2517<sup>th</sup> Conference

**Global Experts Meeting on** 

# Infectious Diseases, Diabetes and Endocrinology

February 27-28, 2019 Tokyo, Japan

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# Scientific Tracks & Abstracts Day 1

# Dengue fever associated cerebral hemorrhages, a rare, poorly understood entity in an era of dengue epidemic: A case series and literature review

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engue fever is caused by a flavivirus, which is a vector borne RNA virus with four anti-genically distinct serotypes (DEN 1, DEN 2, DEN 3 and DEN 4). Neurological manifestations are rare compared to other complications of the disease. Encephalopathy, encephalitis, aseptic meningitis, intracranial hemorrhages, thrombosis, mono-neuropathies / polyneuropathies, Guillain-Barre syndrome and myelitis have been reported. Neurological manifestation in dengue hemorrhagic fever usually results from multisystem dysfunction secondary to liver failure, cerebral hypoperfusion, electrolyte imbalance, shock, cerebral edema and hemorrhage related to vascular leak. The occurrence of brain hemorrhage in a case with dengue shock can be serious and leads to death. The occurrence of brainstem hemorrhage can be a very serious fatal situation. We report this case series of dengue hemorrhagic fever with multiple intracranial, sub arachnoid hemorrhages and sub-dural hematoma causing brainstem herniation. Case 1: A 25-year-old previously healthy woman was admitted on third day of fever with thrombocytopenia. Critical phase started on 5th day with evidence of pleural effusion and moderate ascites. 31 hours into critical phase, she developed headache, altered level of consciousness, limb rigidity and respiratory depression without definite seizures. Non-contrast CT brain done at tertiary care level revealed diffuse intra cranial hemorrhages and sub arachnoid hemorrhages in right frontal, parietal, occipital lobes and brainstem, cerebral oedema with an acute subdural hematoma in right temporo-parietal region. Her platelet count was 40,000 at this time with signs of vascular leakage. She was intubated and ventilated with supportive care. Later on, she developed features of cranial diabetes insipidus and it responded to intranasal desmopressin therapy. In spite of above measures signs of brainstem herniation developed and she succumbed to the illness on day 8. Dengue was confirmed serologically. Case 2: A 24 year old previously healthy was admitted on 2nd day of fever with constitutional symptoms and no bleeding manifestations. Clinical, hematological and serological parameters confirmed dengue infection. On 5<sup>th</sup> day of illness, she entered into leaking phase, but did not have evidence of any bleeding Intra Cranial Hemorrhage (ICH) in right parietal lobe deep white matter area associated with perilesional oedema and midline shift. Bleeding into the right lateral ventricle and Small Subdural Hematoma (SDH) were also noted in right parietal lobe area. Her platelet count at the time of development of hemorrhages was 32,000 and International Normalised Ratio was normal. NCCT brain was repeated 24 hours later and showed progression of hemorrhages. It showed progressive worsening of right occipito-temporal ICH, cerebral oedema, midline shift, right SDH and SAH. Patient remained hemodynamically stable and platelet count was on the rising trend. It was 52,000, 77,000 and 83,000 on 3 consecutive occasions. PCV was stable around 43. There were no other bleeding manifestations neurosurgical interventions were not attempted and patient was managed conservatively. Amidst maximum care provided, patient succumbed to illness on the following day. It can be concluded that diffused cerebral hemorrhages with moderate thrombocytopenia and normal coagulation profile are a very rare and fatal complication of dengue fever. Exact pathophysiological mechanism is not well understood. Increased awareness and high degree of clinical suspicion is needed among clinicians for timely diagnosis of this extremely rare complication of dengue fever. We postulate that immunological mechanisms may play a role in pathogenesis. However further comprehensive research and studies are needed to understand the pathophysiological mechanisms leading to this complication.

