator at a world renowned cancer center in NYC: Memorial Sloan Kettering Cancer Center. She has been invited lecturer at numerous local and international meetings, has published papers and book chapters on topic of Antimicrobial Stewardship.

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March 01-02, 2018 Berlin, Germany

Pharmacoproteomics of *Aspergillus fumigatus* for identification of novel molecular targets having application immuno diagnosis and therapy

Rambir Singh and Poonam Sharma

¹Bundelkhand University, India²Indira Gandhi National Tribal University, India

Aspergillosis has emerged as threat to public health in recent past. Early stage diagnosis of aspergillosis has been difficult. There are limited options of effective drugs for treatment and invasive infections are always fatal. Importantly, clinical symptoms of aspergillosis overlap with those of TB. This often leads to misdiagnosis of aspergillosis as TB and wrong treatment. Hence, early diagnosis of aspergillosis is essentially needed. Currently, available late stage antigen based serological tests have limited diagnostic efficacy. Hence, there is urgent need for identification of novel molecules of diagnostic and therapeutic relevance. While working with Indian (ITCC-6604) and German (DAYA) strains of *A. fumigatus*, we were able to identify 111 cytosolic proteins spots from 2D gels. Out of these 111 protein spots, 66 proteins have been identified on comparison with available protein databases. Immuno-proteomics studies on these cytosolic proteins showed the presence of highly immunodominant IgG and IgE reactive proteins. Characterizations of these proteins have immense application in immuno-diagnosis and therapy of aspergillosis.

Biography

Rambir Singh completed his PhD in Biomedical Sciences (Infection Biology) from University of Delhi, India in 2004. After completing PhD, he joined Bundelkhand University, Jhansi, India, as an Assistant Professor in Biochemistry where currently he is working as Associate Professor in Biomedical Sciences. He is teaching microbiology, biochemical techniques and natural plant product based drug discovery at undergraduate and postgraduate level. He is working in the research area of 'Bioactive molecules from Ayurvedic medicinal plants, health effects of probiotics and proteomics of *Aspergillus fumigatus*.'

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5th International Congress on

INFECTIOUS DISEASES

March 01-02, 2018 Berlin, Germany

Correlation between abscess size and liver function tests in cases of liver abscess

Vineet Jain

Associate Professor, Hamdard Medical College, India.

Background: Liver abscess has shown a major change in demographics, etiology, diagnosis, and treatment over the past 100 years. The modern diagnostics like ultrasound and computed tomography to locate and drain the abscess have reduced the mortality to 2-12%. However, due to the complications of liver abscess especially the amebic ones the morbidity is still high. This study aims to study the correlation of various LFT parameters with abscess volume for early detection of high risk patients and early treatment thus reducing morbidity.

Methods: The study was conducted over a period of six months on 50 patients of liver abscess. History and physical examination was done. All patients were subjected to complete hemogram, liver function test, coagulation profile (PT/INR) and USG abdomen. The data was recorded and compiled in excel sheets and analyzed using correlation coefficient (R) method.

Results: The mean age of the patients was 41.2 years with male preponderance. Amoebic liver abscess (88%) was predominant over pyogenic liver abscess (12%). Alcoholism (48%), smoking (42%) and diabetes mellitus (18%) are main predisposing factors in case of liver abscess. Hepatomegaly was found in 88% cases. Elevated ALP, low albumin, increased PT INR points to the diagnosis of liver abscess. Complications seen were pleural effusion (10%) and ascites (4%). On analysis, liver abscess size is significantly positively correlated with INR, ALP, liver enzymes, and negatively correlated with serum albumin level.

Conclusions: Liver abscess size was found to be positively correlated with INR and alkaline phosphatase (ALP), liver enzymes (SGOT, SGPT) and negatively correlated with serum albumin levels. There was no correlation of abscess size and bilirubin levels. Hence, LFT can be used to estimate the liver abscess size and predict the severity and prognosis of patient.

