5th International Congress on

INFECTIOUS DISEASES

March 01-02, 2018 Berlin, Germany

Posters

Lee Jun Jun, J Infect Dis Ther 2018, Volume 6
DOI: 10.4172/2332-0877-C1-039

Clinical characteristics and therapeutic outcomes of postneurosurgical bacterial meningitis in elderly patients over 65: A hospital-based study

Lee Jun Jun
Kaohsiung Chung Gung Memorial Hospital, Taiwan

We collected 540 patients with adult bacterial meningitis (ABM) from 1986-2015, of whom 167 were ≥65 years. Of these 167 elderly patients, 82 had post-neurosurgical infections and 85 had spontaneous infections. The 82 elderly ABM patients with post-neurosurgical infections included 48 men and 34 women with a median age of 71 years (range: 65-84 years). The major clinical presentations were fever (80.5%), altered consciousness (50.0%), hydrocephalus (43.9%), seizure (24.4%) and septic shock (15.9%). Of the implicated pathogens, staphylococcal species (spp.) were the most common (31.7%), followed by *Acinetobacter* spp. (12.2%), *Enterobacter* spp. (7.3%), *Pseudomonas* spp. (7.3%), *Enterococcus faecalis* (7.3%) and *Escherichia coli* (6.1%). The implicated *staphylococcal* spp. had a high rate of non-susceptibility to methicillin (84.6%), and the implicated *Acinetobacter* spp. and *Enterobacter* spp. had non-susceptible rates to ceftazidime of 60% and 50%, respectively. The mortality rate was 28.1%, and septic shock was the most significant prognostic factor. As the conclusion, elderly patients accounted for 30.9% of all cases of ABM, of whom 49.1% had post-neurosurgical ABM. The clinical characteristics of the elderly patients with post-neurosurgical ABM were non-specific, and cerebrospinal fluid studies were needed to confirm the diagnosis. The mortality rate of this group of patients was high, and septic shock was an important prognostic factor. The clinical and laboratory features and therapeutic outcomes were different between the elderly patients with post-neurosurgical and spontaneous ABM.

Biography

Lee Jun Jun has completed her Medical Training at Tapei Medical University and Resident Training at Kaohsiung Chung Gung Memorial Hospital.

killerclaire@gmail.com

Notes:

Hsieh Yuan Kuei, J Infect Dis Ther 2018, Volume 6
DOI: 10.4172/2332-0877-C1-039

Atypical clinical presentation in young, healthy women with pyogenic spondylodiscitis: Case report

Hsieh Yuan Kuei
Yuan's General Hospital, Taiwan

Adult patients with spontaneous spondylodiscitis usually present in elderly population with diabetes mellitus or systemic infection. This 29 years old women, previously healthy, reported chronic low back pain with acute exacerbation in five days prior to her visit. The severe pain radiated to right leg and made her disability in walking. There was no fever, no travel history, no contact history, and no wound. Neurologic examination revealed right L4/5 dermatome paresthesia and her muscle power was full over four extremities. The lab data showed leukocytosis and elevated C reactive protein level. The dynamic plain film of lumbar spine showed L4/5 spondylolisthesis. The Magnetic Resonance Imaging of lumbar spine showed mild L4/5 degenerative spondylolisthesis and diffuse posterior herniated disc, with right lateral ruptured sequestrum compromising L4 foramino-outlet nerve root. She was admitted to general ward and she received laminectomy and facetectomy then. During operation, purulent material was collected. The lumbar spine specimen and blood culture both identified methicillin-resistant *Staphylococcus aureus*. She received vancomycin then. Trace back her history, she worked as a nurse and denied any Intravenous drug abuse. The survey for HIV and autoimmune disease were also negative finding. There was no evidence of infective endocarditis by transthoracic echocardiography. The clinical presentation in this case was atypical in two aspects. First, the relative young age was not fit in bimodal distribution in spondylodiscitis; second, she did not have any related comorbities.

Biography

Hsieh Yuan Kuei has completed his Medical Training at Taipei Medical University and Resident Training as Neurosurgeon at Chi Mei Hospital. He got his Master degree at Taipei Medical University.

claire17@cgmh.org.tw

Notes:

Vineet Jain, J Infect Dis Ther 2018, Volume 6
DOI: 10.4172/2332-0877-C1-039

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

Vineet Jain
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.

References

1. Meddings L, Myers R P, Hubbard J, Shaheen A A, Laupland K B and Dixon E, et al. (2010) A population-based study of pyogenic liver abscesses in the United States: incidence, mortality, and temporal trends. Am J Gastroenterol. 105:117-24.
2. Tsai F C, Huang Y T, Chang L Y and Wang J T (2008) Pyogenic liver abscess as endemic disease, Taiwan. Emerg Infect Dis. 14:1592-600.
3. Rahimian J, Wilson T, Oram V and Holzman R S (2004) Pyogenic liver abscess: recent trends in etiology and mortality. Clin Infect Dis. 39:1654-9.
4. Channanna C, Rehman F U, Choudhuri B and Patil A (2014) A clinical study, diagnosis and management of Liver Abscess at VIMS, Bellary. J Evidence Based Med Health Care. 1:668-85.

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.

dr.vineet83@yahoo.in

Notes:

Soraya J Kaewpitoon, J Infect Dis Ther 2018, Volume 6
DOI: 10.4172/2332-0877-C1-039

Prevention and control for a carcinogenic liver fluke in rural communities of Thailand through inter- and trans-disciplinary university

Soraya J Kaewpitoon
Suranaree University of Technology, Thailand

Liver fluke is an endemic in Southeast Asia particularly in Thailand, Lao People's Democratic Republic, and Cambodia. The infection is associated to cholangiocarcinoma; bile duct cancer. Prevention and control is required to decrease the liver fluke incident. Here, we described the liver fluke prevention and control program (LFPCP) through Inter- and Trans-disciplinary University (ITU). LFPCP was constructed among the rural communities in northeast Thailand during November 2016 and July 2017. ITU was integrated in LFPCP; briefly, ITU is comprised the partnership, scholarship, mutual benefit, and social impact. ITU is established by teachers and student (medical, nursing, public health, engineering, and business computer) from Suranaree University of Technology, Vongchavalitkul University, and Nakhon Ratchasima Rajabhat University, local government officers, and villagers, to solve the health problem in the rural community particularly liver fluke disease and cholangiocarcinoma. Quantitative and qualitative data were collected by questionnaires, group and individual feedback, consequently. Of 120 participants were included. Participants (89%) had a high level of satisfaction regarding LFPCP particularly in the steps of sharing ideas, decision making, and planning step. They could improve their knowledge, attitude and their practice regarding liver fluke prevention and control. LFPCP is an integrative activity that improves knowledge, attitude, skill, and practice for students and villagers. Therefore, LFPCP toward ITU is highly potential mutual benefit among university, students, teachers, and communities.

Biography

Soraya J Kaewpitoon has completed her MD at Khon Kaen University in Thailand and FCFPT at Royal College of Family Physicians of Thailand. She is the Vice Dean in Research Affair, and Head of Parasitic Disease Research Center, Institute of Medicine, Suranaree University of Technology, Thailand. She has published more than 60 papers in reputed journals and has been serving as an Editorial Board Member of repute.

soraya.k@sut.ac.th

Notes:

Gladys Makuta et al., J Infect Dis Ther 2018, Volume 6
DOI: 10.4172/2332-0877-C1-039

Proof-of-concept study to determine the feasibility of measuring bacterial load in exhaled breath of children with pneumonia and empyema using a novel point-of-care test

Gladys Makuta, Colin Powell, Bastiaan Hoogendoorn, Clive Gregory, Jenna Bowen and **Rhiannon Phillips**
Cardiff University, UK

Background: Pneumonia is a leading cause of death in children. Approximately 75% of patients with acute respiratory tract infections (ARTI) receive antibiotics despite most of these infections having viral origin. Early diagnosis and appropriate treatment is essential. There is no point-of-care (POC) test, available to diagnose bacterial pneumonia. This study aims to investigate the feasibility of developing a POC device that will measure bacterial load in breath from children with pneumonia and empyema. The purpose is to find a diagnostic POC test capable of isolating bacterial pneumonia.

Methods: This study is designed to show that a POC breath test can detect the difference in bacterial load (through assay of lipopolysaccharide (LPS) and peptidoglycan) in exhaled breath of children with pneumonia/empyema and those without a chest infection (controls). It comprises of development of a breath sampler, laboratory and clinical testing. Three prototypes of the breath sampler were produced in phases with refinement. Each prototype underwent laboratory testing using a known concentration of endotoxin which was nebulized thorough the prototype incorporating a sampling surface (SS). Subsequently, a sample of endotoxin impinged on the SS was extracted and tested using limulus amebocyte lysate (LAL) assay. Clinical testing involves collecting breath samples from 48 children between 5 to 15 years with pneumonia/empyema and well matched controls. Semi-structured qualitative interviews will be conducted with participants, parents and clinicians to examine the acceptability of the test.

Results: A breath sampler, suitable for clinical testing has been developed. Results from laboratory testing show that it is possible to detect nebulized endotoxins (comparable to levels detectable in breath) using the LAL assay.

Discussion & Conclusion: The study will demonstrate the potential of using a POC test to identify children with pneumonia or empyema who may benefit from antibiotics.

References

1. Shah S N, et al., (2017) Does This Child Have Pneumonia?: the rational clinical examination systematic review. Jama 318(5):462-471.
2. Schuetz P, et al., (2009) Effect of procalcitonin-based guidelines vs. standard guidelines on antibiotic use in lower respiratory tract infections: the ProHOSP randomized controlled trial. Jama 302(10):1059-1066.
3. Wootton D and C Feldman (2014) The diagnosis of pneumonia requires a chest radiograph (X-ray)–yes, no or sometimes? Pneumonia 5(1):1.
4. Bartlett J G (2011) Diagnostic tests for agents of community-acquired pneumonia. Clinical Infectious Diseases 52(4):S296-S30.

Biography

Gladys Makuta completed her MSc in International Health and Management and BA in Health Sciences and Social Services. She is currently a PhD student in the Division of Population Medicine at Cardiff University, United Kingdom, working on the balloon study. She has strong research interest in infection detection, prevention and management in a global health context. She has significant experience in commercial and non-commercial clinical research and teaching gained from both developed and resource limited areas, prior to her current role.

MakutaG@cardiff.ac.uk

Arash Heidari, J Infect Dis Ther 2018, Volume 6
DOI: 10.4172/2332-0877-C1-039

Medical students' knowledge and professional practice for prevention of nosocomial infections

Arash Heidari
Tehran University of Medical Science, Iran

Nosocomial infections are a serious problem in health care centers and dramatically increase the morbidity and mortality of patients and pose costs on patients and health care. One of the most common causes of these infections is medical and therapeutically interventions, therefore, the role of doctors and medical students in the prevention of nosocomial infections is of particular importance. This study was carried out to assess medical students' knowledge and practice of nosocomial infection in hospitals affiliated to Tehran Medical Science Universities (Tehran, Iran and Shahid Beheshti Medical Science Universities). In this descriptive study, 150 medical students (externship period) were selected randomly from three universities. Data were collected by self-reported questionnaire including questions on awareness of nosocomial infection and prevention, demographic characteristics and practice. Data was analyzed by SPSS software using descriptive and analytical statistical methods and Pearson correlation. Results showed that the mean scores of knowledge and practice were 58.22±13.66 (moderate) and 48.41±5.62 (poor) respectively. Results showed that there was no statistically significant relationship between medical students' knowledge and their practice (p=0.10).There was a significant relationship between knowledge and academic year (P=0.01) and practice and clinical unit (P=0.04). There was no significant difference between knowledge level with age, sex, marital status, history of needle steak, history of hospitalization and relative's hospitalization (p>0.05). The results showed that although the level of knowledge of medical students regarding to prevention of nosocomial infections is moderate but their practice is poor, therefore the practical training of students should be emphasized more than before.

