

A retrospective Study Comparing Patients with Tuberculosis and HIV Coinfection in Relation to Mean CD4 Count in cART Era

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Abstract:

Background:-Individuals with HIV infection are at increased risk for tuberculosis (TB) and other respiratory tract infections. Infection with TB enhances replication of HIV and may accelerate the progression of HIV to AIDS, with rapid fall in CD4 count, as both HIV/TB are individually known to decrease CD4 count.

Aim: Emphasizing the pivotal role of cART and ATT in TB/HIV patients in maintaining their immune system effective (by maintaining CD4 count) and thus decreasing MDR/XDR, morbidity and mortality among these patients. Calculating average mean CD4 count for Indian scenario in cART era.

Material and methods: All the 961 HIV infected patients early morning sputa were screened for AFB and few of the samples were even cultured on LJ medium. The samples were also examined for PMNLs in Gram's staining. All patients' CD4 count were also evaluated by flow cytometry method within one week of sputa collection. Seven other published work of HIV patients were analyzed for TB in relation to CD4 count. Moreover five published research work of CD4 in TB patients but HIV-negative were also discussed in this article.

Results: Out of 961 patients with RTI, 308(32.06%) found positive for tuberculosis with mean CD4 count found to be 198.5 and 105.9 cells/ μ l for pulmonary TB and for extra-pulmonary TB respectively in present study. The average mean CD4 count from seven research studies from India were found to be 169.75 and 145.3 cells/ μ l for pulmonary and extra-pulmonary TB respectively, in TB/HIV co-infected patients on cART. In advanced TB (HIV-negative) patients mean CD4 count found to be 485 ± 321 by other researchers.

Conclusion: HAART and ATT both are equally important in maintaining immune system (maintaining CD4 count) of TB/HIV co-infected patients. In India, clinician should suspect more for TB at around mean CD4 count of 169.75 even if found negative by AFB staining but should be confirmed by culture on LJ medium, PCR or any other advanced techniques for HIV-positive patients.

Biography:

Dr. Rajeev R Shah is a competent and experienced medical microbiologist and holds his Master Degree in Medical Microbiology from SSG Hospital and Vadodara Medical College, Maharaja Sayajirao University, Vadodara, Gujarat, India. Whereas he had been awarded his PhD degree from Veer Narmad South Gujarat University, Surat, Gujarat, India. His whole unrevised PhD thesis had been uploaded by Shodganga, a well-known search engine on website. Recently he is working as a

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