Biography

Vineet Jain is an Associate Professor at Hamdard Medical College, New Delhi, India. He has an experience of eight years post MD. His special interest has always been towards Infectious Diseases. He believes that all infectious disease if diagnosed in time and managed appropriately can lead to a drop in mortality. So lot of my research work is focused on understanding various aspects of infections.

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5th International Congress on

INFECTIOUS DISEASES

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Knowledge and practices concerning multi-drug resistance tuberculosis among health workers and TB patients in Enugu, South-East, Nigeria

Omotowo Babatunde^{1,2}, Ibeziako Vivian², Ndu Anne C^{1,2} and Ezeoke Uchechukwu E¹¹University of Nigeria Enugu Campus, Nigeria²University of Nigeria Teaching Hospital, Nigeria³Institute of Human Virology, Nigeria

Introduction: Inadequate knowledge and practices of health workers and TB patients concerning MDR-TB may have serious health consequences and significant negative impact in the control of TB.

Objective: The purpose of the study was to ascertain the knowledge, and practices of health care workers and TB patients concerning MDR-TB.

Methods: A cross sectional descriptive survey was conducted by questionnaire designed precisely for the study. Data was collected from 115 health workers at the University of Nigeria Teaching Hospital Enugu, and 120 patients from DOTS centers. Data collected included sociodemographic and professional categories, knowledge and practices concerning MDR-TB. Data was analysed using SPSS version 21. Statistical significance of association between variables was assessed using Chi-square test at $p < 0.05$. Ethical clearance was obtained from the Research Ethics Committee of UNTH and consent was obtained from TB patients.

Results: All 115 and 120 respondents among health workers and TB patients respectively returned the completed questionnaires. Among health workers, 60 (52.2%) were females, 55 (47.8%) were males, and mean age was 38.7 ± 11.8 years. Majority of TB patients were females 54.6%, with mean age of 32 ± 12.6 . A higher percentage 64.3% had tertiary education among health workers while only 13.5% among TB patients had tertiary education. Majority of TB patients 87.6% had no knowledge of MDR-TB, while only 35.6% of health workers had good knowledge. Category of health workers and knowledge of MDR-TB relationship was not statistically significant ($X^2=8.296$, $df=4$, $p=0.081$), but the relationship with their practices concerning MDR-TB was statistically significant ($X^2=13.426$, $P=0.001$). Practices of both health workers and TB patients towards MDR-TB were poor.

Conclusion: Both knowledge and practices of health care workers and TB patients concerning MDR-TB were poor. Training on MDR-TB for health care workers and health education for TB patients should be intensified for good treatment outcomes and improvement in TB control programs generally.

Biography

Omotowo Babatunde Ishola is currently working as an expertise chief in department of community health medicine at University of Nigeria, Teaching hospital, Enugu Nigeria.

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Notes:

5th International Congress on

INFECTIOUS DISEASES

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Epidemiological studies on tuberculosis and ethnopharmacological methods of its control among tribals of Anuppur district, Madhya Pradesh, India

Poonam Sharma¹ and Rambir Singh²¹Indira Gandhi National Tribal University, India²Bundelkhand University, India

Currently, one third of the world population is infected with *Mycobacterium tuberculosis*, the causative organism of Tuberculosis (TB), and new cases are being reported every year. In 2013, World Health Organization (WHO) reported 9 million new cases of TB and 1.5 million deaths, worldwide. India is having the highest burden of TB in the world, accounting for nearly one third of all TB cases. WHO statistics showed the incidence of 2.1 million new TB cases in India, in 2013. Madhya Pradesh accounts for highest population (14.7%) of scheduled tribes (ST) among Indian states. According to the 2011 population census, 25.7% of the state population is ST. Anuppur district is among the least developed districts in the state. All tehsels of the Anuppur district are having significant number of ST population. The main ST populations in Amarkantak area of Anuppur district are Baiga, Gond, Panika, Kamars, Birhor, Bharias and Hill Korbas. Due to lack of awareness, illiteracy and poverty, sizable number of tribals are suffering from TB. The present paper focuses on the socio-economic, nutritional and health status of tribal population in Anuppur district of MP. The possible reasons for TB prevalence and seasonal indices of TB have been explored. We have also explored the ethno-medicinal practices for healthcare management among the tribal population, especially the use of medicinal plants for the control of TB.