Biography

Arash Heidari is a fourth year Medical Student of Medical School of Tehran University of Medical Sciences, Tehran, Iran.

heidaryarash@yahoo.com

Notes:

Manijeh Nourian, J Infect Dis Ther 2018, Volume 6
DOI: 10.4172/2332-0877-C1-039

Healing touch on death rate and physiological criteria of premature infant with septicemia

Manijeh Nourian
Shahid Beheshti University of Medical Science, Iran

Septicemia is one of the major causes of infant mortality. Premature infants are more at risk of septicemia due to the lack of development of the defense system, the acquisition of aggressive care and long hospitalization time. The application of therapeutic touch in neonatal intensive care unit is expanding to implement developmental and holistic care. The aim of this study was to determine the effect of healing touch (HT) on death rate and physiological criteria in neonates with septicemia. This is a randomized clinical trial, in which 50 premature infants with septicemia admitted to NICUs of hospitals affiliated with Shahid Beheshti University of Medical Sciences of Iran were selected through convenience sampling and assigned randomly in two groups. In the HT group, the procedure was conducted twice a day (morning and evening) for 15 minutes over 10 days. The physiologic variables (O2 saturation, respiration rate, heart rate) were recorded 10 minutes prior to HT, during 15 minutes of HT (7th minute) and 10 minutes after HT. The number of deaths was recorded in both groups. Data were analyzed with SPSS 21 using repeated measurements analysis. The death rate in the HT group was significantly lower than the control group during intervention (P=0.001). The mean heart rate in HT group in evening record was lower compared to control group, but statistically was not significant (P=0.07). There was statistically significant difference in the respiratory rate of the neonates in morning and evening record between the groups (P=0.009, P=0.005)). Results showed significant difference in the mean of O2 saturation in morning record in the HT group was higher than control group (P=0.006). Repeated measurements test showed that the trend of changes in all physiological criteria were not significantly different during the intervention period (p>0.05). The death rate in the HT group was significantly lower than the control group and healing touch may have a positive effect on reducing respiration rate, and could be effective in increasing O2 saturation in premature infants with septicemia.

Biography

Manijeh Nourian has completed his PhD in Nursing at University of Social Welfare and Rehabilitation Sciences and he is Scientific Member and Director of Pediatric & NICU Nursing department, Nursing & Midwifery School, Shahid Beheshti University of Medical Sciences, Tehran, Iran.

manighea@yahoo.com

Notes:

Catherine Hsu et al., J Infect Dis Ther 2018, Volume 6
DOI: 10.4172/2332-0877-C1-039

Magnesium in tetanus: A systematic review of the literature 1980-2017

Catherine Hsu and **Su Ling Yeoh**
Cambridge University School of Clinical Medicine, UK

Tetanus remains a dangerous problem in many low to middle-income countries, despite the availability of an effective vaccine. Death usually arises from autonomic dysfunction and spasm-related respiratory failure. Heavy sedation with benzodiazepines therefore forms the cornerstone of treatment. However, this necessitates mechanical ventilation, often unavailable where tetanus burden is highest, and may explain why tetanus mortality has remained >40% in the last 50 years. Magnesium sulphate has been suggested as a promising therapeutic alternative, but only one inconclusive meta-analysis has been published on its use in tetanus. We therefore performed an up-to-date systematic literature review of all primary studies examining the effects of magnesium sulphate on mortality, length of stay, spasm and autonomic control and potential toxicity in tetanus patients. Two independent reviewers carried out a set search on PubMed and Web of Knowledge. Identified texts underwent abstract and full text review, with further review of relevant reference lists. Data was then extracted for comparison. No study showed a mortality benefit. However, magnesium was demonstrated to significantly shorten duration of hospital stay, reduce muscle spasms, lower maximum systolic blood pressure and heart rate, and reduce the need for additional drugs such as benzodiazepines and inotropes. Magnesium at therapeutic serum levels was not associated with any clinically significant side effect, though disagreement exists as to whether magnesium causes hypoventilation. Magnesium appears both safe and effective in managing tetanus. Future work should establish regimens preserving respiratory muscle function, to allow widespread use of magnesium in units without access to ventilatory support.

Biography

Catherine Hsu is final-year medical students at the University of Cambridge with an interest in infectious disease medicine and global health. They undertook their elective at the Oxford University Clinical Research Unit (OUCRU) in Vietnam, under the guidance of Dr Louise Thwaites (senior clinical research fellow and member of the Emerging Infections group at OUCRU). Catherine completed a BA researching the oncogenic potential of human herpesvirus-8 and has also presented her work on neglected tropical diseases at a national level. Su Ling completed her BA in neuroscience and is particularly interested in neurological infections.

cth.hsu@gmail.com

Notes:

Jack Vojak, J Infect Dis Ther 2018, Volume 6
DOI: 10.4172/2332-0877-C1-039

The influence of mucus on *Streptococcus pneumoniae* and how this impacts bacterial colonisation of the human nasopharynx

Jack Vojak
Liverpool University School of Medicine, UK

Morbidity and mortality caused by *Streptococcus pneumoniae* is a global issue affecting all age groups from every walk of life. Disproportionately high levels of pneumococcal disease are associated with abnormalities of nasopharyngeal mucus production. Additionally, an association between viral co-infection and increased pneumococcal pathogenicity has been observed. Pneumococcal disease requires the bacterial colonisation of the human nasopharynx; without which colonisation and disease cannot occur. Despite this, colonisation does not inevitably result in disease. In order to understand why this may be, it is essential to understand the roles of immune factors at the epithelial barrier with regards to colonisation and how this progresses to invasive disease. Using an experimental human pneumococcal carriage model, colonisation in the nasopharynx of human volunteers was studied to elucidate the dynamic relationship between pneumococcus and the immune responses present at the epithelial barrier. To achieve this, quantification of MUC5AC, a key glycoprotein found in the mucus of the nasopharynx, was performed. This was done in the presence of attenuated viral co-infection in participants who were carriage positive or negative for pneumococcus. Additionally, the direct killing effect of secretory mucus was measured on pneumococcal colonies. Finally, we assessed the impact of secretory mucus on pneumococcal adherence to a living population of cells. We found there no killing effect of mucus on pneumococcus ($p=0.20$) and instead found the mucus to significantly increase bacterial replication. Secretory mucus was also found to possess barrier properties. These properties significantly reduced the proportion of pneumococcus in an environment from adhering to a living cell layer ($P<0.001$). Finally, our study indicated no relationship between raised MUC5AC levels and pneumococcal carriage with attenuated viral co-infection ($P>0.05$). Mucins role in pneumococcal colonisation is not yet well characterized. The study concluded that further investigation into the effect of mucus will be vital in fully understanding the immunological processes at play. Only then therapies can better target invasive pneumococcal disease and reduce the impact of this globally significant pathogen.

Biography

Jack Vojak is medical student pursuing his final year in medical school at University of Liverpool. He completed his MSc at Liverpool School of Tropical Medicine where he studied biology and control of parasites and disease vectors. During his time at the school, he undertook research into the host pathogen relationship between the infectious bacterial pathogen *Streptococcus pneumoniae* and the human nasopharynx.

hljvojak@liv.ac.uk

Notes:

Trisha Patel et al., J Infect Dis Ther 2018, Volume 6
DOI: 10.4172/2332-0877-C1-039

Antimicrobial Stewardship Program (ASP) eliminates *Clostridium difficile* infections in an oncology hospital

Trisha Patel, Dean Miller and **Mashiul Chowdhury**
Eastern Regional Medical Center Cancer Treatment Centers of America, USA

Clostridium difficile is not only the most common organism to cause hospital acquired infections in the US but the incidence in cancer patients is increasing significantly. Their risk factors for acquiring *Clostridium difficile* infections (CDI) are prolonged hospitalization, chemotherapy, and changes in bowel environment. However, the most common risk is frequent exposure to antibiotics. The centers for disease control and prevention showed the risk of CDI among those exposed to high-risk antibiotics was three times higher compared to persons with low-risk or no antibiotic exposure. This emphasizes the crucial role of ASPs which have created a positive impact on CDI rates in several studies. At a private oncology hospital, ASP and infection control use several strategies to retain low rates of CDI. ASP reviews all patients on antibiotics daily to identify opportunities to optimize therapy. Prospective audit and feedback is then provided to clinicians on any necessary interventions. Educational in-services are also performed for nurses and the medical staff on a regular basis. Additionally, infection control enforces strict hand hygiene for which compliance has consistently been greater than 98%. Due to oncology patients having a higher incidence of baseline diarrhea, a three-component C. difficile test is used at this institution to reduce false positive results. The glutamate dehydrogenase (GDH) antigen and enzyme immunoassay tests for toxins A and B are obtained on all samples. If there is discordance between the tests, then only is a polymerase chain reaction (PCR) test performed. With these combined efforts, there were 0 incidences of CDI over a period of 10 months in 2017 and no more than one incidence per month since January of 2016. However, both incidences in August and September 2017 were false positive results. Therefore, without any clinical infections, the institution had 0 incidences of CDI for one year (table 1).

References

1. Dubberke E R, Carling P, Carrico R, et.al. (2014) Strategies to prevent *Clostridium difficile* infections in acute care hospitals: 2014 Update. Infect Control Hosp Epidemiol 35(6):628-645.
2. Valiquette L, Cossette B, Garant M P, et.al. (2007) Impact of a reduction in the use of high-risk antibiotics on the course of an epidemic of *Clostridium difficile*-associated disease caused by the hyper-virulent NAP1/027 strain. CID 2007:45 (Suppl 2) S112-S121.
3. Muto C A, Blank M K, Marsh J W, et.al. (2007) Control of an outbreak of an infection with the Hyper-virulent *Clostridium difficile* BI strain in university hospital using a comprehensive bundle approach. CID 45:1266-1273.
4. Fowler S, Webber A, Cooper B S, et.al. (2007) Successful use of feedback to improve antibiotic prescribing and reduce *Clostridium difficile* infection: a controlled interrupted time series. Journal of Antimicrobial Chemotherapy 59:990-995.
5. Carling P, Fung T, Killion A, Terrin N, et.al. (2003) Favorable impact of a multidisciplinary antibiotic management program conducted during 7 years. Infection Control and Hospital Epidemiology 24(9):699-706.

Biography

Trisha Patel is the Infectious Diseases/Critical Care Pharmacist at Cancer Treatment Centers of America (CTCA). She completed her Pharmacy Residency with a specialty in critical care at University of Alabama Hospital in Birmingham (UAB). After working at UAB for four years as the Medical ICU Pharmacist, she moved to Philadelphia to work at CTCA. Since acquiring this position, she has assisted Dr. Mashiul Chowdhury in managing all patients on antibiotics as well as to lead their Antimicrobial Stewardship Program.

trisha.patel@ctca-hope.com

Sundus Ahmed et al., J Infect Dis Ther 2018, Volume 6
DOI: 10.4172/2332-0877-C1-039

Vector-borne diseases and public health: 1986-2010

Sundus Ahmed, Nagasudha L. Chigurupati, and **Satesh Bidaisee**
George's University School of Medicine, Grenada

Vector-borne diseases (VBDs) remain a prominent threat to human health, and research in this field has increased dramatically in recent decades. This study examines the published literature on VBDs and public health over a 25-year time period (1986-2010) and identifies important trends, hypothesizes their underlying factors, and makes predictions for future trends. Not only does this provide a historical snapshot for future researchers, but by identifying where significant focuses and neglects have been thus far, it can potentially influence future research decisions such as the allocation of funding and resources.

A systematic literature review was conducted from May-June 2017 using Web of Science and Google Scholar. A random sampling method was used to review publications for inclusion. Each publication was classified into a sub-theme based on its main purpose and further into 1 of 6 overarching themes. The prevalence (proportion of times a theme appeared) over the entire study period and rates for individual years were calculated and plotted appropriately.