#### Biography

Nayomi Shermila Jayasinghe is working as a Consultant physician in Internal medicine, Bairnsdale Regional Health Service, Victoria, Australia, Associate lecturer of University of Queensland, Ex. Consultant Specialist Physician attached to specialized dengue unit in National Hospital of Sri Lanka. Her main areas of work include – Dengue infection and its complications Author of many publications on dengue infection published in national and international medical journals, symposium and congresses. She has delivered speech on changing trends of dengue infection at World congress of Internal medicine 2018.

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# AdipoRon, adiponectin receptor agonist improves vascular function in the mesenteric arteries of type 2 diabetic mice

**Soo Kyoung Choi** Yonsei University, Republic of Korea

diponectin is one of the most abundant adipokines secreted from adipose tissue. An orally active synthetic adiponectin  $\Lambda$ receptor agonist, adipoRon has been suggested to ameliorate insulin resistance, myocardial apoptosis, and pancreatic tumor. It has been reported that adiponectin directly induces vascular relaxation however; the chronic effect of adipoRon in the vascular dysfunction in type 2 diabetes has not been studied yet. Thus, in this study, we examined whether adipoRon improves vascular function in type 2 diabetes and what mechanism is involved. Ten to 12-week old male type 2 diabetic (db-/ db-) mice were treated with adiponectin receptor agonist (adipoRon, 10 mg/kg/everyday by oral gavage) for 2 weeks. Isolated mesenteric arteries were mounted in the arteriography and arterial diameter was measured. And western blot analysis was assessed. Pressure-induced myogenic response was significantly increased, whereas endothelium-dependent relaxation was significantly reduced in the mesenteric arteries from type 2 diabetic mice. Interestingly, treatment of adipoRon normalized potentiated myogenic response. However, endothelium-dependent relaxation was not affected by treatment of adipoRon. The expression levels of adiponectin receptor 1, 2 and APPL 1, 2 were increased in the mesenteric arteries from Type 2 diabetic mice and treatment of adipoRon did not affect them. Interestingly, adipoRon treatment increased the phosphorylation level of AMPK and decreased phosphorylation of MYPT1 in the type 2 diabetic mice while there was no change in the level of eNOS phosphorylation. The treatment of adipoRon improves vascular function in the mesenteric arteries from type 2 diabetic mice through endothelium-independent mechanism. It is suggested that MLCP activation through reduced phosphorylation of MYPT1 might be the dominant mechanism in the adipoRon-induced vascular effect.

#### **Biography**

Soo Kyoung Choi has pursued her PhD from Yonsei University and Postdoctoral studies from Tulane University. She is the Research Assistant Professor in Department of Physiology at Yonsei University. She has published more than 22 papers in reputed journals.

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### The insight of adolescent diabetes mellitus

Goutam Kumar Acherjya Upazila Health Complex, Bangladesh

Diabetes mellitus is an endocrine disorder where hyperglycemia occurs due to defect in insulin secretion, insulin action or both. Recently WHO member countries have given more emphasis on the Non-Communicable Diseases (NCDs) rather than the communicable diseases for the sustainable developmental goal due to increased rate of long-term morbidity, mortality and high cost health related resources expenditure. Diabetes mellitus is one of the four priority NCDs related to both macrovascular and microvascular complications causing blindness, kidney failure, heart attacks, stroke and lower limb amputation. Due to genetic predisposition, environmental factors, positive family history, obesity, inadequate physical activities, sedentary lifestyle, rapid urbanization and unhealthy food practice the global prevalence of diabetes is dramatically increasing not only in the adult and older aged group but also in the children and adolescent aged group. In near future many countries of the globe may face a major public health challenge more than our anticipation due to increased prevalence of adolescent diabetes which is directly related to early onset risk factors and complications. There are high up negative significant effects on the quality of life, employment and health related expenditure when diabetes affects in this age group. So necessary steps and strategic plan should be designed for the earlier detection and intervention of adolescent diabetes.