Biography

Poonam Sharma completed her PhD in Zoology from Dr. B R Ambedkar University, Agra, India in 2002. Her research interests include "Toxicology, natural antioxidant in prevention of toxicity and infection biology". She has published over 40 research papers in reputed and peer reviewed journals. He has completed three research projects funded by various funding agencies of Government of India. Presently, she is working as an Associate Professor of Zoology at Indira Gandhi National Tribal University, Madhya Pradesh, India.

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INFECTIOUS DISEASES

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Prevention of cholera outbreak in Chorkor, Accra-Ghana

Seth Omari Mensah¹, Mary Oderba Ashley², Hitesh Toor³, Rhodaline Yayra Odoi⁴, Benjamin Abrokwa-Ansah¹ and Nlend Michel Pharrel¹¹Kharkiv National Medical University, Ukraine²Deputy Director of Nursing Service Korle-bu, Ukraine³Hitesh Impex Ghana-Limited, Ghana⁴Dnipropetrovsk Medical Institute, Ukraine

Statement of the Problem: Chorkor is a fishing community in Accra, Ghana. It has a population of about 3000 people. Chorkor like many other communities close to the capitals of many West African countries suffers from overcrowding and pollution due to the inability of town planning activities to catch up with rural urban migration. Cholera is one of the leading causes of morbidity and mortality in Chorkor. The incidence of cholera tends to increase during the rainy season and cholera is responsible for about 30% of the total deaths in Chorkor. A close second is tuberculosis which is responsible for 15% of the total deaths and can easily be attributed to overcrowding.

Methodology & Theoretical Orientation: We carried out a descriptive cross sectional study to investigate the epidemiological link of the cholera outbreak in Chorkor Greater Accra region of Ghana. Index cases were identified with the help of line lists. Univariate analyses were expressed as frequency distributions, percentages, mean±standard deviation, and rates (attack rates, case-fatality rates etc.) as appropriate. Maps were drawn using Arc GIS and Epi info software to describe the pattern of transmission.

Findings: We found 1733 cases with 20 deaths (CFR=1.2%) with an overall attack rate of approximately 25 per 3000 population with sex specific attack rates of 24% and 18% for males and females respectively. 90 stool samples yielded *V. cholerae* O1 Ogawa with ciprofloxacin and tetracycline being sensitive to the cholera strains.

Conclusions & Significance: The lack of personal hygiene, safe drinking water, open defecation, poor sanitation and food were some of the causes of the cholera outbreak in Chorkor. We recommend the Ministries of Local Government and Rural Development, Works and Housing and Water Resources to ensure proper liquid and solid waste disposal systems and provide adequate potable water to the populace and also our research with the help of sustainable medical missions helped curb cholera in Chorkor with the distribution of fliers which educated them more on how cholera could be prevented.

Recent Publications

1. Osei F B and Duker A A (2008) Spatial and demographic patterns of cholera in Ashanti region-Ghana. Int J Health Geogr. 7(1):1.
2. Garg P, Chakraborty S, Basu I, Datta S, Rajendran K, Bhattacharya T, et al. (2000) Expanding multiple antibiotic resistance among clinical strains of *Vibrio cholerae* isolated from 1992–7 in Calcutta, India. Epidemiol Infect. 124:393–9.
3. Shears P (2001) Recent developments in cholera. Curr Opin Infect Dis.14(5):553–8.

Biography

Seth Omari Mensah is a 5th year Medical Student of Kharkov National Medical University of Ghanaian Nationality. He has attended numerous conferences held in Ukraine, Denmark and Netherlands regarding various topics of healthcare to share and obtain ideas to assist the public in developing countries with a focus on his Nation of Origin, Ghana, to improve their health conditions.