A total of 632 publications were reviewed, the majority being peer-reviewed journal articles. A sharp increase in total publications was observed over the study period. Vector Pathogen Characteristics + Epidemiology was the most prevalent theme overall (28%) followed by Biotechnology Advancements (21%). Environmental Factors/Human Impact exhibited a strong positive trend overall (R = 0.53) due to an increasing number of publications on climate change.

Many important trends were identified and discussed. Some of the most important include associations between an increase in the popularity of climate change and the dramatic increase in Lyme disease incidence in the U.S. (both in the 1980's) with subsequent increases in publications. Moreover, the much higher prevalence of themes on vector behavior and control/prevention methods compared to clinical management of diseases shows that population-level approaches to prevention remain the dominant focus in combating VBDs.

References

1. Gubler, Duane J. "The global emergence/resurgence of arboviral diseases as public health problems." Archives of medical research 33.4 (2002): 330-342.
2. Gubler, Duane J. "Resurgent vector-borne diseases as a global health problem." Emerging infectious diseases 4.3 (1998): 442.
3. Gratz, Norman G. "Emerging and resurging vector-borne diseases." Annual review of entomology 44.1 (1999): 51-75.
4. Chan, Nathan Y., et al. "An integrated assessment framework for climate change and infectious diseases." Environmental Health Perspectives 107.5 (1999): 329.
5. Haines, Andy, et al. "Climate change and human health: impacts, vulnerability and public health." Public health 120.7 (2006): 585-596.

Biography

Satesh Bidaisee is a Professor of Public Health and Preventive Medicine and Assistant Dean for Graduate Studies at St. George's University. He is a graduate of the University of the West Indies, Faculty of Medical Sciences, St. Augustine, Trinidad, St. George's University, School of Medicine, School of Graduate Studies and the University of Sheffield, UK. As a research investigator, Prof. Bidaisee supports community based participatory research and service activities in the fields of Emerging Infectious Diseases, Zoonoses, Food Safety and Security and One Health One Medicine. His research projects include Human Behavior, Climate Change and Viral Infections, Zoonoses and One Health and Vector Borne Disease outbreak investigation. Prof. Bidaisee is board certified by the U.S. National Board of Public Health Examiners, and holds Fellowships to the Royal Society of Public Health (FRSPH), Royal Society of Tropical Medicine and Hygiene (FRSTMH), International Society on Infectious Diseases and the Society of Biology.

sbidaisee@sgu.edu

Nuryuziliana Dolmat et al., J Infect Dis Ther 2018, Volume 6
DOI: 10.4172/2332-0877-C1-039

Toxic-shock syndrome of *Streptococcus pyogenes* (group A streptococcus) in pregnancy – A rare entity

Nuryuziliana Dolmat and **Siti Nadiah Ibrahim**
Tawau General Hospital, Malaysia

Group A streptococcus (GAS)-induced toxic shock syndrome (TSS) in pregnancy is rare, but its clinical course is fulminant. Mortality of GAS-induced toxic-shock syndrome is high as 50%. Here, we report two obstetrics cases from South-East Coast of Sabah, Malaysia. The first case was 23 year old lady presented with preterm labour at 24 weeks. She was in severe septic shock at presentation that requires three inotropes support. Her condition deteriorate very fast despite broad spectrum antibiotic and metronidazole, she succumbed within 24 hours from admission. Post mortem was done for her showed tissue culture from multiple organs grew GAS. While in other case, 23 year old lady at 34 weeks initially presented with shortness of breath with elevated blood pressure which been treated as acute pulmonary oedema secondary to severe pre-eclampsia. Her chest X-ray also suggestive of pneumonia was treated with ceftriaxone and azithromycin. An emergency lower segment caesarean section was done as her condition was worsening, severe metabolic acidosis requiring haemodialysis, difficulty in maintaining ventilation and needing inotropes to support her blood pressure. Post operatively, she was monitored in intensive care unit and antibiotics were changed to C-Penicillin and Clindamycin as her blood culture grew GAS which was sensitive to both. She had good recovery period after completion of antibiotics for 10 days and discharged well home. Unfortunately, both baby for these two women did not survive. The clinical manifestation is varied thus it is challenging in making diagnosis and subsequently delivering early management.

Biography

Nuryuziliana Dolmat (Yuzi) is currently working as Obstetrician and Gynecologist at Tawau General Hospital, Tawau Sabah. She completed her Masters of Obstetrics & Gynaecology from the University of Malaya. She worked at Sabah Women and Children Hospital as a Specialist and then promoted as Head of Department in Obstetric Department in Tawau General Hospital. She had involved with many teaching session for post graduate student in O&G.

widuri_183@yahoo.com

Notes:

Fikreslasie Samuel, J Infect Dis Ther 2018, Volume 6
DOI: 10.4172/2332-0877-C1-039

Soil transmitted helminthiasis and associated risk factors among elementary school children in Ambo town, Western Ethiopia

Fikreslasie Samuel
Ethiopian Public Health Institute, Ethiopia

Background: Soil-transmitted helminths (STHs) are widespread in underdeveloped countries. In Ethiopia, the prevalence and distribution of helminth infection varies by different exposing risk factors. We therefore investigated the prevalence of and risk factors of STHs infection in school children living in Ambo town, west Shoa Ethiopia.

Methods: In 2014/15, among 375 school children planned to be included in this study, only 321 school children were recruited in the study. Data onto school children from different schools were collected, including stool samples for qualitative STHs analysis. Questionnaire data on various demographic, housing and lifestyle variables were also available.

Results: Prevalence of any STHs infection was 12.6%. The respective prevalence of major soil-transmitted helminths is Ascaris (7.8%), hookworm (2.8%) and Trichuris (2.2%). This study result shows STHs prevalence varies regards to age, sex, latrine use, family size and nail trimming.

Conclusion: The results of the present study indicated that the percentage of positive finding for STHs in Ambo area is low. Besides, large family size, not nail trimming and unavailability of improved latrine were identified as predisposing factor for STHs infections. All school children enrolled and not enrolled in this study should be treated twice a year until the prevalence falls below the level of public health importance.

Biography

Fikreslasie Samuel is currently working as expert in public health, Ethiopian Public Health Institute, Ethiopia.

fikre21sam@yahoo.com

Notes:

Han Naung Tun, J Infect Dis Ther 2018, Volume 6
DOI: 10.4172/2332-0877-C1-039

Review of the screening and treatment of CMV retinitis in HIV patients

Han Naung Tun
Pun Hlaing Siloam Hospital, Taiwan

This abstract is to review the demographic results, complication and treatment outcomes of CMV eye program. A retrospective review of patients' register based on our under-care patients at HIV clinic and the period of treatment was started from March 2016 to December 2017. 914 patients whose CD4 is less than 100 were eligible for the study. Mean age was 30.37 +/- 10.7 year. Among those patients with active CMV lesion, 50% of them were already on any kind of first line ART (NNRTI and NRTI) but 38.9% of the newly diagnosed patients with HIV infection were also co-infected with active CMV lesion. Only 5.6% of the patients were already on second line ART (with PI) or another special regimen of ART. On one month after the treatment according to our WHO CMV protocol, 73.3% of the lesions became improved with appropriate treatment and 26.7% of the lesions became inactive. Here, 16.7% of the patients did not reach to one month. On three months, 53.8% of the lesions became inactive and 23.1% of the lesions become improved well on the treatment but another 23.1% of the patients suffered again with relapsed. The reason of relapse was not due to inefficiency of the treatment but mainly due to loss of follow up for weeks or months. Here also 27.8% of the patients did not reach to three months. On six months, 60% of the lesions became inactive and 40% of the lesions improved well. There was low incidence of complications (5 cases in 914). The cause of death was due to occurrence of new OIs who were also loss to follow up. The cause of death is not totally associated with side effect of injection (Ganciclovir) and oral (Valganciclovir). The study showed that even low CD4 (<100) with CMV retinitis was effectively cured with very low side effect and achieved better outcome with least of adverse reaction.

Recent Publications and Papers.

1. Linkage Between AGT M235T Gene Polymorphism and Essential Hypertension in Myanmar. (2017)
2. Beautiful Nature, Peaceful Hope and Infectious Diseases in Treasure Land of East Asia - Experiences on Eastern Shan State. (2017)
3. Clinically Significant Association of Microalbuminuria, Creatinine Clearance and High hs-CRP level for early detection of Diabetes Nephropathy in Type 2 Diabetes Mellitus
4. Localization of Different Culprit Arteries in Patients with Acute Inferior Wall Myocardial Infarct Along with Dead deviation in aVr (BAOJ Cellular & Molecular Cardiology, 2017, 3:20;015)
5. Increased plasma angiotensinogen level, BMI and its association with the AGT M235T gene polymorphism and essential hypertension

Biography

Han Naung Tun is a Physician in Internal medicine, Tropical Medicine and Cardiology, has been working at Pun Hlaing Siloam Hospital. He got MBBS from University of Medicine (2), Yangon. He is also an International Active Member of American Academy of Family Medicine and Australia College of Tropical Medicine and Professional Member of European Society of Cardiology and Working Groups. He has him expertise in Tropical Medicine and Cardiology in both clinical and Research. He has been still working in new Treatment outcomes and Molecular Topical Medicine research join with University of Medicine, Yangon and Zurich University.

annasxhan@gmail.com

Notes:

5th International Congress on

INFECTIOUS DISEASES

March 01-02, 2018 Berlin, Germany

e-Posters

Infection Congress 2018

Natthawut Kaewpitoon, J Infect Dis Ther 2018, Volume 6
DOI: 10.4172/2332-0877-C1-039

Effectiveness of SUT-OVCCA-Mobile application for risk group screening of a carcinogenic liver fluke among rural population in Thailand

Natthawut Kaewpitoon
Suranaree University of Technology, Thailand

Liver fluke caused by Opisthorchis viverrini is an endemic in Southeast Asia particularly in Thailand, Lao People's Democratic Republic, Cambodia and central Vietnam. The infection is associated to cholangiocarcinoma; bile duct cancer. Active surveillance in rural communities with an appropriate low-cost screening tool is required to facilitate early detection. Previously, we developed verbal screening test and then created for smartphone. In addition, mini-parasep sf parasite faecal concentrator is a new technique that increased the sensitivity and specificity for helminthic infection. This study aimed to screen the risk group for liver fluke infection among participants from rural communities northeast areas of Thailand where has been reported the highly incident of cholangiocarcinoma, by using OVCCA mobile application (verbal screening test), and determine the liver fluke infection in the high risk group by using mini-parasep sf parasite faecal concentrator (mpfc). A cross-sectional survey was performed among 560 participants from Nakhon Ratchasima, Chaiyaphum, and Khon Kaen province, northeast Thailand during October 2016 and February 2017. All participants were self-screened test through OVCCA mobile application and then reported the result for themselves and data retrieved. The high risk group was asked for faecal collected and parasitic examined by using mpfc. The majorities of participants were female (58.3%), age group 41-50 years old (37.3%), primary school (61.0%), and agriculture (84.4%). The data demonstrated OVCCA application had a very good intra-class correlation coefficients =0.895 and could clearly distinguish the risk group of liver fluke infection. The item analysis was weighted and found that cyprinoid fish consumption had an important weight for liver fluke infection screened (β=0.427, t=409.892, p=0001), and partial correlation=0.967. Participants had scores with the low risk; however, the high risk was found 3.1%. In the high risk group found that the liver fluke infection rate was 2.8%, found frequently in male, primary school, and agriculture group. In conclusion, liver fluke is still a serious problem in community level of Thailand. OVCCA application is a valid and reliable method for assessing liver fluke risk among community populations therefore it may be useful for early detection in other epidemic areas of Thailand.