#### Biography

Goutam Kumar Acherjya is a Junior Consultant of Medicine in the Upazila Health Complex, Bagherpara, Jashore, Bangladesh. He has obtained MBBS degree and completed Post-graduate Fellowship (FCPS) in Internal Medicine. He has several global publications. His areas of interest are diabetes, effect of metabolic disorders on CNS.

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#### Presence of cellular components in vaccines and immunobiological drugs

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Tow preventive maintenance of flu by means of vaccination is conventional and is supported by experts of world. To check presence of trypsin-like proteinase and its inhibitor in antiflu and other vaccines and in immunobiological blood preparations of domestic and foreign manufacture. In work following commercial preparations have been used: Interferon leukocytic human, the immunoglobulin of human placental, donor 10%, a gonococcal vaccine a herpetic vaccine (Odessa), vaccines for preventive maintenance of a flu, a season 2002/2003-Influvac which consists of hemagglutinins and a neuraminidase of a virus of a flu, strains: A/Moscow/10/99 (H3N2), A/New Caledonia/20/99 (H/N), B/Hong Kong/330/2001, Fluarix which consists of hemagglutinins of strains (H1N1) A/New Caledonia (H3N2), A/Panama and B/Shandont 17/97 and Vaxigrip which consists of three strains of a flu virus, a vaccine for preventive maintenance of a hepatitis A - vaxim, a blood preparation received from a heparin (the antifactor of Ha)- Fraxiparine, a preparation from a blood of calves for a hemodialysis -Solcoseryl. Preparations were investigated before the termination of a period of validity. Work is devoted to study presence of components of a cell-owner and its inhibitor in vaccines and blood preparations and to define presence trypsin-like proteinase and its inhibitor in vaccines and blood preparations. It is revealed that anti influenza vaccines (Influvac, Vaxigrip, Fluarix), Herpetic and Tularemic vaccines contained an inhibitor of trypsin-like proteinase in considerable quantity. Commercial preparations from a human donor blood (an immunoglobulin, interferon, Fraxiparine and Solcoseryl) contained as trypsin-like proteinase and its inhibitor. The immunoglobulin contained in 4.0 times more inhibitor, than interferon. Hence, the modern vaccines applied to prophylaxis and treatment, are insufficiently cleared. Presence of cellular components (enzymes and inhibitors) could lead to allergization and follow complication which is not very known.

#### Biography

Valentina A Divocha has completed her Graduation from I.I. Mechnikov Odessa State University, Faculty of Biology (Department of Virology). She has completed her Post graduation studies from Odessa Institute of Virology and Epidemiology (specialty virology). She has completed her Doctoral degree with the thesis entitled, *Biological basis anti-proteinase therapy of influenza*. She has many scientific publications, 3 monographs, textbook Virology (2012), 12 patents, 4 innovations. She is currently working at Lugansk State Medical University, Ukraine. She is the Supervisor of the nine research programs in virology and biochemistry.

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# Transcultural study of dietary habits and physical activities among patients with diabetes and control subjects in Myanmar and Thailand

Ahmad Ishtiaq Juntendo University, Japan

Diabetes prevalence has been rising more rapidly in low and middle income countries. In Myanmar WHO STEP survey, a high intake of FV (fruit and vegetable) was associated with lower odds of hypertriglyceridemia among men and women. It was also associated with cholesterol levels, negatively among women and positively among men. Myanmar's traditional food tends to have a lot of fats and carbohydrates. Recently, dietary habits of Myanmar residents have been westernizing. More than 200,000 deaths annually among the Thai population are owing to chronic non-communicable diseases and about 30,000 deaths are owing to diabetes, a leading cause of death in Thailand. With rapidly emerging T2DM, prevalence among adults has risen from 2.3% in 1991 to 8.0% in 20155. Over 4 million Thai adults live with diabetes, making it the top cause of disability-adjusted life years lost for Thai women and the seventh cause for men. In total 600 T2DM patients will be recruited (both side) to have face to face questioners interview dietry habits, physical activity, salt and sugar measurement from the food. This study will investigates the occurrence of DM in citizens of the Yangon Region, Myanmar and Chiang-mai, Thailand. The comparison of pre-test results of the actual dietary habits and activity habits of adult of Myanmar and Thailand showed the factor that the prevalence of T2DM in urban Myanmar is extremely high.