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5th International Congress on

INFECTIOUS DISEASES

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Scientific Tracks & Abstracts Day 2

Infection Congress 2018

Sessions:

Day 2 March 02, 2018

Sessions @ Bismarck: Infection and Immune System | Microbes and Infections | Infection pathogen Biology | Infection prevention & Control | Healthcare Infectious Diseases | Vector borne Infectious diseases | Microbes and Infections

Session Chair
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Session Introduction

Title: Can herbal treatment be better than the leading drugs? A comparison of Gene-Eden-VIR/Novirin, acyclovir and valacyclovir in oral herpes

Hanan Polansky, The Center for the Biology of Chronic Disease (CBCD), USA

Title: Study of *Neisseria gonorrhoeae* strain antibiotic sensitivity profiles (collected in Yaoundé from 2009 to 2014) and determination of reference laboratory (Centre Pasteur, Cameroun) role in the surveillance of bacterial resistance to antibiotics.

Tayimetha Carolle Yanique, Catholic University of Central Africa, Cameroon.

Title: Patient support group in MDR-TB treatment: a study at Moewardi Hospital Surakarta Central Java, Indonesia

Cri Sajjana Prajna Wekadigunawan, Sebelas Maret University, Indonesia

Title: HIV-1 Tat up-regulates Secretory Leukocyte Protease Inhibitor (SLPI) expression in African Green Monkey (AGM) cells and leads to the suppression of HIV-LTR promoter

Selcuk Özdemir, Izmir Institute of Technology, Turkey

Title: Life conditions and infectious diseases: A correlation analysis from mega clinic 2017

Alfonso Magaña-Méndez, Universidad Autónoma de Baja California, Mexico

5th International Congress on

INFECTIOUS DISEASES

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Can herbal treatment be better than the leading drugs? A comparison of Gene-Eden-VIR/Novirin, acyclovir and valacyclovir in oral herpes

Hanan Polansky, Adrian Javaherian and Edan Itzkovitz
Center for the Biology of Chronic Disease, USA

Background: Our previous papers showed that suppressive or preventive treatment with the herbal Gene-Eden-VIR/Novirin reduced the number and duration of genital herpes outbreaks with no adverse effects. These studies also revealed that the herbal Gene-Eden-VIR/Novirin is mostly superior to acyclovir, valacyclovir, and famciclovir drugs in genital herpes. This study tested the effect of Gene-Eden-VIR/Novirin in oral herpes (also called cold sores and fever blisters).

Methods: The framework of the study was a retrospective chart review. The study included 68 participants. The participants took 1-4 capsules per day over a period of 2-36 months. The study included two FDA recommended controls: baseline and a no-treatment.

Results: Gene-Eden-VIR/Novirin was effective in 89.3% of participants. The treatment reduced the mean number of outbreaks per year from 6.0 and 3.6 in the control groups to 2.0 in the treatment group ($P<0.0001$ and $P=0.07$, respectively). Gene-Eden-VIR/Novirin reduced the mean duration of outbreaks from 9.8 and 5.8 days in the control groups to 3.2 days in the treatment group ($P<0.0001$ and $P=0.02$, respectively). There were no reports of adverse experiences. Gene-Eden-VIR/Novirin was compared to acyclovir and valacyclovir in six tests. In all tests, Gene-Eden-VIR/Novirin showed higher efficacy. Gene-Eden-VIR/Novirin also showed superior safety.

Conclusions: This clinical study showed that suppressive or preventive treatment with the herbal Gene-Eden-VIR/Novirin reduced the number and duration of outbreaks in oral herpes without any adverse effects. The study also showed that the herbal Gene-Eden-VIR/Novirin had better clinical effects than acyclovir and valacyclovir, the leading drugs in the category. Based on these results, we recommend using the herbal Gene-Eden-VIR/Novirin as preventive treatment for oral herpes, and specifically, as an alternative to the acyclovir and valacyclovir drugs.

Biography

Hanan Polansky is the Director of the Center for the Biology of Chronic Disease (CBCD). He is also developer of Computer Intuition, a psycholinguistic-based data-mining program that analyzes scientific text and assigns a rating to all ideas found in the text.