Biography

Natthawut Kaewpitoon completed his PhD from Khon Kaen University in Thailand and molecular biology practicum performed at Queensland Institute of Medical Research, Brisbane, Australia. He is the committee member of Parasitic Disease Research Center, Institute of Medicine, Suranaree University of Technology, Thailand. He has published more than 60 papers in reputed journals and has been serving as an Editorial Board Member of repute Natthawut Kaewpitoon completed his PhD from Khon Kaen University in Thailand and molecular biology practicum performed at Queensland Institute of Medical Research, Brisbane, Australia. He is the committee member of Parasitic Disease Research Center, Institute of Medicine, Suranaree University of Technology, Thailand. He has published more than 60 papers in reputed journals and has been serving as an Editorial Board Member of repute.

natthawut.ka@sut.ac.th

Notes:

Soraya J Kaewpitoon, J Infect Dis Ther 2018, Volume 6
DOI: 10.4172/2332-0877-C1-039

Prevention and control for a carcinogenic liver fluke in rural communities of Thailand through inter- and trans-disciplinary university

Soraya J Kaewpitoon
Suranaree University of Technology, Thailand

Liver fluke is an endemic in Southeast Asia particularly in Thailand, Lao People's Democratic Republic, and Cambodia. The infection is associated to cholangiocarcinoma; bile duct cancer. Prevention and control is required to decrease the liver fluke incident. Here, we described the liver fluke prevention and control program (LFPCP) through Inter- and Trans-disciplinary University (ITU). LFPCP was constructed among the rural communities in northeast Thailand during November 2016 and July 2017. ITU was integrated in LFPCP; briefly, ITU is comprised the partnership, scholarship, mutual benefit, and social impact. ITU is established by teachers and student (medical, nursing, public health, engineering, and business computer) from Suranaree University of Technology, Vongchavalitkul University, and Nakhon Ratchasima Rajabhat University, local government officers, and villagers, to solve the health problem in the rural community particularly liver fluke disease and cholangiocarcinoma. Quantitative and qualitative data were collected by questionnaires, group and individual feedback, consequently. Of 120 participants were included. Participants (89%) had a high level of satisfaction regarding LFPCP particularly in the steps of sharing ideas, decision making, and planning step. They could improve their knowledge, attitude and their practice regarding liver fluke prevention and control. LFPCP is an integrative activity that improves knowledge, attitude, skill, and practice for students and villagers. Therefore, LFPCP toward ITU is highly potential mutual benefit among university, students, teachers, and communities.

Biography

Soraya J Kaewpitoon has completed her MD at Khon Kaen University in Thailand and FCFPT at Royal College of Family Physicians of Thailand. She is the Vice Dean in Research Affair, and Head of Parasitic Disease Research Center, Institute of Medicine, Suranaree University of Technology, Thailand. She has published more than 60 papers in reputed journals and has been serving as an Editorial Board Member of repute.

soraya.k@sut.ac.th

Notes:

Përparim Kadriaj et al., J Infect Dis Ther 2018, Volume 6
DOI: 10.4172/2332-0877-C1-039

Seroepidemiology of CCHF in domestic animals in endemic areas in Albania

Përparim Kadriaj[1], Majlinda Dhimolea-Kota[1], Enkelejda Velo[1], Kujtim Mersini[2], Kristaq Berxholi[3] and **Silva Bino[1]**
[1]Institute of Public Health, Albania
[2]Institute of Food Safety and Veterinary, Albania
[3]Agriculture University of Tirana, Albania

Crimean-Congo hemorrhagic fever (CCHF) is an arboviral zoonotic infection which is endemic in some areas of the country. The aim of this study was to assess the seroprevalence of CCHFV in previous and recent endemic areas of the country. This cross sectional serologic study was conducted in period 2010-2014 by the Institute of Public Health in Tirana, Albania. A total of 152 serum samples from domestic animals were included in the survey. All samples were collected randomly from seven districts in Albania and were examined for anti-CCHFV IgG. Of the total of 152 samples examined, 102 (67.1%) were positive to IgG ELISA. The highest positivity rate was among cows (88.3%) and in recent endemic areas of Has and Kukes, 89.7% and 82.9% respectively. The scientific data presented in this study indicated that humans are at risk of World Health Organization.

Recent Publications

1. Maltezou H C and Papa A (2010) Crimean-congo hemorrhagic fever: risk for emergence of new endemic foci in Europe? Travel Med Infect Dis 8:139–43.
2. Kampen H, Poltz W, Hartelt K, Wölfel R, Faulde M. Detection of a questing Hyalomma marginatum marginatum adult female (Acari, Ixodidae) in southern Germany. Exp Appl Acarol 2007;43:227–31.
3. S S Al-Abri et al. (2017) Current status of Crimean-Congo haemorrhagic fever in the World Health Organization Eastern Mediterranean Region: issues, challenges, and future directions / International Journal of Infectious Diseases 58 (2017) 82–89
4. Messina J P, Pigott D M, Golding N, Duda K A, Brownstein J S, Weiss D J, et al. (2015) The global distribution of Crimean-Congo hemorrhagic fever. Trans R Soc Trop MedHyg 109:503–13.

Biography

Perparim Kadriaj is currently working as a expertise in Control of Vector Diseases in Institute of Public Health, Albania. He has been conducting field trips in the framework of different research projects and emergencies in case of disease outbreaks; representing Institute of Public Health, Tirana, Albania at national and international events, congresses and workshops.

pkadriaj@yahoo.com

Notes:

Brigitta Zana et al., J Infect Dis Ther 2018, Volume 6
DOI: 10.4172/2332-0877-C1-039

First genetic characterization of *Usutu virus* from Culex pipiens mosquitoes Serbia, 2014

Brigitta Zana[1], **Gábor Kemenesi**[1], **Dóra Buzás**[1], **Kornélia Kurucz**[1], **Bosiljka Krtinic**[2], **Anett Kepner**[3], **Fanni Földes**[1] and **Ferenc Jakab**[1]
[1]University of Pécs, Hungary
[2]Ciklonizacija Ltd., Novi Sad, Serbia
[3]PROPHYL Ltd., Mohács, Hungary

Since its first appearance in Europe, *Usutu virus* (USUV) diverged to several different genetic lineages. The virus was reported to date from multiple countries across Europe (Hungary, Italy, Switzerland, Spain, Germany, Czech Republic and Belgium). Considering the more frequently published impact of the virus on humans it is crucial to investigate locally circulating genetic variants and trace its evolution. We retrospectively analyzed mosquito samples from Serbia Vojvodina region, collected during 2014. In this study, we report the results of the screening of 23753 female mosquitoes (753 pools) for USUV-specific nucleic-acid. Based on phylogenetic analysis the Serbian USUV sequence was most closely related to the virus that emerged in Austria in 2001, in Hungary in 2005 and was circulating until 2015 in Hungary. This data presents a wider geographic distribution of this genetic variant and provides the first genetic data from this region.

Recent Publications

1. Zana B (2016) Genomic characterization of West Nile virus strains derived from mosquito samples obtained during 2013 Serbian outbreak. Journal of Vector Borne Diseases 53:379.
2. Zana B (2017) Molecular traces of a putative novel insect flavi virus from *Anopheles hyrcanus* mosquito species in Hungary. Acta Virologica 61:127-129.
3. Bányai K (2017) Candidate new rotavirus species in Schreiber's bats, Serbia. Infection, Genetics and Evolution 48:19-26.
4. Kemenesi G (2017) Highly divergent cyclo-like virus in a great round leaf bat (*Hipposideros armiger*) in Vietnam. Archives of Virology 162:2403-2407.
5. Kurucz K (2017) Ecological preferences of the putative West Nile virus vector *Uranotaenia unguiculata* mosquito with description of an original larval habitat. North-Western Journal of Zoology 13(2):193-199.

Biography

Brigitta Zana is a PhD student at University of Pécs, Hungary. Her PhD program is focusing on the description and genetic characterization of viral pathogens distributed by different vector organisms such as bats, mosquitoes and ticks. Her findings give detailed genetic characterization and phylo-geographic information about human pathogenic viruses circulating in Central Europe and Asia.

brigitta.zana@gmail.com

Notes:

Radwa Hussein Mohamed Ghoraba et al., J Infect Dis Ther 2018, Volume 6
DOI: 10.4172/2332-0877-C1-039

Quantitative analysis of *Human herpes virus 6* DNA in patients treated for acute leukemia

Radwa Hussein Mohamed Ghoraba, Ghada F Helaly, Nadia E Zaki and **Dalia E Metwally**
Alexandria University, Egypt

Viral infections are important causes of morbidity and mortality for patients with a hematological malignancy, but the true incidence and consequences of viral infections for these patients who undergo conventional non transplant therapy are inadequately defined. The significance of estimating the prevalence of HHV-6 in cancer patients does not actually get its importance from morbidity of the disease itself but from further interference of the outcome in bone marrow transplant patients; where it may be associated with serious life threatening complications. Thus, screening of patients with hematological malignancies for HHV-6 might be considered mandatory. The aim of this study was to evaluate a possible association between HHV-6 infection and acute leukemia in adults after receiving chemotherapy treatment for acute leukemia. The patients were divided into two main groups according to the type of leukemia: Group I; 36 patients with newly diagnosed acute myeloid leukemia (AML) and group II; 27 patients with newly diagnosed acute lymphoblastic leukemia (ALL); 21 patients with B-ALL and six patients with T-ALL. All 63 studied adult patients with newly diagnosed acute leukemia were subjected to history taking, complete clinical examination for the presence of organomegaly and routine laboratory investigations. Peripheral blood samples were collected from all patients for quantitative determination of HHV6 viral load by Taqman probe technique (real time PCR) at day 0 and day 100 of induction chemotherapy. The results argued against an etiological relationship between HHV-6 infection and the genesis of acute leukemia in adults, however, it supports the hypothesis of viral latency and the possibility of virus reactivation in immunocompromised hosts. The possible presence of HHV-6 as an associated or a putative causative agent in leukemia should however be considered. Recommendations include screening of patients with hematological malignancies for HHV-6 might be considered among the routine initial laboratory work-up.

Recent Publications

1. Agut H, Bonnafous P and Gautheret-Dejean A (2015) Laboratory and clinical aspects of human herpesvirus 6 infections. Clin Microbiol Rev 28(2):313-35.
2. Pellett P E, Ablashi D V, Ambros P F, Agut H, Caserta M T, Descamps V, et al. (2012) Chromosomally integrated human herpesvirus 6: questions and answers. Rev Med Virol 22(3):144-55.
3. Becerra A, Gibson L, Stern L J and Calvo-Calle J M (2014) Immune response to HHV-6 and implications for immunotherapy. Curr Opin Virol 9:154-61.
4. Yip C C Y, Sridhar S, Cheng A K W, Fung A M Y, Cheng V C C, Chan K H, et al. (2017) Comparative evaluation of a laboratory developed real-time PCR assay and the RealStar® HHV-6 PCR Kit for quantitative detection of human herpesvirus 6. J Virol Methods 2017; 246:112-6.
5. Inazawa N, Hori T, Yamamoto M, Hatakeyama N, Yoto Y, Nojima M, et al. (2016) HHV-6 encephalitis may complicate the early phase after allogeneic hematopoietic stem cell transplantation: Detection by qualitative multiplex PCR and subsequent quantitative real-time PCR. J Med Virol. 88(2):319-23.