#### **Biography**

Ahmad Ishtiaq has completed his MD at the age of 24 years from International School of Medicine, Bishkek. His specialty is gastroenterology and worked as research fellow at graduate School of Medicine, Juntendo University, Tokyo, Japan. Currently, He is the PhD candidate, at Juntendo University dept. of Public health. He is working on Pfizer Type 2 Diabeties project in Thailand and mayanmar. He has published a systematic review on Childhood obesity and nutrition transition in Asian countries.

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## Antimicrobial resistance-A global public health challenge

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Over the couple of decades the antimicrobial resistance is one of most common global public health problems not only in the developed countries but also developing countries. In the daily clinical practice antibiotics are commonly prescribed in case of respiratory tract infections, many of the genitourinary tract infections, acute of chronic gastroenteritis or other gastro intestinal symptoms, traumatized patients to prevent secondary infections. Antibiotics are commonly used to prevent and control the bacterial infection for reducing the mortalities and morbidities but its resistance has become the major public health challenge in the era of 21<sup>st</sup> century. After achieving the millennium development goal, antibiotic resistance will be one of the major stakeholders to set the sustainable developmental goals as the scenario is more endangering and life threatening than our current anticipation. A complex mechanism of interaction between genetic, pathogenic properties, environmental and host factors are related to develop antimicrobial resistance. Out of which several factors including inappropriate antibiotics practicing, patient's illiteracy, unauthorized sale of antibiotics, inadequate supervision by drug monitoring agencies and nonhuman use of antibiotics such as animal production are modifiable. Many of the pathogens have shown highly resistance to several commonly used antimicrobials reported in various studies which is really alarming for us. So, the judicious strategies should be planned to prevent and combat against the antimicrobial resistance and make the globe livable for our generation next.

#### **Biography**

Goutam Kumar Acherjya is currently working as a Junior Consultant of Medicine in the Upazila Health Complex, Bangladesh. He has completed his MBBS degree from Sher-E-Bangla Medical College and Hospital, University of Dhaka, Bangladesh and also has completed Fellowship (FCPS) in Internal Medicine from Bangladesh College of Physician and Surgeon, Bangladesh. He has completed Fellowship training under Emeritus Prof. AV Srinivashan in AVS Clinic and Prof. M R Sivakumar in GLB Hospital and Acute Stroke Centre in Chennai, Tamil Nadu, India. He has achieved his Life Membership from Bangladesh Society of Medicine and Bangladesh Medical Association. He has gained his membership from American College of Physician in 2016. He has won the Bangladesh Society of Medicine Research Grant Award 2018. He has 11 global publications.

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### Natural products research: A potential source of innovative new drug discovery and development

