Bacteriology-2013

OMICS Group Conferences
Accelerating Scientific Discovery

International Congress on
Bacteriology & Infectious Diseases

November 20-22, 2013 DoubleTree by Hilton Baltimore-BWI Airport, USA

Acquired Immune Deficiency Syndrome (AIDS), Diabetes Mellitus and Tuberculosis; A Challenging Scenario

Amer Hayat Khan

Universiti Sains Malaysia, Malaysia

Abstract

Tuberculosis (TB) is a common infection affecting patients with human immunodeficiency virus (HIV) and diabetes mellitus (DM). With the increasing trend of HIV/AIDS (more affected the Extra PTB) and DM (PTB were found in higher incidence), markedly increase the incidence of TB. Even make the treatment complicated and leads to morbidity and mortality.[1-3] HIV/AIDS induced immunosuppression provides a right atmosphere for opportunistic infection. Cytokine dysregulations have been observed, decreased production of interferon-γ (IFN-γ) caused by HIV, compromises the host's ability to combat invasion by tubercle bacilli and thereby, facilitates reactivation of dormant foci of TB. Tumor necrosis factor-α (TNF-α), a stimulatory agent for some cell lines (e.g., fibroblasts), was noted to increase during the retroviral disease, which enhances HIV replication and progression of the AIDS disease process. Literature proved that DM may be one of the manifestations of HIV disease process and it is the result of activated T-lymphocytes homing to anatomical sites that are not normally infected by HIV. This leads to apoptosis, increased cytotoxicity such as TNF-α, IFN-γ and interleukin-1 in pancreas, which in turn, may affect the beta cells leading to development of DM. Furthermore, DM by compromising with the cell-mediated immunity reactivates latent TB infection and leads to dissemination of dormant organisms.[4,5] HIV therapy is another factor that develop the type 2 DM.[6] As people with HIV live longer with HAART, their care providers must be more cautious about chronic conditions like DM and uncontrolled blood pressure that can cause significant damage.[7] HIV and DM in the same patient with TB may suppress the immune system further as compared to TB-HIV or TB-DM cases and the chances of acquiring opportunistic infections is greater leading to higher morbidity and mortality, strong evidence based research is needed to clear the real causes of terrible scenario.

Biography

Amer Hayat Khan completed PhD in Clinical Pharmacy from Universiti Sains Malaysia, in 2010. Currently Dr. Amer working as Senior Lecturer in Discipline of Clinical Pharmacy, School of Pharmaceutical Sciences, Universiti Sains Malaysia. Communicable diseases and surgical infections are the main focus of research, and currently supervising 2 PhD's and 8 Master by research fellows, whereas 2 students from Master by course work. Dr. Amer published more than 40 papers in international journals and serving as an editorial board member of Journal. Furthermore, Dr. Amer is the author of two books.

DAmer got good exposure with Medical Statistics and volunteer bases serving Penang General Hospital (Tertiary level government hospital at Penang, Malaysia) as a Bio-statician.

During PhD, Dr. Amer worked on communicable diseases, specifically on Tuberculosis and co-morbidities in general population and in prison inmates, in Malaysia and received best research presentation award.