Biography

Radwa Hussein Mohamed Ghoraba is a Pharmacist, graduated from Faculty of Pharmacy and Drug Manufacturing, Pharos University, Alexandria, Egypt in 2012. She completed her Master's degree in Diagnostic and Molecular Microbiology at Medical Research Institute (MRI), Alexandria University in 2017. Her involvement in research has given her first-hand exposure to the process of active scientific research, resulted in incredible research experiences, and instilled in her a passion for science and exploration. She is interested in improving public health through research.

rhussein14@yahoo.com

Zeghbib Safia, J Infect Dis Ther 2018, Volume 6
DOI: 10.4172/2332-0877-C1-039

Genetic and evolutionary characterization of a novel picornavirus in Algerian *Miniopterus schreibersii* bats

Zeghbib Safia
University of Pécs, Hungary

Despite the fact that bats are reservoir hosts of numerous viruses with zoonotic potential, the presence of the Picornaviridae family members in these flying mammals remains little known, however they may have the potential to cross species barriers. Picornaviruses are non-enveloped small positive sense-single stranded-RNA viruses, which evolve very fast: 80 species are counted to date. In order to be prepared to face newly emerging viral diseases our knowledge about the viruses circulating in animals of high zoonotic potential, is highly important in order to rapidly detect zoonotic spillovers. For this purpose, we accomplished co-phylogenetic analyses of host–virus relationship on *Miniopterus schreibersii* bat guano samples collected in Algeria in 2017, through both metagenomic and phylogenetic analyses. In this study, we report the first molecular data and genomic characterization of a novel picornavirus from the bat species *M. schreibersii* in Algeria. Phylogenetic analyses showed that this novel picornavirus belongs to Mischivirus genus and is closely related to *Mischivirus B,* also within the Mischivirus group there is no host jumping phenomenon observed comparing to other members of Picornaviruses.

References :

1. Alexander N Lukashev, Victor Max Corman, Daniel Schacht, Florian Gloza-Rausch, Antje Seebens-Hoyer, Anatoly P Gmyl, Christian Dorsten and Jan Felix Drexler (2017) Close genetic relatedness of picornaviruses from European and Asian bats. Journal of General Virology 98:955-961.
2. Claude Kwe Yinda, Roland Zell, Ward Deboutte, Mark Zeller, Nádia Conceição-Neto, Elisabeth Heylen, Piet Maes, Nick J. Knowles, Stephen Mbigha Ghogomu, Marc Van Ranst and Jelle Matthijnssens (2017) Highly diverse population of Picornaviridae and other members of the Picornavirales in Cameroonian fruit bats. BMC Genomics 18:249.
3. David T S Hayman (2016) Bats as viral reservoirs. Annual Review of Virology 3:77-99.
4. Gabor Kemenesi, Dabing Zhang, Szilvia Marton, Bianka Dallos, Tamas Gorfo, Peter Estok, SandorBoldogh, Korne lia Kurucz, Miklos Oldal, Anna Kutas, Krisztian Banyai and Ferenc Jakab (2015) Genetic characterization of a novel picornavirus detected in *Miniopterus schreibersii* bats. Journal of General Virology 96:815-822.
5. Patrick C Y Woo, Susanna K P Lau, Garnet K Y Choi, Yi Huang, Saritha Sivakumar, Hoi-WahTsoi, Cyril C Y Yip, Shanty V Jose, Ru Bai, Emily Y M Wong, Marina Josephf, Tong Li, Ulrich Wernery and Kwok-YungYuen (2016) Molecular epidemiology of canine picornavirus in Hong Kong and Dubai and proposal of a novel genus in Picornaviridae. Infection, Genetics and Evolution 41:191-200.

Biography

Zeghbib Safia is a PhD student at University of Pécs in the virological research group. She completed her MSc in Genetics from U.S.T.H.B University in Algeria. She worked as a medical representative for three years, then joined Pasteur institute in Tunisia for six months where she worked on congenital deafness, after that she had been awarded a Stipendium Hungaricum scholarship and started her work on zoonosis in Algeria.

zeghbib.safia@gmail.com

5th International Congress on

INFECTIOUS DISEASES

March 01-02, 2018 Berlin, Germany

Accepted Abstracts

conferenceseries.com

J Infect Dis Ther 2018, Volume 6
DOI: 10.4172/2332-0877-C1-039

5th International Congress on

INFECTIOUS DISEASES

March 01-02, 2018 Berlin, Germany

Establishing national malaria slide bank: Key strategy for implementing reliable proficiency testing external quality assessment and microscopy training programs

Abnet Abebe[1], Abeba G Tsadik[1], Bereket Alemayehu[2], Mekonnen Tadesse[3], Tesfay Abreha[3], Gonfa Ayana[1], Adisu Kebede[1], Nicole Whitehurst[4], Zenebe Melaku[3], Jessica Justman[2] and **Hiwot Teka[5]**

[1]Ethiopian Public Health Institute, Ethiopia
[2]Columbia University-ICAP, USA
[3]Columbia University-ICAP, Ethiopia
[4]Medical Care Development International, USA
[5]US President's Malaria Initiative-USAID, Ethiopia

Background: Despite the provision of microscopy trainings for health workers and implementation of proficiency testing (PT) external quality assurance (EQA) programs implemented in most countries, few countries have the capacity to produce and use validated blood film slides to ensure the sustained reliability of the trainings and EQA programs. Ethiopian Public Health Institute (EPHI) has partnered with ICAP and Malaria Care for mass production of validated malaria blood film slides with the aim of establishing the nation's first malaria slide bank.

Methods: *Plasmodium falciparum (Pf)* and *Plasmodium vivax* (Pv) positive slides were prepared at Adama Malaria Control Center from blood specimens collected from consented adult patients. Negative slides were prepared from blood collected from volunteer visitors from non-malaria endemic countries with no history of malaria and travel to malarious areas. Between 200-400 blood film slides were prepared from each donor. The blood film slides were examined by WHO-certified expert microscopists for species identification and then characterized and validated by polymerase chain reaction (PCR). The slides were archived using a custom-made slide bank database and storage cabinets with capacity for 10,000 slides.

Results: A total of 10,742 (9,045 Pf and Pv positive; 1,697 negative) validated blood film slides were collected from 35 donors. Validated malaria slides sets containing blood films slides of negative, Pf, Pv, mixed Pf/Pv and Borrelia spp will be used during in-service and pre-service malaria microscopy trainings at regional reference laboratory training centers and pre-service laboratory teaching universities, respectively. In addition, 995 facilities that are currently enrolled in regional PT EQA programs in five regions will receive the validated malaria PT slides.

Conclusion: Establishment of the slide bank enabled the national malaria program to use standardized and validated slides for quality in-service and pre-service malaria microscopy trainings, competency assessment of microscopists, laboratory mentorship programs, and regional malaria microscopy proficiency testing EQA programs.

abnetabas@gmail.com

conferenceseries.com

J Infect Dis Ther 2018, Volume 6
DOI: 10.4172/2332-0877-C1-039

5th International Congress on

INFECTIOUS DISEASES

March 01-02, 2018 Berlin, Germany

Comparative study on factors associated with voluntary HIV counselling and testing uptake and accepting attitudes towards people living with HIV/AIDS among adults in Sub-Saharan Africa countries: A cross-sectional survey

Afewerki Weldezghi Tesfay
Tongji Medical College- Huazhong University of Science and Technology, China

Background & Aim: As the global HIV/AIDS epicenter, the Sub-Saharan Africa (SSA) region has been conducting the national HIV voluntary counselling and testing (VCT) campaign to control HIV infection. To explore a puzzle about why high-level VCT is related inconsistently to low-high HIV infection, we performed an integrative structure analysis to identify and characterize the path model of VCT uptake on three main influential factors, HIV-related comprehensive knowledge, attitude towards people living with HIV/AIDS (PLWHA) and risky sexual behaviour, among adults.

Methods & Findings: Adjusted by the demographic and socio-economic covariates, complex sample logistic regression was employed to build the path model of VCT uptake at the individual level in a nationally representative dataset from the demographic and health survey of seven SSA countries. We identified a tight structure of path connections among VCT uptake and the three influential factors for the countries with lower HIV incidence (e.g., Democratic Republic of Congo and Ethiopia) and a loose structure for those with the highest HIV incidence (e.g., Namibia and Lesotho). Using a mediation analysis, we detected the strongest direct positive effect of highly risky sexual behaviour on VCT uptake, the adjusted odds ratio (aOR) ranged from 1.883 to 5.540 and all p-values <0.001 in the sampled SSA countries. But the other direct and indirect paths of HIV-related knowledge and attitude towards PLWHA to VCT uptake did not have consistent significance. With controlling the effect of covariates, a partial contingency coefficient for measuring the degree of association between two categorical variables was developed as a partial correlation coefficient for two continuous variables. The partial contingency coefficients of the direct and indirect paths of the three factors to VCT uptake were adopted as partial least squares (PLS) regressors on the logit transformation of 2013-2016 HIV incidence rates at the country level. According to World's criterion, we determined two critical paths to VCT uptake, the direct path of risky sexual behaviour and the indirect path of HIV-related comprehensive knowledge through risky sexual behaviour, in affecting population HIV incidence. Their standardized PLS coefficients range from 0.52 to 0.57 as well as from -0.61 to -0.60, respectively, suggesting that population HIV incidence was affected positive by the former path but negatively by the latter. Our study's limitations are that HIV testing status is subject to information bias, and that further work is needed to validate these findings using a prospective study.

Conclusions: The work identifies the opposite effect on population HIV incidence from the two critical paths to VCT uptake, the direct path of risky sexual behaviour and the indirect path of HIV-related knowledge to VCT uptake, and provides evidence for future studies of an HIV/AIDS health education system based on a balanced bidirectional model of knowledge, attitudes and behaviour to prevent and control HIV/AIDS.

afeto_wf_2014@yahoo.com

J Infect Dis Ther 2018, Volume 6
DOI: 10.4172/2332-0877-C1-039

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

Alfonso Magaña, David S Salas Vargas, José A Geraldo Murillo and **Dilayaxi Cárdenas Bautista**
Autonomous University of Baja California, México

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.

mga.alfonso@gmail.com

J Infect Dis Ther 2018, Volume 6
DOI: 10.4172/2332-0877-C1-039

Plasmodium vivax population structure in malaria endemic area of southern Iran

Aliehsan Heidari[1] and **Hossein Keshavarz**[2]
[1]Alborz University of Medical Sciences, Iran
[2]Tehran University of Medical Sciences, Iran

Malaria is an important parasitic disease that consider as a threat of public health in worldwide. *Plasmodium vivax* causes malaria infection mainly in Asia, South America and Oceania. In Iran, as member of east Mediterranean region office (EMRO), *Plasmodium vivax* and Plasmodium falciparum are responsible of malaria that occur mainly in south and southeast of the country. This area has common borders with Pakistan and Afghanistan. *Plasmodium vivax* accounts as agent of more than 90% of malaria cases in Iran. The access to enough information about population structure of *Plasmodium vivax* is necessary for developing malaria vaccine and epidemiological studies. The present study was conducted to determine population genetic diversity of *Plasmodium vivax* in southeast of Iran. Blood was taken from symptomatic malaria patients. The nested PCR were performed to amplify the two merozoite antigens of *Plasmodium vivax*. The products of PCR were sequenced. The MEGA 5 and DNASP software were used for the genetic analysis. The nucleotide sequences were deposited in world gene bank. The findings of present study showed genetic diversity in *Plasmodium vivax* population in the hypo-endemic area for malaria in Iran.

aliehsan2001@yahoo.com

Notes:

J Infect Dis Ther 2018, Volume 6
DOI: 10.4172/2332-0877-C1-039

A constructed porcine teschovirus with deleted highly conserved "RNNQIPQDF" epitope of VP1 has potential to serve as DIVA vector

Arthur Tung-Hsuan Tsai[1], **Chia-Yi Chang**[2] and **Fun-In Wang**[1]
[1]National Taiwan University, Taiwan
[2]Animal Health Research Institute, Taiwan

Differentiation of infected from vaccinated animals (DIVA) is an important strategy for disease control. Development of a specific epitope-erased marker vector and accompanying diagnostic serum may improve the efficiency of DIVA. Porcine teschovirus (PTV) is well suited for serving as an immunization vector due to its: Fecal-oral or intranasal route of infection; pantropism in swine host; generally low virulence and minor epidemic impact on swine herds worldwide and; DIVA purpose as proposed above. Here, a mono-specific antibody was found to recognize conserved "RNNQIPQDF" epitope spanning amino acids 188–196 of capsid protein VP1 of PTV1/PS 34 strain. The epitope was deleted and replaced by a reverse genetics procedure. The ability of this mono-specific antiserum to differentiate the epitope-erased marker PTV from parental virus shows its potential to serve as an immunization vector for swine diseases. This is the first report of a DIVA possibility based on an anti-structural protein antibody of PTV. In general, recombined picornaviruses have DIVA potential on using as vector-based vaccines.

d99629004@ntu.edu.tw

J Infect Dis Ther 2018, Volume 6
DOI: 10.4172/2332-0877-C1-039

Successful control of two simultaneous outbreaks of OXA-48-carbapenemase producing Enterobacteriaceae and multi-resistant *Acinetobacter* baumannii in an intensive care unit

A Robustillo-Rodela, V Perez-Blanco, Espinel Ruiz, G Ruiz Carrascoso, J C Figueira Iglesias and **D Abad Martin**
Hospital Universitario la Paz, Spain

Background: Enterobacteriaceae producing OXA-48-carbapenemase and multi-resistant *Acinetobacter* baumannii (MRAB) have a high capacity for colonization in individuals and on surfaces. Moreover, they are difficult to eradicate from the environment. This report describes a double outbreak of OXA-48–producing Enterobacteriaceae (OXA-48-PE) and MRAB in an intensive care unit (ICU) and the effectiveness of measures implemented, including decontamination with vaporized hydrogen peroxide (VHP).