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**E** nabling innovation and access to health technologies remains a key strategy in combating infectious diseases in low and middle income countries. In such countries, infectious disease are a leading cause of death and are difficult to control if the infectious agents evolve resistance to commonly used drugs. Modern medicine needs new kinds of antibiotics and antivirals to treat drug-resistant infections. One source of such drugs lies in medicinal plants, an available resource still abundant in Africa. Both herbal and traditional medicines of plant origin have provided templates that have served as scaffolds for rational drug design. We have presented a new management therapy being developed for herpes infection in human from a medicinal plant with activity for both acyclovir resistant and sensitive strains of Herpes Simplex Virus. Herpes is a viral infection affecting over 60% of the Sub-Saharan Africa young adult population. The herbal product, Zedupex has been evaluated for preclinical safety and efficacy in suitable *in vitro* and *in vivo* systems of herpes infections. Cytotoxic concentrations of the product in mammalian cell lines have indicated a wide therapeutic index ( $CC_{50} \ge 58.5 \pm 4.6 \mu g/ml$ ). *In vivo*, an  $EC_{50}$  of  $\le 14.7 \pm 3.7 \mu g/ml$  for both wild type and resistant strains of HSV has been realized in plaque and viral yield assays. Oral (250 mg/kg) and topical (10% cream) administrations exhibits a significant delay in onset of infections, hindered progression of infection to lethal forms with increased mean survival times and low mortality with no acute toxicity at therapeutic concentrations. Financial constrains has slowed down the progression of clinical trial stages in human of this product but results so far obtained exemplify the potential that still exists from medicinal plants.

#### Biography

Festus M Tolo is a Medicinal Phytobiologist holding a PhD in Medicinal Phytochemistry, a fellow at the African Scientific Institute and an awardee of the "The Nelon Gold Award (NGA)" of the Kenya Medical Research Institute (KEMRI). He also holds the Inter-Academy Medical Panel "Distinguished Scientist Award" of the Chinese Medical Sciences (CACMS) and Chinese Academy of Engineering (CAE) in Natural Products Research. Tolo is a Chief Research Officer and the Head of the Natural Products Research and Drug Development Programme (NAPREDA) at KEMRI.

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# **Special Session**

## **Global Experts Meeting on**

## INFECTIOUS DISEASES, DIABETES AND ENDOCRINOLOGY February 27-28, 2019 Tokyo, Japan





Medical Acupuncture and Pain Management Clinic, Brazil

# Is it possible to treat community-acquired and nosocomial infections with the same method, without the use of antibiotics

**Introduction & Aim:** The difference between community-acquired and nosocomial infections is that community-acquired infections are defined as infections contracted outside of a health-care environment. Nosocomial infections, on the other hand, are those contracted after the patient's admission and not incubated before hospitalization. In addition, the microorganisms potentially causing community infections are generally more sensitive to antimicrobials, as opposed to nosocomial infections, which are generally caused by multi-resistant bacteria. The purpose of this study is to demonstrate that community-acquired and nosocomial infections can be treated with the same approach and without the administration of antibiotics.

**Method:** The method used was to include older medicine theories such as Traditional Chinese Medicine and three case reports of community-acquired infection compared to another three cases of nosocomial infection. All six cases were treated with the same method, by balancing the *Yin, Yang, Qi* and blood, removing the internal heat using auricular acupuncture and using energy based Chinese dietary reorientation.

**Result:** All cases of community-acquired and nosocomial infection reported in this study improved uniquely with the treatment administrated with no prescription of antimicrobials and the use of these drugs themselves was generating the energy imbalance that maintained the infectious process.

**Conclusion:** Based on these six clinical reports, we can use the same method to treat community-acquired and nosocomial infections. This research was based on the theories of Traditional Chinese Medicine, which indicated that these diseases came from the same roots, and therefore could be treated with the same method.

#### **Biography**

Huang Wei Ling has completed her Graduation in Medicine in Londrina State University. She is Specialist in infectious and parasitic diseases, a General Practitioner and Parenteral and Enteral Medical Nutrition Therapist. She was the In-charge of the Hospital Infection Control Service of the City of Franca's General Hospital, responsible for the control of all prescribed antimicrobial medication.

