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LEVELS OF SERUM C-REACTIVE PROTEIN IN PREDICTING TUBERCULOSIS DISEASE PROGRESSION IN HIV CO-INFECTED PERSONS IN RESOURCE LIMITED SETTINGS

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The challenge of tuberculosis diagnosis in TB/HIV co-infected persons are worrisome especially in resource poor countries. Assessment of some biomarkers' levels in active tuberculosis could serve as a veritable tool in diagnosing TB in some settings. This study investigates the relationship between C-reactive protein (CRP), Erythrocyte Sedimentation Rate (ESR), absolute CD4+ cell counts and TB/HIV co-infection in sputum-producing patients in Uyo, Nigeria. TB was diagnosed using Ziehl-Neelsen staining and Immunofluorescence techniques. HIV was diagnosed serologically. Total serum CRP levels and CD4+ count were estimated using sandwich-ELISA and Flow cytometry, respectively. Differences in mean serum CRP of TB patients with and without HIV were significant (PHIV-positives alone(20.45±28.5mg/l), >TB-neg/HIV-negatives(12.34±20.9mg/dl), >apparently healthy subjects (0.44±0.64mg/l), as against TB-positives alone(29.83±30.8 mg/l). Mean serum CRP levels in TB-positives alone was significant >the control group(PTB-neg/ HIV-negative group (P<0.05). The pairwise analysis of mean absolute CD4+ counts show that TB/HIV-coinfection (175.12±85.79cells/μl) had a significantly lower count than HIV-positives only (358.93±240.1cells/μl), TB-positives only (576.31±326.3cells/μl) and HIV-neg/TB-negative groups (1089.8±331.3cells/μl). There was no significant difference between the mean CD4+ count among TB-positives and HIV-positives alone. Both groups had significantly lower counts than HIV-neg/TB-negatives. These findings revealed that the use of serum CRP levels alone or in combination with ESR and CD4+ count is a promising predictor of TB disease progression, especially in TB/HIV coinfecting persons in high disease burden areas.

Biography

Anietie E Moses is an Associate Professor in the Department of Medical Microbiology and Parasitology, College of Health Sciences, University of Uyo, Nigeria. He holds a PhD degree in Microbiology, and research area is microbial immunology and infectious diseases epidemiology. He teaches Medical Microbiology and supervised many undergraduate and postgraduate students in some Nigeria universities. He coordinates postgraduate programs in his department and has published more than 40 original articles in local and international journals and also presented papers in many conferences within and outside Nigeria. He is the Deputy Editor-In-Chief of 'World Journal of Biomedical Research' published by his faculty.

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