Methods: Affected patients were isolated in a confined area and cared for by dedicated personnel. Four percent chlorhexidine soap was used for patient daily hygiene. All patients are subjected to contact precautions. Training on hand hygiene and random samples of hands were taken to evaluate staff hand hygiene. An in-depth cleaning of the ICU was performed with a chlorine solution, followed by decontamination with VHP. Environmental samples were taken before and after the decontamination.

Results: From July-October 2015, 13 patients were colonized or infected by OXA-48-PE and 18 by MRAB in the ICU. The cumulative incidence of OXA-48-PE and MRAB was 3.48% and 4.81%, respectively. In the period after the intervention, they were 0.8% and 0%, respectively (P<.001). The compliance of hand hygiene was 62.2%. Before the VHP bio-decontamination, 4.5% of environmental samples were positive for OXA-48-PE and none for MRAB. After bio-decontamination, 1.4% of samples were positive for OXA-48-PE.

Conclusions: This study emphasizes the importance of environmental hygiene in the control of outbreaks caused by microorganisms of high environmental impact. When an outbreak is sustained after the implementation of the usual control measures and a high level of adherence to hand hygiene, there may be environmental reservoirs that need to be eliminated. The rapid effect after the VHP treatment suggests an influence of this measure in eradication.

ana.robustillo@salud.madrid.org:

Notes:

J Infect Dis Ther 2018, Volume 6
DOI: 10.4172/2332-0877-C1-039

Bilharzial urinary bladder carcinoma in Egyptian population: Epidemiological trending changing traditional management

Gamal M Saied
Cairo University, Egypt

Background: The objective of this study is to validate the new clinicopathological features of bilharzial and non-bilharzial urinary bladder carcinoma in Egyptian population. These features are caused by altered epidemiology, and proposed to have reflection on management.

Patients & Methods: Timely contributions of leading Egyptian experts in domicile post-Bilharzial bladder cancer (last 4 decades) were reviewed. Additionally, 102 patients were studied in two subsets A&B based on a preplanned treatment modality: cystectomy facing transurethral resection plus radiotherapy. Observation on gross and microscopic features and their reflection on treatment decision are recorded.

Results: An overview of the aforementioned studies is given, demonstrating a striking change in the characteristic features of bladder carcinoma in Egypt, more obvious in 2007 and after. In the present work, 65% of patients had their tumors in a bilharzial bladder where walls demonstrated the classical cystoscopy features of the disease, while 35% had their tumors in a non bilharzial one. Group A patients were treated by cystectomy carrying 7.7% perioperative mortality, whereas patients in group B received sensitized radiotherapy preceded by transurethral resection.

Conclusion: Bladder cancer in Egyptian patients has lost its peculiar features imposed by chronic bilharzial cystitis, shifting towards traditional types suitable for organ preserving management.

gamal44@hotmail.com

J Infect Dis Ther 2018, Volume 6
DOI: 10.4172/2332-0877-C1-039

Diagnosis of toxocariasis in patients with allergic diseases

Eldor Urinov
Tashkent Medical Academy, Uzbekistan

Toxocariasis is a disease of humans caused by larvae (immature worms) of either the dog roundworm (Toxocara canis) or the cat roundworm (Toxocara cati). Toxocariasis is often called visceral larva migrans. 30 patients aged 21 to 55 years (men-17, women-13) were under our supervision. 19 of them were in the in-patient department of the specialized allergological center, 11 patients were treated in outpatient clinics allergological center and republic infectious diseases clinic. Collecting epidemiological history, we asked about the presence of an animal in the house, especially the dogs and the presence of pietism (geophagia). Clinical and laboratory examination were carried out. Serological testing for toxocariasis was performed at the laboratory of immunology of parasites, by using ELISA test system toxocara-strip. Positive results were received in six (20.0%) patients from 30 examined patients. The frequency of major clinical manifestations of toxocariasis was presented as follows: manifestations of allergic skin rash - three (50.0%), astheno-vegetative syndrome - in four (66.6%), intoxication syndrome - in five (82.3%), pulmonary syndrome in one (16.6%), enlargement of lymph nodes - two (33.3%). In peripheral blood eosinophilia were found in five (82.3%) patients. Based on epidemiological analysis it was established that the key risk factors for infection with T. canis are existence of geophagia and/or contact with a dog (79%). These data coincide with the literature data. The most frequently toxocariasis was diagnosed in patients with allergic skin rash (50.0%), astheno-vegetative syndrome (66.6%), intoxication syndrome (82.5%) and high titers of antibodies to T. canis.

eldor.urinov@gmail.com

Notes:

J Infect Dis Ther 2018, Volume 6
DOI: 10.4172/2332-0877-C1-039

Atypical clinical presentation in young, healthy women with pyogenic spondylodiscitis: Case report

Hsieh Yuan Kuei
Yuan's General Hospital, Taiwan

Adult patients with spontaneous spondylodiscitis usually present in elderly population with diabetes mellitus or systemic infection. This 29 years old women, previously healthy, reported chronic low back pain with acute exacerbation in five days prior to her visit. The severe pain radiated to right leg and made her disability in walking. There was no fever, no travel history, no contact history, and no wound. Neurologic examination revealed right L4/5 dermatome paresthesia and her muscle power was full over four extremities. The lab data showed leukocytosis and elevated C reactive protein level. The dynamic plain film of lumbar spine showed L4/5 spondylolisthesis. The Magnetic Resonance Imaging of lumbar spine showed mild L4/5 degenerative spondylolisthesis and diffuse posterior herniated disc, with right lateral ruptured sequestrum compromising L4 foramino-outlet nerve root. She was admitted to general ward and she received laminectomy and facetectomy then. During operation, purulent material was collected. The lumbar spine specimen and blood culture both identified methicillin-resistant *Staphylococcus* aureus. She received vancomycin then. Trace back her history, she worked as a nurse and denied any Intravenous drug abuse. The survey for HIV and autoimmune disease were also negative finding. There was no evidence of infective endocarditis by transthoracic echocardiography. The clinical presentation in this case was atypical in two aspects. First, the relative young age was not fit in bimodal distribution in spondylodiscitis; second, she did not have any related comorbities.

claire17@cgmh.org.tw

J Infect Dis Ther 2018, Volume 6
DOI: 10.4172/2332-0877-C1-039

The efficiency of good and clear communication between the radiology technologist and patient with infectious disease prior the radiology procedure in improving the infectious disease diagnostic and infection control

Hissa Mohammed
Communicable Disease Center, Qatar

Introduction: Through good and clear communication with patients of infectious diseases before they undergo radiology procedures, the rate of spread of an infection can be reduced significantly or further spread prevented. Communication allows the patients to understand and appreciate the precautions they need to take to prevent the spread of the infection to others.

Purpose: The purpose of communication is to make patients understand the seriousness of the infections they have. It should allow the patient an opportunity to participate in the campaign against the virus by equipping them with information on how to prevent the spread. It should additionally help them familiarize with the diagnostic procedure.

Method: Qualified and tested people should give appropriate explanations of prevention methods and radiology procedures. Radiology should be employed in their treatment. The essential elements in the process include radiology personnel, radiology equipment, and the patient. The method of radiology depends on the machine used and includes X-ray, CT-scan, SPECT-scan among others.

Results: The results of the effective communication with infectious disease patients get to understand the radiology process and learn techniques and practices that help them prevent the spread of the infection.

Conclusion: Effective communication with infectious disease patients is the key towards reducing the rate of the infections' spread. Communication assists patients to understand how to cope with the infection and its progression or otherwise. The method is through radiology and involves personnel to explain prevention techniques, and radiology equipment and personnel for diagnosis. It results in reduced infection rates.

hmohammed6787@gmail.com

Notes:

J Infect Dis Ther 2018, Volume 6
DOI: 10.4172/2332-0877-C1-039

Promastigote existence in infected lesions of cutaneous leishmaniasis

Mohammed Wael Daboul
Damascus University, Saudi Arabia

Leishmaniasis is an endemic parasitic disease in 88 countries. It is widely distributed throughout the world, caused by vector-borne, obligate, intracellular hemoflagellates of the genus Leishmania. The parasite continues its life cycle transforming to promastigote in the mid gut of the sand fly vector and is transmitted to the human host in the form of promastigote via the bite of the sand fly. Other less encountered forms of transmission are because of a laboratory accident, direct person-to-person transmission, organ transplant and blood transfusion. There is evidence that leishmaniasis may be transmitted either in utero or during the peripartum period. The promastigote form is considered the primary organism of disease transmission between the vector and the host. By not having a chance to continue its life cycle and transform into promastigote within the vector sand fly when considering the many different routes of transmission other than the sand fly bites, it is reasonable to assume an alternative possible existence of the promastigote form of the parasite in the infected lesion of cutaneous leishmaniasis in human host. The information presented indicates that a real transformation of amastigote to promastigote form occurs within the human host cutaneous lesion in the extracellular fluid after the macrophage membrane eruption and the amastigote release. New techniques are recommended for future studies to confirm these findings including real-time polymerase chain reaction (PCR) and applying the immunohistochemistry techniques using a novel monoclonal antibody (mAb) against the parasite flagellate (promastigote form) cell wall component.

mowaeldaboul@yahoo.com

J Infect Dis Ther 2018, Volume 6
DOI: 10.4172/2332-0877-C1-039

Role of the hepcidin-ferroportin axis in controlling the iron content of the cytosol and *Salmonella*-containing vacuoles in infected macrophages

Hyon Choy
Chonnam National University, South Korea

Iron plays a dual-role in bacterial infection: first, it is a critical micronutrient required for the proliferation of infecting bacteria, and second, it acts as a cofactor in the generation of bactericidal free radicals. Macrophages provide a major source of serum iron by releasing cytoplasmic iron via the membrane bound iron export protein, ferroportin (FPN), degradation of which is triggered by hepcidin produced by hepatocytes upon bacterial infection. *Salmonella typhimurium* is an intracellular pathogen capable of invading macrophages and proliferating in the membranous *Salmonella*-containing vacuole (SCV). In this study, we first demonstrate that FPN is localized on the SCV and plays a role in iron transport into the SCV. To measure iron content in the SCV, a biosensor was constructed by fusing the iron responsive iroB promoter of *Salmonella* to a mutant GFP with a short half-life (gfpOVA). Using this construct, we estimated the iron levels in macrophages in animals as well as in in vitro cultured macrophages in the presence and absence of hepcidin. In contrast to the generally accepted opinion, the iron level in the SCV in the presence of the iron transporter (FPN) was higher than in its absence (+hepcidin). In general, host defense against pathogens relies on the generation of reactive oxygen species (ROS) in phagocytic cells, especially during the early stage of infection. Thus, we examined for the generation of bactericidal ROS in the SCV using another biosensor composed of the ROS-responsive katG promoter of *Salmonella* fused to gfpOVA. To our surprise, ROS generation in the SCV was higher in the presence of FPN than in its absence. The relatively high level of iron in the SCV increased the generation of bactericidal ROS, which in turn decreased the number of intra-macrophage *Salmonella* and extended infected animal survival. Thus, this study reveals the mechanism via which a block in the hepcidin-FPN circuit controls intra-macrophage *Salmonella* infection.