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Medical Acupuncture and Pain Management Clinic, Brazil

# Why are diabetic patients still having hyperglycemia despite diet regulation, antiglycemic medication and insulin?

Diabetes and its complications were responsible for 8.8% of deaths worldwide in 2017. Many of those deaths could be avoided. Western medicine manages the disease with lifestyle changes and medication. The aim of this work is to demonstrate how in Traditional Chinese Medicine, all diseases are associated with the *Yin* and *Yang* imbalance, including diabetes. Although western medicine and Traditional Chinese Medicine (TCM) share the diabetes treatment goals of reducing symptoms and preventing complications, their approaches to conceptualizing, diagnosing, and treating the disease are very different. The methods used in this study were two case reports and bibliographic researches of TCM's medical literature and Five Elements Theory on the pathophysiology of energy imbalances in diabetes, which lead to the manifestation of the clinical symptoms. The treatment results, looking from the energy point of view, treat the individual as a whole; not only treating the disease but the entire body, as recommends Hippocrates, the father of Medicine. After rebalancing the body's energy, taking awareness and precaution about internal (emotional) triggers, dietary factors and external (climatic) triggers, the symptoms' improvement is noticible. Concluding, when looking at patients as a whole, from the point of view of *Yin* and *Yang* energy and Five Elements Theory, we can analyze aspects of the diet normally recommended and the use of hypoglycemic medication and/or insulin, and have a greater balance of hyperglycemic diabetic patients, treating them according to the energy point of view with dietary recommendation, acupuncture, etc.

#### **Biography**

Huang Wei Ling, Chinese raised in Brazil since the age of one, graduated in medicine, specializing in infectious and parasitic diseases, a General Practitioner, Parenteral and Enteral Medical Nutrition Therapist, Acupuncture and Pain Menagement. She is the owner of the Medical Acupuncture and Pain Management Clinic, and since 1997 has been presenting her work worldwide concerning the treatment of various diseases, using techniques based on several medical traditions around the world.

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# Scientific Tracks & Abstracts Day 2

## Metabolic risk profile of pre-diabetes in an urban medical center in Cambodia

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**Introduction:** Pre-diabetes is associated with insulin resistance and increased risk of cardiovascular disease. Pre-diabetes may precede Type 2 Diabetes Mellitus (T2DM) by many years, allowing for potential intervention. The prevalence of diabetes is increasing around the world, especially in developing countries. Characteristic of patients with pre-diabetes in Cambodia have not previously been reported.

**Aim:** To determine the clinical characteristics of patients with pre-diabetes who presented for health care at the Community Medical Center (CMC) in Phnom Penh, Cambodia and to determine if any sex differences exist.

**Method:** A retrospective study of 207 patients found to have pre-diabetes (HbA1C from 5.7% to 6.49%), who had a complete biophysical profile (age, gender, BMI, abdominal girth, blood pressure and lipid profile) between July 2015 and July 2018.

**Result:** Physical: Among 207 patients, women represented 72%. Men and women had similar mean of age around 60. Both genders had similar high rates of overweight and hypertension. Women had significantly greater rates of elevated gender corrected abdominal girth (p-value <0.001). Labs: Both women and men had high rates (approximately 80%) of elevated lipid values (total cholesterol, LDL and triglycerides). Women had significantly higher total cholesterol levels than men (p=.04). HDL levels were not measured. Men and women had similar A1C levels (mean around 6.2).

**Conclusion:** This is the first study to characterize pre-diabetes in Cambodia. Patients with pre-diabetes have high risk lipid profiles and hypertension. Women have more central adiposity than men, which may adversely impact progression to diabetes. Patient with pre-diabetes in Cambodia may benefit from aggressive management of metabolic risk factors.

#### Biography

Sovann Peng has pursued his Diploma of Doctor of Medicine from International University, Phnom Penh, Cambodia. He has been working as Diabetes Program Coordinator and Junior Physician at Community Medical Center, Phnom Penh, Cambodia.

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### Is it possible to treat Candida fungus infection without the use of anti-fungicides medication

Huang Wei Ling

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**Introduction & Aim:** Candidiasis is an infection caused by *Candida*, which is already living inside the body (mouth, throat, gut, vagina, skin). Sometimes *Candida* can multiply causing an infection, if the environment changes. The study aims to demonstrate if it is possible to treat *Candida* infection without the anti-fungicides.

**Method:** The method used was two case reports. In both cases, the patients were being treated for vaginal candidiasis with anti-fungicides and the condition would relapse after the end of the anti-fungicide medication treatment. They were treated with Traditional Chinese medicine approach, using auricular acupuncture with apex ear bloodletting, diet regulation and correction of the emotional factors through acupuncture.

**Results:** With the use of Traditional Chinese Medicine approach, with diet regulation and seeing the patient as whole, not only focusing the spot of infection, both patients were cured without the use of anti-fungicides. Each patient is seen individually, but the main factor maintaining the fungus was the humidity, caused by the spleen-pancreas deficiency. Correcting the humididty in the body through diet and acupuncture, the factors maintaining the fungus growth were corrected and both cases were cured without the use of any antifungicide medication.

**Conclusion:** We conclude in this study that *Candida* infections can be treated without the use of antifungicides. For this aim, we need to see the patient as a whole looking to their energy imbalances, changing the dietary habits and using acupuncture, to restore the balance between the internal energy.

#### **Biography**

Huang Wei Ling has completed her Graduation in Medicine in Londrina State University. She is a specialist in infectious and parasitic diseases. She is a General Practitioner and Parenteral and Enteral Medical Nutrition Therapist.

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#### Increase aminoglycosides in multi-drug resistance A. baumannii in important province in Iran

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A cinetobacter baumannii is one of the important causes of nosocomial infection in health care systems. A. baumannii has been shown to acquire antibiotic resistance elements quickly. Recently, this Gram negative bacilli has shown resistance to the most of available antibiotics followed by emergence of Multi Drug Resistance (MDR) and Extensive Drug Resistance (XDR) strains. This has partly been due to extensive use of broad spectrum antibiotics especially in burned patients. Aminoglycoside used with beta lactam antibiotics commonly. So, resistance to aminoglycoside can lead to appearance MDR strains of A. baumannii can make serious problem and increase mortality and morbidity especially in immunosuppress patients like hospitalized one. This study reports to increase rate of aminoglycosides enzymes in MDR A. baumannii and also antibiotic resistance patterns of these global threating bacteria in important province in Iran.

#### **Biography**

Fatemeh Fallah is a Professor of Medical Microbiology in Shahid Beheshti University of Medical Sciences, Tehran, Iran. Her research interest is in Medical Bacteriology. Her works are on *Mycobacterium tuberculosis*.

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#### Carbapenem resistant mechanisms in Pseudomonas aeruginosa: A report from Iran

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**P**seudomonas aeruginosa is one of most prevalent and important Gram negative bacteria in hospital can cause healthcare association infection in hospitals. Multi Drug Resistance (MDR) strains for these microorganisms can create drastically therapeutic challenges. During the last decade, first line antibiotic resistance using for the treatment of Gram negative bacterial infections are increasing globally and in the recent decade resistant to beta-lactam antibiotics such as carbapenemas as a broad spectrum antibiotic has become increasingly prevalent. Resistance associated with production of carbapenemase and also, efflux pump are the important problem in the health care systems. Carbapenemase can hydrolyze all of beta- lactam antibiotics except Monobactam in some case. Efflux pump can eject different classes of antibiotics to outside of bacteria and make resistance to them. So, these two important antibiotic resistance mechanisms can lead to appearance of multi drug resistance *P. aeruginosa*. This study reports the rate of different important carbapenemase and also increase of gene expression in efflux pump in *P. aeruginosa* strains were isolated from some burden cities in Iran.

#### **Biography**

Shahnaz Armin is a Specialist of Pediatric Infectious Diseases in Pediatric Infections Research Center, Research Institute for Children Health, Shahid Beheshti University of Medical Sciences, Tehran, Iran. Her research interest is in Medical Microbiology and also Antibiotic Resistance. Her research group works on national project about global threating bacteria according to priority of WHO.

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## **BACTEC** and conventional culture systems comparison to isolate of microorganisms from blood and other sterile body fluids

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**B** lood stream infectious diseases are prevalent in children and adults. Rapid and accurate diagnosis of bloodstream infections are primarily based on conventional culture results, which saves time and prevents empiric treatment. This study aims to BACTEC and conventional culture systems comparison to isolate of microorganisms from blood and other sterile body fluids, on blood specimens collected from three training hospitals in Tehran, Iran. BACTEC 9120 and conventional methods were used for isolation of microorganism from specimens including blood and other body fluid samples collected from patients hospitalized in the selected hospitals during the study period, from April to June 2009. Time for positive and negative results and hospital charge were estimated for the two culture methods. In total 747 specimens were possessed by BACTEC 9120 systems and 787 by conventional method. Patients aged between 3 days and 8 years old, (mean 11.4±21.9 years); 52% of patients were male and 48% female; Out of 747 specimens were possessed by BACTEC 9120 system, 26% (196/747) and from 787 specimens cultured by conventional method 5% (49/787) were positive (p<0.05). Hospital stay was 13.8±12.9 days in BACTEC 9120 and 17.9±14.9 days in Conventional method (p<0.05), respectively. Time for positivity by BACTEC system was 3.8±1.1 days and 5.9±2.5 days in conventional method (p<0.05), treatment response showed 1.8 day earlier result in patients that their specimens were processed by BACTEC 9120 system. Death rate in BACTEC 9120 method was 6% and 11% in conventional method (p>0.05). In conclusion implementation of BACTEC system for microbiologic detection of pathogens decreases the admission time and early diagnosis and treatment results are cost effective for patient management and prevention of antibiotic resistance.

#### Biography

Maham S is working as the Manager of Pediatric Infections Research Center, Shahid Beheshti University of Medical Sciences, Tehran, Iran. His research interest is in medical and diagnostic methods.

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# **Video Presentation**

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## The future of insulin pump therapy in T1DM and T2DM patients in India and developing countries-Resale and recycle-A new vision

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**Aim:** Can we change the Economics of insulin pump Therapy in India and other developing countries? We want to find the answer to this question, thereby making the pumps available to the needy T1DM and T2DM patients at much lower prices than the present costs.

**Methods:** We have studied the total nine patients using the insulin pumps at our centre, Gandhi Clinic in Pune, India. Out of nine patients, four are IDDM and others are T2DM. We have also tried IPT in a lady retired teacher who is 72 years old (T2DM). Out of 9 patients, three Insulin Pumps are lying at our clinic, two pumps due to sad demise of the patients and one pump due to the adverse advice by another doctor. The relatives of the patients are at double loss, moneywise and person loss.

**Results:** Many healthcare professionals compare a car with pump. Frequently, we say if someone can afford a car then he would easily afford the insulin pump. In India, we have a scheme to buyback and refurbish the used cars by the manufacturer and the resale of the same car is possible at a much lower cost than the cost of the new car of same brand and the manufacturer.

**Discussion:** Since the fact prevails in India and developing countries that availability of insulin is a difficult task at times, insulin pump therapy is a farfetched dream. There must be more than few thousand pumps in India which are resalable. These pumps can be refurbished and can be made available to the needy and willing patients of T1DM as well as T2DM patients in these resource constrained countries. We want the whole world brain volume to think on this sensitive issue.

#### **Biography**

Sanjay P Gandhi has pursued his MBBS and MD from B J Medical College, Pune, India. He has teaching experience of about 3 years and has been practicing as Physician for almost 30 years. He has been running a charitable organization 'Diabetes Patient Club' since 2002 and A1c Club' since 2011, very successfully. He has written articles in India Today magazine for 3 years. He has conducted short one day picnic programs for Diabetic patients and their better halves for 9 consecutive years in and around Pune in India.

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