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5th International Congress on

INFECTIOUS DISEASES

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Study of *Neisseria gonorrhoeae* strain antibiotic sensitivity profiles (collected in Yaoundé from 2009 to 2014) and determination of reference laboratory (Centre Pasteur, Cameroun) role in the surveillance of bacterial resistance to antibiotics

C Y Tayimetha¹, M Kengne¹ and M C Fonkoua²¹Catholic University of Central Africa, Cameroon²Centre Pasteur du Cameroun, Cameroon

The resistance of *Neisseria gonorrhoeae* to antibiotics as recommended by WHO, poses a real public health problem. Thus, a study of the sensitivity profiles and the determination of the role of the reference laboratory in the surveillance of this resistance were carried out in Yaoundé. The aims of this study were to contribute to the therapeutic management of infected patients with appropriate antibiotics; monitor the resistance of *Neisseria gonorrhoeae* to antibiotics; limit its emergence in order to preserve the recommended antibiotics. Objectives of the study were to study the susceptibility profiles of *Neisseria gonorrhoeae* to antibiotics and to determine the role of the laboratory in monitoring this resistance. This retrospective and prospective study was carried out at Centre Pasteur of Cameroon from 1st January 2009 to 30th September 2014. It consisted of isolation of *Neisseria gonorrhoeae* strains from the human genital specimens, identification and determination of their resistance phenotypes to antibiotics by the diffusion method in agar medium. This highlighted the role of the reference laboratory in resistance monitoring. A total of 193 strains of gonococci were isolated and identified. The most infected age classes were 20-29 and 30-39. Men were more infected than women (sex ratio 2.01). Several phenotypes of resistance have been described. High resistance to penicillin G (93.3%), tetracycline (58.5%) and nalidixic acid (17.6%) were observed. Ceftriaxone, azithromycin, spectinomycin, and chloramphenicol were effective at resistance rates of 1.0%, 2.6%, 3.1% and 7.2%, respectively. The overall percentage of strains producing penicillinase is 81.1%. Only ceftriaxone is still effective among the two WHO recommended molecules in Cameroon. The other (ciprofloxacin) should be monitored. As resistances to nalidixic acid (quinolone marker) have been observed since 2010 and continue to grow up exponentially (25% in 2013 and 50% in 2014). Monitoring *Neisseria gonorrhoeae* resistances to antibiotics is one of the best strategies to prevent resistances in order to preserve the recommended molecules. Centre Pasteur of Cameroon is the reference laboratory chosen by the WHO for monitoring the resistance of *Neisseria gonorrhoeae* to antibiotics in Central Africa.

Biography

C Y Tayimetha is currently working as a expertise in microbes and infection biology, at Catholic University of Central Africa, Cameroon.

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5th International Congress on

INFECTIOUS DISEASES

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Patient support group in MDR-TB treatment: A study at Moewardi Hospital Surakarta Central Java, Indonesia

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Sebelas Maret University, Indonesia

Background: Directly Observed Treatment Short Course (DOTS) have been an applied strategy in Indonesia for years. But, still, Indonesia has challenge to decrease number of patients who decided drop out from treatment. The number of patients with MDR TB increases year to year. The study was carried out in Moewardi Hospital in Surakarta to explore a patient support group in term of contributing patient awareness to complete their treatment course.

Methods: A focus group discussion was conducted in a room at Faculty of Medicine Sebelas Maret University. The respondents are former MDR-TB patients who have been declared as totally cured after two years. Interviews, notes, and then transcript were analyzed using coding to identify emerging patterns and themes. Ethics approval was received from the Health Research Committee of Moewardi Hospital.

Result: Adherence to taking medication for six to nine months or more is very challenging especially for MDR-TB patients who have to take medication for 18 months and more. The themes are: I have been declared as cured after six months of treatment, but why I got the disease again?; the side effects of treatment made me tired; I need a more patient and pleasant health worker and; I am very excited to hear of patients who have successfully recovered from MDR-TB. Most of former MDR-TB patients stated that the patient support group is very important to help them in achieving recovery.

Conclusion: Patient support groups have very important role in MDR-TB patients to achieve their recovery.