hyonchoy@jnu.ac.kr

Notes:

J Infect Dis Ther 2018, Volume 6
DOI: 10.4172/2332-0877-C1-039

Occurrence of *Yersinia enterocolitica* in diarrhoeic pigs and humans in selected farms and hospitals in Ogun state, Southwestern Nigeria

Mabekoje Oladele O
Caleb University, Nigeria

Yersinia enterocolitica is a food-borne enterotoxigenic microorganism associated with human gastroenteritis and septicaemia especially among children. Pigs constitute a major source of infection for man. The increase in pig farms and pork consumption in Southwestern Nigeria necessitated investigation into the occurrence of *Yersinia enterocolitica* in diarrhoeic pigs and humans in selected farms and hospitals in Ogun state, Nigeria. 700 diarrhoeic samples were collected: 300 from pigs rose in three selected farms, 120 from children aged 1-7 years and 280 adults (22-50 years) in medical wards of two selected hospitals located in the study areas. *Yersinia enterocolitica* was isolated from faecal samples and identified biochemically by standard bacteriological methods. Antisera were raised in rabbits to serotype the *Yersinia enterocolitica* isolates into groups A, B, C and D using slide agglutination technique. The serotypes were further identified with Commercial Latex Agglutination Kit (CLAK). Susceptibility of *Yersinia enterocolitica* to antibiotics was determined by disc diffusion method. Minimum inhibitory concentrations of some antibiotics were determined for the resistant isolates. Plasmid transfer of R-determinants to E. coli 356 k12 resistant to 200 µg/mL streptomycin was performed. The kinetics of phenotypic expression of ampicillin, chloramphenicol, tetracycline and amoxicillin were determined. Heat-stable enterotoxin of *Yersinia enterocolitica* isolates was assayed using rabbit ileal loop test. Sereny-test for invasiveness of isolates was performed by instilling 2.0x1010 cfu/mL/animal into the right eyes of guinea pigs while 1.0 mL sterile tryptose-soy broth was instilled into the left eyes as control. Histopathology of the eyes was carried out. Data were analysed using descriptive statistics and ANOVA at $p<0.05$. 90 *Yersinia enterocolitica* isolates comprising 30 from humans: 16 and 14 from the two selected hospitals and 60 from pigs: 20, 16 and 24 from the three selected farms were identified. There was significant difference between the occurrence of human and pig isolates. Slide agglutination technique yielded serotype occurrence of *Yersinia enterocolitica* as A(5), B(63), C(8) and D(14), while CLAK gave serotypes A(0:3), B(0:5), C(0:8) and two of the 14 D isolates were serotype 0:9. *Yersinia enterocolitica* isolates were identified as biotypes 1A (77), 2(8), 4(5), serotypes 0:3, 0:5, 0:8 and 0:9 while 12(E) were non-typeable. 11 and 13 antibiotic resistant patterns were observed in humans and pig isolates, respectively. R-determinants were transferred to the recipient en bloc. However, segregation was observed indicating chromosomal transfer. Ampicillin and chloramphenicol had the highest kinetics of phenotypic expression for the trans-conjugants for human and pig isolates respectively. The isolates induced accumulation of fluid in ileal loops of rabbits, corneal oedema and hemorrhagic keratoconjunctivitis in guinea pigs. Invasive, enterotoxigenic and multi-resistant *Yersinia enterocolitica* that harboured transferable R-plasmid were isolated in humans and pigs. These organisms may constitute great public health hazard, hence proper piggery hygiene and disposal of waste is advocated to prevent contamination of water and food of humans. Legislation on misuse and abuse of antibiotics should be enforced to prevent drug resistance.

delemabekoje70@gmail.com

J Infect Dis Ther 2018, Volume 6
DOI: 10.4172/2332-0877-C1-039

PCR array profiling of antiviral genes in human embryonic kidney cells expressing *Human coronavirus OC43* structural and accessory proteins

Meshal Samir Beidas and **Chehadeh W**
Kuwait University, Kuwait

Background & Aim: *Human coronavirus OC43* (HCoV-OC43) causes common cold, and is associated with severe respiratory symptoms in infants, elderly and immunocompromised patients. HCoV-OC43 is a member of Betacoronavirus genus that includes also the severe acute respiratory syndrome (SARS) and the Middle East Respiratory Syndrome (MERS) coronaviruses. Both SARS-CoV and MERS-CoV were shown to express proteins with the potential to evade early innate immune responses. However, the ability of HCoV-OC43 to antagonise the intracellular antiviral defenses has not yet been investigated. The objective of this study was to investigate the role of HCoV-OC43 structural (membrane and nucleocapsid) and accessory (ns5a and ns2a) proteins in the modulation of antiviral gene expression profile in human embryonic kidney 293 (HEK-293) cells using PCR array analysis.

Methods: HCoV-OC43 membrane (M), nucleocapsid (N), ns5a and ns2a mRNA were amplified and cloned into the pAcGFP1-N expression vector (Clontech), followed by transfection in HEK-293 cells. Expressions of M, N, ns5a and ns2a proteins were confirmed by indirect immunofluorescence test. Three days post-transfection, the cells were challenged by Sendai virus. The human antiviral response PCR array system (Qiagen) was used to profile the antiviral gene expression in HEK-293 cells, using the fold regulation comparison and the manual normalization methods.

Results: Around 50-60 genes were down-regulated by HCoV-OC43 proteins, the most prominent genes being those critical for the activation of transcription factors involved in the antiviral response like interferon regulatory factors (IRFs) and activator protein 1 (AP-1). Among the most important down-regulated genes were those coding for interferons (IFNs) mitogen-activated protein kinases (MAPKs), pro-apoptotic and pyroptotic proteins (caspases, cathepsins, and tumor necrosis factor), pro-inflammatory cytokines (interleukins), pattern recognition receptors (PRRs; toll-like receptors and NOD-like receptors) and their signaling transduction proteins (TICAM1, MAVS).

Conclusion: This study shows for the first time that similarly to SARS-CoV and MERS-CoV, HCoV-OC43 has the ability to down-regulate the transcription of genes critical for the activation of different antiviral signaling pathways.

meshrock2000@hotmail.com

conferenceseries.com

J Infect Dis Ther 2018, Volume 6
DOI: 10.4172/2332-0877-C1-039

5th International Congress on

INFECTIOUS DISEASES

March 01-02, 2018 Berlin, Germany

Antibiotic resistance profile among gram-negative bacterial pathogens from a teaching hospital in Ghana

Nicholas Agyepong
University of KwaZulu Natal, South Africa

Infections caused by antibiotic resistant gram-negative bacteria have become a major challenge to healthcare delivery in Ghana. Production of beta-lactamase mediated-hydrolytic enzymes such as extended spectrum beta lactamases (ESBLs) or combined with other mechanisms confers resistant to beta-lactam antibiotics (penicillins, cephalosporins and carbapenems) as well as non-beta-lactams in gram-negative bacteria. The study aimed to assess the prevalence of antibiotic resistance among gram-negative bacteria in the Komfo Anokye Teaching Hospital in the Ashanti region of Ghana. Bacterial cultures were collected and identified using standard microbiological techniques and Vitek-2 automated systems. Of 200 isolates collected, 192 (96%) showed resistant to multiple antibiotics classes tested. The isolates *(Klebsiella pneumoniae, Acinetobacter baumannii, Pseudomonas aeruginosa and Enterobacter spp, E. coli, Citrobacter koseri, Pantoea spp, Serratia marcescen, Providencia rettgeri and Sphingomonas paucimobilis)* showed high resistance to ampicillin (95%), trimethoprim/sulfamethoxazole (84%), cefuroxime/axetil (82%), cefuroxime (81%), cefotaxime (73.5%), amoxicillin/clavulanic acid (52.50), ciprofloxacin (41.0%) and piperacillin- tazobactam (13.00%), but highly sensitive to ertapenem (98.48%), meropenem (96.98%), imipenem (96.5%), amikacin (87%) and colistin (81.9%). The high resistance to beta-lactam/beta-lactamases inhibitor combination antibiotic therapy and aminoglycosides and fluoroquinolones, poses serious healthcare threat in Ghana, due to their use as an empirical antibiotic of choice for treatment of common infections. This study revealed a high prevalence of multidrug resistant pathogens in Komfo Anokye Teaching Hospital, is rife and a wakeup call for constant review of antibiotic guideline protocol for treatment is recommended. Finally the outcome of the study provides a baseline for further and extensive research into the underlying molecular factors of the evolving resistance in Ghana.

agyanicho33@yahoo.com

J Infect Dis Ther 2018, Volume 6
DOI: 10.4172/2332-0877-C1-039

Emerging drug resistance *Salmonella* strains from chicken meat

Ghoneim Nahed and **Kadry Mona**
Cairo University, Egypt

This work was carried out to study the occurrence of salmonella infections in chicken and human suffering from gastroenteritis in Egypt. A total of 349 chicken meat and 40 stool specimens of children were collected, samples were subjected to bacteriological examination and identified biochemically as salmonella then subjected to serological identification, also were tested for their antibiotic susceptibility by disc diffusion method. Also, genotyping by PCR to detect salmonella enterotoxin gene *(stn)* and their expression by infant mouse assay. The study revealed that 14 (4.01%) and two (5%) were positive for Salmonella species in chicken meat and children respectively and serological identification were *(Salmonella infantis, Salmonella typhi, Salmonella kentucky, Salmonella rubislaw, Salmonella poona, Salmonella typhimurium, Salmonella virginia, Salmonella enteritidis and Salmonella montevideo) and (Salmonella kentucky and Salmonella enteritidis)* in chicken meat and children isolates respectively. Disc diffusion method showed that three (21.4%) in chicken meat isolates and two (100%) in children isolates were multidrug resistant in which S. Kentucky have resistance to ciprofloxacin, the drug of choice for treating salmonellosis in children. Also, genotyping showed that nine (64.28%) and two (100%) isolates confirmed to be enterotoxigenic strains in chicken meat and children respectively and this (stn) gene have been expressed (100%) by infant mouse assay. Sequencing and phylogentic tree of four studied isolates resulted in assessment of the relations between different isolation sources. Special attention must be paid to antibiotics that are used exclusively in poultry farms, appropriate measures must be taken to control the spread of resistant bacteria to human.

vet_moony@yahoo.com

Notes:

conferenceseries.com

J Infect Dis Ther 2018, Volume 6
DOI: 10.4172/2332-0877-C1-039

5th International Congress on

INFECTIOUS DISEASES

March 01-02, 2018 Berlin, Germany

Enteric pathogens and potential risk factors for acute bloody diarrhea in Kisumu west and Kisumu Central sub counties

Redemptah Yeda[1] and **George Ayodo**[2]
[1]Jaramogi Oginga Odinga University of Science and Technology, Kenya
[2]Kenya Medical Research Institute, Kenya

