Joint Meeting on Annual Conference on BACTERIAL, VIRAL AND INFECTIOUS DISEASES & NEGLECTED TROPICAL DISEASES CONGRESS: THE FUTURE CHALLENGES December 05-06, 2018 Dubai, UAE



### Annual Conference on BACTERIAL, VIRAL AND INFECTIOUS DISEASES & NEGLECTED TROPICAL DISEASES CONGRESS: THE FUTURE CHALLENGES December 05-06, 2018 Dubai, UAE

#### Correlation of dengue serology with disease severity

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**Background & Objective:** Dengue fever is one of the most common arboviral mediated outbreaks. The disease carries high morbidity and mortality. The spectrum ranges from mild self-limiting illness to severe fatal disease. This study was designed to correlate the dengue serology with the disease.

**Methods:** Prospective observational study was undertaken among pediatric patients in a rural tertiary care hospital. The study conducted over a period of 4 years. In patients suspected as dengue NS1 antigen, IgM and IgG for dengue were sent and those who were positive for at least one of the three were included in the study.

**Results:** In the study, 234 patients studied, majority were males (68%). In the presenting symptom, fever was the most common symptom (100%) followed by headache (86%), myalgia (84%). Edema was observed in 19% while rash in 13%. According to the WHO criteria 174 (74%) were classified as non-severe dengue while 60 (26%) as severe dengue. Thrombocytopenia was seen in 97% of patients. The complications of dengue observed in our study were hemorrhagic manifestations (26%), shock (33%), ARDS (8%) and CNS involvement (5%). Mortality rate was 8.97%. In the children classified as severe dengue only 5 (2%) children had only NS1 positive, 21 (9%) were positive for IgM, 11 (5%) for IgG and 23 (10%) for both IgG and IgM.

#### **Biography**

Sachin Damke has completed MBBS in 2001 and MD pediatrics in 2006. He is working in a medical college from last 10 years.

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### NEGLECTED TROPICAL DISEASES CONGRESS: THE FUTURE CHALLENGES

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# Seroprevalence of *Brucella agglutinins* in patient with pyrexia of unknown origin attending a tertiary care rural hospital

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**Background & Aim:** Human brucellosis is a zoonosis with worldwide distribution, with great importance in developing countries like India. The diagnosis of brucellosis is frequently difficult to establish as it mimics many other infectious and non-infectious diseases. The use of feasible diagnostic tests seems to be great importance for diagnosing human brucellosis. The present study was carried out to study the seroprevalence of human brucellosis by estimating IgG and IgM by ELISA in central India.

**Methodology:** A total of 124 serum samples were collected and processed from April 2016 to March 2017 in tertiary care teaching hospital on central India. The serum samples of the patients admitted to the hospital with the diagnosis of Pyrexia of Unknown (PUO) were investigated for detectable IgG and igM antibodies by ELISA. The observance value thus obtained was converted to NovaTec Unit (NTU) by using the formula according to the manufacturer's instructions.

**Results:** In the present study, from the total of 124 serum samples, ELISA detected presence of IgG antibodies in 12 (9.67%) indicating chronic infection and IgM antibodies in 28 (22.58%) suggesting acute and recent infection.

**Conclusion:** ELISA has the ability to measure two specific immunoglobulins for effective diagnosis and is also a rapid method for detecting seroprevalence of human brucellosis in the community.

#### **Biography**

Smita Damke has completed MBBS in 2007 and MD Microbiology in 2013. She is working in a medical college from last 5 years.

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#### Monitoring of opportunistic micro-sporidia in immune-compromised patients in Slovakia

Monika Halanova, Pavol Jarcuska, Zuzana Kalinova, Lenka Cechova and Ingrid Babinska Pavol Jozef Safarik University, Slovakia

The importance of opportunistic pathogens, which are able to be agents of disease only if the natural defence mechanisms are damaged and function of immune system is decreased, is growing due to an increasing number of patients with HIV infection/AIDS, as well as other persons with disrupted immune systems due to primary or secondary immunodeficiency. Micro-sporidia are among the opportunistic pathogens that are occurring with greater frequency or severity in patients with impaired host defenses. Therefore, the aim of our study was to map the prevalence of *Encephalitozoon intestinalis* and *Enterocytozoon bieneusi* infection in a group of patients and to compare it with the occurrence of specific antigens in immune-competent people. Detection of spores of both pathogens in fecal samples was performed by an immunofluorescence test using species-specific monoclonal antibodies. Overall, we examined 142 people, including 80 men and 62 women. We compared the relative risk of micro-sporidia Encephalitozoon intestinalis in the group of HIV/AIDS patients was 6.6 times higher, in the group of hemodialysis patients 1.6 times and in the group of renal transplant patients 4 times higher in comparison with the immune-competent persons. The risk of occurrence of micro-sporidia *Enterocytozoon bieneusi* in the group of HIV/AIDS patients was 10 times higher and in the group of renal transplant patients 6.7 times higher in comparison with the immune-competent persons. In the group of hemodialysis patients, the risk of occurrence of micro-sporidia *Enterocytozoon bieneusi* was the same as in the group of hemodialysis patients, the risk of occurrence of micro-sporidia *Enterocytozoon bieneusi* was the same as in the group of immune-competent persons.

#### Biography

Monika Halanova has completed DVM Degree at University of Veterinary Medicine in Kosice in 1995 and PhD in Infectious and Parasitic Diseases in 2000. She was honored as Associate Professor in Epidemiology at Pavol Jozef Safarik University in Kosice, Faculty of Medicine in 2008. She works with several labs focusing on the diagnosis of infectious and parasitic diseases and long lasting study stay in Central Laboratory in Abu Dhabi, UAE. Her research takes place at the crossroads of public health, epidemiology and infectious diseases. She has been part of several research projects as principal investigator or scientific co-worker. She has published around 367 scientific papers and abstracts.

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### Annual Conference on BACTERIAL, VIRAL AND INFECTIOUS DISEASES & NEGLECTED TROPICAL DISEASES CONGRESS: THE FUTURE CHALLENGES December 05-06, 2018 Dubai, UAE

#### Pigeons as a source of chlamydial infections for humans

Lenka Cechova, Monika Halanova, Zuzana Kalinova and Ingrid Babinska Pavol Jozef Safarik University, Slovakia

Urban and periurban areas are frequently home to wild birds, particularly feral pigeons (*Columba livia domestica*), which can be present at high density. These animals are known as reservoirs of zoonotic viruses, bacteria, fungi and protozoa. In particular, columbiform birds, including pigeons, have been ranked as the second major reservoir, after psittaciformes, of *Chlamydia psittaci*. This is a highly infectious bacterium which inducing asymptomatic forms or pneumonia, poor growth, diarrhea and central nervous system disorders. *C. psittaci* is transmissible to humans causing severe zoonotic infections. Because both, domestic and feral pigeons may be carriers of hazardous agents for humans and animals and get in close contact with humans, the aim of this study was to investigate the pigeons in Slovakia living in different areas close to the people for the presence of *C. psittaci* from pharyngeal and cloacal swabs and compare incidence between domestic and feral pigeons. Each sample was examined by molecular method PCR and in case of positive result the identity of the obtained sequences was examined by a BLAST search. Of the total of 60 clinically healthy feral pigeons that were examined, 13 (21.7% positivity) were positive for *C. psittaci* after sequenation. From 47 domestic pigeons were no pigeons positive for chlamydial infections. Our results show, that feral pigeons have higher risk for chlamydial infections in comparison with domestic pigeons (21.2 times higher). Because urban pigeon populations still represent risk to public health, is necessary performs screening examination of animals and analyze the epidemiological factors affecting the way of transmission and circulation of pathogen with the aim of reducing or halting of the spread of this infection not only between animals but also in the line pigeons – sensitive persons.

#### **Biography**

Lenka Cechova has completed Public Health degree at the University of Pavol Jozef Safarik in Kosice, Slovak republic in 2013 and PhD in Public Health in 2017. Her research takes place at the crossroads of public health, epidemiology and infectious diseases with special focus on DNA analysis and genotyping spectrum of chlamydial pathogens in humans and animals. She is a member of several research projects. She has published more than 30 scientific papers and abstracts.

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### Annual Conference on BACTERIAL, VIRAL AND INFECTIOUS DISEASES & NEGLECTED TROPICAL DISEASES CONGRESS: THE FUTURE CHALLENGES December 05-06, 2018 Dubai, UAE

#### Prevalence of cryptosporidiosis in children from minority group in Slovakia

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In present, intestinal parasitic infections remain a serious public health problem globally concern in both developed and developing countries. One of them is *cryptosporidiosis*, a diarrheal disease caused by protozoan parasites of the genus *Cryptosporidium*. In human, two species – *Cryptosporidium hominis* and *Cryptosporidium parvum* are of major significance to public health. Infection is endemic in places with poor sanitation and crowded living conditions and is associated with source of water supply, age and socioeconomic status. In Slovakia, such places largely representing the Roma settlements and housing. Because *Cryptosporidiosis* is potentially life-threatening in immunocompromised persons and younger children between 1 and 5 years, which are more susceptible to infection than others, for the presence of *Cryptosporidium* antigen we examined a total of 81 asymptomatic children aged 0-14 years of Roma national minority coming from settlements of Eastern Slovakia. The faecal samples were analysed by ELISA method and by modified Kinyoun's acid-fast stain. The overall positive percentage was 44.4%. All faecal samples were parallel examined by the modified Kinyoun's acid-fast stain, which had a lower detection rate. The finding of large numbers of oocysts was observed mostly at absorbance between 0.575 OD to 2.066 OD.

#### **Biography**

Ingrid Babinska has completed her Graduation as a Medical Doctor in 1995 at the Medical Faculty, Pavol Jozef Safarik University, completed three years of study Master of Public Health (2005) and finished PhD study in Public Health (2014). Currently, she is working as a Assistant Professor in the Department of Epidemiology, Medical Faculty, Pavol Jozef Safarik University. She is a member of several research team. Her research is in the field of public health and epidemiology with a particular focus on socio-economically disadvantaged groups. She has published 36 scientific papers and abstracts.

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### Annual Conference on BACTERIAL, VIRAL AND INFECTIOUS DISEASES & NEGLECTED TROPICAL DISEASES CONGRESS: THE FUTURE CHALLENGES December 05-06, 2018 Dubai, UAE

#### Occurrence of IgG A. phagocytophilum antibodies in professional soldiers in Eastern Slovakia

Zuzana Kalinova, Monika Halanova, Lenka Cechova and Ingrid Babinska Pavol Jozef Safarik University, Slovakia

Human Granulocytic Anaplasmosis (HGA) is emerging tick-borne infectious diseases caused by Anaplasma phagocytophilum. In Europe, the first serological evidence of HGA was described in 1995 in Switzerland and first clinical case was confirmed in 1997 in Slovenia. Since then, many European countries, including Slovakia reported occurrence of HGA. Therefore, the aim of the study was map the occurrence of IgG *A. phagocytophilum* antibodies in group of professional soldiers. A total 322 human serum samples (296 men and 26 women) were analyzed for the presence of antibodies against *A. phagocytophilum*. Anti-*A. phagocytophilum* IgG antibodies were detected by the focus diagnostics indirect immunofluorescence antibody IgG test, which is intended for the detection of human serum IgG class antibodies to *A. phagocytophilum*, as an aid in the diagnosis of HGA. Blood sera were processed and results interpreted according to the test producer. Of the total number of 322 examined people, 67 (20.8%) showed positivity for IgG antibodies against *A. phagocytophilum*. Out of 67 positive people, 35 have positive anamnesis for tick bite. The real infection rate of HGA in Europe is still hard to establish. Sero-prevalence rates range from zero to up to 28.0%. No official epidemiological data on the prevalence of this infection in the human population are available in Slovakia. Only a few studies have been published relating to anaplasmosis, with results of prevalence ranging from 7% to 25%. The total prevalence of *A. phagocytophilum* antibodies in our sample (20.8%) corresponds with the findings of these studies.

#### Biography

Zuzana Kalinova has received her Medical Doctor Degree at Pavol Jozef Safarik University, Medical Faculty in 1995 and her PhD degree in Public Health in 2011. Since 2006 she has worked as a senior research at Pavol Jozef Šafarik University in Košice, Medical Faculty, Department of Epidemiology. Her research activities are oriented on different fields of epidemiology, mainly on the field of vector-borne diseases. She is co-worker of several research projects. To this time, she published 147 scientific papers and abstracts.

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### Annual Conference on BACTERIAL, VIRAL AND INFECTIOUS DISEASES & NEGLECTED TROPICAL DISEASES CONGRESS: THE FUTURE CHALLENGES December 05-06, 2018 Dubai, UAE

#### MicroRNA Differential Expression in Chronic HCV Cases from Jeddah, Saudi Arabia

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Hepatitis C virus (HCV) is one of the major global causes of morbidity and mortality, recent estimates showed that >185 millions are infected worldwide. Chronic HCV infection is often associated with the development of liver cirrhosis, hepatocellular cancer, liver failure, and death. Saudi Arabia is the largest country in the Gulf region by population and area. There is large variability in HCV prevalence reported in different population groups in Saudi Arabia ranging from 0% among blood donors to 34.0% in high risk groups. MicroRNAs are short, non-coding RNAs that are partially complementary to regulatory regions of target messenger RNAs. MicroRNA binding suppresses translation of target mRNAs or promotes mRNA degradation. Measurement of serum microRNAs is reported to be correlated with the expression of these microRNAs in the liver. MicroRNA dysregulation is involved in all stages of hepatocarcinogenesis, their profiles have the potential to discriminate patients with HCC from those with other liver diseases. A number of studies have reported miR-21 to be frequently up-regulated in HCC tumors, while serum miR-122 is up-regulated in patients with HCC. In this study, we have investigated the levels of mir-21 and miR-122 in the serum of HCV related HCC cases compared to their levels in chronic HCV cases. Our result showed increased expression of both mir-21 and mir-122 in HCV related HCC cases and in chronic HCV cases with high fibrosis score compared to chronic HCV cases with low fibrosis score.

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