Biography

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HIV-1 Tat up-regulates Secretory Leukocyte Protease Inhibitor (SLPI) expression in African Green Monkey (AGM) cells and leads to the suppression of HIV-LTR promoter

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Statement of the Problem: Human immunodeficiency virus type 1 (HIV-1) leads to AIDS in humans by reducing CD4(+) T lymphocytes which are crucial for proper adaptive cellular and humoral immune responses. Old World Monkeys (OWM) on the other hand is resistant to HIV-1 infection. Although these monkeys can be successfully infected by monkey adapted HIV-1 strains, they eventually clear the infection and virus numbers drop to undetectable levels unless the animals are immune-compromised by CD8 cell depletion during and after experimental infections. These results indicate the possibility of the presence of yet unidentified factor(s) that restrict HIV-1 in OWM cells after integration of the viral genome into the host cell. The purpose of this study was to investigate whether any anti-HIV factors were expressed in AGM cells in the presence of HIV-1 Tat protein. Tat is among the first viral proteins produced in infected cells and is known to affect the expression of many human host genes as well as HIV's own gene expression.

Methodology & Theoretical Orientation: SLPI was identified by 2D-PAGE and mass spectrometry using MALDI TOF. Over expression of SLPI gene was investigated by qRT-PCR on mRNA, and by western blot on protein level, using anti SLPI antibodies. SLPI's effect on NF-kB and HIV-LTR promoter was investigated through the luciferase reporter gene expression.

Findings: We identified that SLPI expression was highly upregulated in presence of HIV-1 Tat in AGM but not in human cells. Furthermore, we showed that SLPI decreased both NF-kB and HIV-LTR promoter driven luciferase reporter gene expressions.

Conclusion & Significance: SLPI is a potential HIV-1 restricting protein. It leads to reduced viral replication in infected cells and should be further investigated. In such case, SLPI can open new avenues in the treatment of HIV-1 infection.

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Biography

Selcuk Ozdemir has expertise in mammalian gene expression analysis, environmental toxicology and animal genetics. He currently works as Assistant Professor at Ataturk University, Faculty of Veterinary Medicine.

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Life conditions and infectious diseases: A correlation analysis from mega clinic 2017

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Life conditions are considered by the World Health Organization, and the Pan-American Health Organization, as determinants of health, associated with the emergence of diseases. We discovered in Maneadero, Ensenada, Baja California, conditions of sub-developed countries with dirt floors, absent of public services, among others; it is a population highly susceptible to diseases, and a wide outcome of clinical manifestations. They present a higher prevalence on chronic-degenerative illness as rich countries. That is why Mexico is in an epidemiological transition, showing health problems, because poverty is highly prevalent (43.6% of population), and significant prevalence of contagious diseases, but, also non-transmissible, like cardiovascular disease as the first cause of death. We realized a descriptive-analytical and transversal study, with a random population of 29 subjects from nearly 400 patients in our data bank who attended a medical program (Clinica Movil) from July 13-16 of 2017. Inclusion criteria: patients would have filled a questionnaire (from INEGI: ENGASTO 2012) for evaluate economic conditions, and medical history. We analyzed the data on Excel software, and made a correlational analysis through odds ratio (OR). Our results showed the highest frequency of diseases on: Chronic-degenerative, musculoskeletal and Infectious. Population in overcrowding has an OR=2 for infectious diseases, those without medical attention has an OR=3.5 to have a second disease; and OR=2.77 for a lack of money to eat in the last three months. We conclude there is a relationship between health determinants and disease, perhaps not the main etiology, but, improve life conditions, it is essential in the attempt of decrease prevalence and control diseases.

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Biography

Alfonso Magaña is on his last year medical student in School of Medicine from Universidad Autonoma de Baja California. He has been part of multiple researches in molecular biology, histology and public health and epidemiology. He has been in a few institutes in research residence in: Laboratorio de Epidemiología y Ecología Molecular from Universidad Autonoma de Baja California, Center for Health and the Environment in University of California Davis and Instituto Nacional de Neurología y Neurocirugía, Dr. Manuel Velasco Suarez, Mexico.

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