Diarrhea is preventable and treatable by early recognition of dehydration and timely treatment. Despite the advances shigellosis is a major cause of diarrhoea-related morbidity and mortality. Kenya experienced a significant increase in acute bloody diarrhoea cases in Coast, Western, Nyanza and Nairobi regions in 2009 (48,272 cases) and 2010 (64,107 cases). Therefore, it was necessary to determine the epidemiological, clinical and laboratory characteristics of acute bloody diarrhoea cases occurring in the urban and rural populations in Kenya. The study enrolled 600 participants between the period of January and December 2016. The main presenting clinical features for bloody diarrhoea cases were: blood in stool (100%) abdominal pain (50%), mucous in stool (50%), loose stools (50%) and anorexia (50%). Pathogen isolation rate from stool was 32.5% with bacterial and protozoal pathogens accounting for 20% and 10%, respectively. The isolation rate among the rural population (Kisumu west) was 18% while among the urban population (Kisumu Central) it was 45%. Shigella was the most prevalent bacterial pathogen isolated in 25% of the cases while Entamoeba histolytica was the most prevalent protozoal pathogen isolated in 12% of the cases. High levels of multidrug resistance to three or more antimicrobial agents were observed 62.5% of all bacterial pathogens with resistance in Shigella being 50.9%. There was a positive correlation between bloody diarrhoea and long term mean rainfall both in rural (Pearson's r=0.55) and urban (Pearson's r=0.65) populations. There was also a positive correlation between bloody diarrhoea and long term mean minimum and maximum temp but the correlation with minimum temp was stronger in rural (Pearson's r=0.32) and urban (Pearson's r=0.56). Shigella dysenteriae type 1 which is an epidemic strain is not the cause of increase in cases of acute bloody diarrhoea in Kenya in both settings, high levels of antibiotic resistance as well as multidrug resistance.

rambogo8285@gmail.com

J Infect Dis Ther 2018, Volume 6
DOI: 10.4172/2332-0877-C1-039

Quantitative PCR system for detection of clinically relevant CMV infections in patients with inflammatory bowel disease

Nils Wethkamp
Head of Molecular Diagnostics, Germany

Several lines of evidence indicate that cytomegalovirus infection can be substantially associated with onset of inflammatory bowel disease, especially in patients who are refractory to immunosuppressive treatment. As cytomegalovirus is widely spread in the population a quantitative detection system was generated which is suitable to differentiate clinically relevant cytomegalovirus infection of the intestine from common latent cytomegalovirus. By using a quantitative real-time PCR approach, cytomegalovirus viral load was evaluated in formalin fixed and paraffin embedded colon biopsy samples of 136 patients diagnosed with inflammatory bowel disease. Besides initial cytomegalovirus testing, the PCR system was also used to monitor therapy response after antiviral treatment. Cytomegalovirus DNA was detected in 27% patients with varying viral loads. Thereof, 13 patients (35%) received an antiviral treatment with 12 of them going into remission (92%). Later, five patients displayed a relapse and three patients who agreed to restart antiviral treatment again showed positive therapy response. A retrospective comparison of viral loads with antiviral therapy response revealed a threshold of 600 cytomegalovirus copies/105 cells as indicative for clinically relevant infection. Interestingly, we found that sensitivity of cytomegalovirus detection by immunohistochemistry was insufficient to reliably identify antiviral therapy responders. In summary, quantitative real-time PCR using formalin fixed biopsy samples is suitable for detection of cytomegalovirus infection in tissue samples of patients with inflammatory bowel disease. Moreover, it allows the definition of a viral load threshold, predictive for clinical relevance concerning antiviral therapy response.

wethkamp@pathologie-vechta.de

Notes:

conferenceseries.com

J Infect Dis Ther 2018, Volume 6
DOI: 10.4172/2332-0877-C1-039

5th International Congress on

INFECTIOUS DISEASES

March 01-02, 2018 Berlin, Germany

Changing *Plasmodium falciparum* genotypes during long term and short time culture in drug free media

Redemptah Yeda, Charles Okudo, Agnes C Cheruiyot, Dennis Juma, Benjamin Opot, Gladys Chemwor, Lorna J Chebon, Ben Andagalu, Hoseah M Akala and **Managbanag Jim Ray**
United States Army Medical Research Directorate-Kenya Medical Research Institute, Kenya

Parasite culture assay is an important tool for malaria drug resistance surveillance. This assay usually leads to the large-scale production of cultured parasites. Consequently, the nature and longevity of parasite genotypes are monitored without influence from the host factors. Here, we set out to study the genotypic and phenotypic dynamics and stability of field isolates adapted in continuous cultures. Three field isolates collected from patients presenting with uncomplicated malaria in high transmission area were maintained in drug-free continuous culture media period spanning 90 days. Aliquots picked at intervals of 24-48 hours gave 56 samples from each of the isolate within the 90 days period. Each aliquot was regarded as a separate parasite sample and genotyped using 12 microsatellite (MS) markers. Further, single nucleotide polymorphism (SNP) analyses of 23 drug resistance markers were done. The 50% inhibitory concentrations (IC50) against four antimalarial drugs were estimated in some of the samples at aliquoting time-points that coincided with parasitemia levels greater than 3%. Samples from each patient (parasite-line) were compared as they were passed through the continuous culture. Data revealed genotypic and phenotypic profiles for the three parasite-lines fluctuated from one generation to the next with no specific pattern or periodicity. Multilocus analysis revealed that of the three parasite-lines showed genetic diversity and structure. SNP/MS changes occurred simultaneously in the parasite generation. The mean IC50 for the four drugs tested in the three parasite lines changed significantly from generation to generation. Our study revealed parasite genetic and phenotypic characteristics fluctuates in short-and long-term cultures, which indicates that parasite genetic information obtained even in short cultures is likely to be different from that of the natural infection parasites. These findings endorse ex vivo analyses of parasites in real-time is important in formulation of anti-malaria drug policies.

rambogo8285@gmail.com

J Infect Dis Ther 2018, Volume 6
DOI: 10.4172/2332-0877-C1-039

Burden of acute gastrointestinal infections in Ouagadougou, Burkina Faso

René Dembele
University Ouaga [1], Burkina Faso

Gastrointestinal infections are one of the major health problems in developing countries. The present study aims to estimate the prevalence of gastrointestinal infections in Ouagadougou, the capital of Burkina Faso. A door-to-door survey of selected residents in Ouagadougou city was conducted. Of the Ouagadougou's 30 districts, nine most populated ones were selected to the study. The residents of these districts have middle incomes as those of the secondary site of Burkina Faso. The overall prevalence of gastrointestinal infections in the 30 days prior to the interview was 77/491 (15.7%): among children 44/223 (19.7%) and among adults 33/268 (12.3%). Diarrhea and abdominal pain were the most common symptoms among 33 adult cases while diarrhea and vomiting were the most common among children. None of the cases were hospitalized and a stool sample was taken in three of 77 cases. Medication for gastrointestinal infections was received by 55% of adults and 77% of children. Our results shown that antibiotics with and without prescription were the most common medicine used. Washing hands before meals and boiling milk before drinking had a protective effect against gastrointestinal infections.

simavedemb@gmail.com

J Infect Dis Ther 2018, Volume 6
DOI: 10.4172/2332-0877-C1-039

Towards universal health coverage: An example of malaria intervention in Nepal

Shiva Raj Adhikari
Tribhuvan University-Patan Multiple Campus, Nepal

A comprehensive and more integrated assessment of health system functioning requires to measure the universal health coverage (UHC) for the diseases specific interventions. This paper aims to contribute measurement of the UHC by utilizing the locally available data related to Malaria in Nepal. This paper utilizes the elements of UHC as outlined by WHO report 2010: population coverage, service coverage and financial coverage. The concept of UHC represents both improvements in health outcomes and protection people from poverty induced by health-care costs. Measuring UHC focusing on tropical disease highlights the progress made towards elimination of diseases and exhibits health system bottlenecks to achieve the goal of elimination of diseases. Several bottlenecks are found from the results in the Nepalese health system which strongly suggests focusing on health system strengthening to shift the health production function of Malaria intervention. The disaggregated data clearly shows the inequality of service coverage among sub groups of the population. Effective coverage of the Malaria intervention indicates the insufficient quality of intervention. None of households faced catastrophic impact due to payment for malaria care in Nepal; however, it doesn't capture the hospital based care of malaria. The paper provides current status of UHC for malaria intervention and system bottlenecks to where policy makers and stakeholders should give focus to improve the malaria control strategy of Nepal.

sssadhikari@yahoo.com

Notes:

J Infect Dis Ther 2018, Volume 6
DOI: 10.4172/2332-0877-C1-039

Tuberculosis control in Armenia

Ying-Ying Lin
Taiwan-Armenia Alliance, Taiwan

Tuberculosis (TB) control is a challenging task in Armenia. Lack of domestic job opportunities and low income have driven Armenians to work in neighboring Russia and other countries, where the TB incidence is high and Multidrug-Resistant Tuberculosis (MDR-TB) is rampant. With the technical and financial support from the World Health Organization (WHO) and several international agencies, Directly Observed Treatment Short-course (DOTS) and DOTS-Plus pilot projects have been implemented to lower the TB burden in Armenia. Despite recent improvements in TB control, the rise of MDR-TB has become a new threat for Armenia. To further control TB in Armenia, cooperation between Armenia's health department and other host countries is necessary for monitoring and treating TB. Additional resources are required to continue vaccination programs, strengthen TB diagnosis, and provide DOTS for all TB patients. This review examines the effects of frequent traveling and migrant workers on TB, discusses the spread of TB, and compares research studies performed on migrant workers in Armenia.

atman@livemail.tw

J Infect Dis Ther 2018, Volume 6
DOI: 10.4172/2332-0877-C1-039

Identification of genes in biofilm of slow and fast growing mycobacteria by using microarray and other molecular tools including electron microscopy

V K Sharma
National Jalma Institute of Leprosy & Other Mycobacterial Diseases, India

Electron microscopy used to investigate the detailed structure and configuration of the mycobacteria which may lead to an understanding the role of infections and in transmitting the diseases. Many Mycobacteria can develop biofilm, a multicellular structure largely combining bacteria and their extracellular polymeric substances (EPS). The formation of biofilm results in an alternative existence in which microbes ensure their survival in adverse environments. Bacterial biofilms are often associated with infections especially with medical implants such as catheters and other medical devices. In the natural world more than 99% of bacteria exist as biofilms and according to NIH report more than 75% of all human infections are associated with biofilms formation. Biofilms are slimy, glue-like substance that excreted by bacteria and aggregate on living surface. Biofilms are formed to protect the bacteria from host defenses, antibiotics and from harsh environmental conditions. Biofilms are found almost everywhere in nature, including soil, water pipes, and even inside the human body. Attachment of mycobacteria involved in biofilm formation in the liquid air interface is a complex process, with many variables such as pH, nutrient levels, iron, oxygen, ionic strength and temperature, affecting the outcome. We had taken four mycobacterial species for study of mycobacterial biofilm. The isolates were sub-cultured and characterized biochemically and molecularly. The large quantity of biofilm was produced by M. smegmatis at temperature 37oC and 42oC as compared to 30oC. M. fortuitum developed more amount of biofilm at 30oC as compared to 37oC and 42oC. M. avium developed strong amount of biofilm at 30oC and 42oC as compared to 370C. M tuberculosis (H37Rv) developed strong biofilm at 37oC and no biofilm at 300C and 420C in MB 7H9 media and Sauton's media. The selected non tuberculosis mycobacteria and H37Rv developed strong biofilm in the presence of OADC enrichment in MB7H9 as well as Sauton's medium. Antibiotic susceptibility of biofilms at ultra-structural level was also studied in fast growing clinical isolates M. smegmatis in presence of streptomycin, isoniazid rifampicin, ethambutol and pyrazinamide. Electron microscopy revealed that control (no drug) biofilms consisted primarily of bacterial clusters a mid fibrillar elements. Isoniazid showed strong inhibited biofilm in fast grower and sensitive isolates. However, pyrazinamide and isoniazid inhibited biofilm of M. tuberculosis (H37Rv) and in MDR isolates ethionamide and moxifloxacin inhibited biofilm in slow grower and fast grower mycobacteria. However, many mycobacterial species are known to form biofilms, little is known about either the genetic requirements, patterns of gene expression. In micro array hybridization, we have found that six genes were expressed in M. avium. In M. tuberculosis, MDR isolates seven genes were expressed and two genes Rv0359 and Rv3526 were homologous as earlier reported in P. aeruginosa and M. avium which might be responsible for biofilm formation.

vksjalma@gmail.com

Notes: