

Co-relation of HIV & Tuberculosis in terms of clinical and radiological presentation with CD4 counts in Rajasthan

Introduction: In India, estimated 40% of population is infected with tuberculosis as against 1% with HIV infection. HIV co-infection is strongest known risk factor for the development of tuberculosis disease. The fact is that tuberculosis kills more adults in the most productive age group in India than any other infectious diseases. Unlike other opportunistic infections that occur at CD-4 cell counts <200/cumm, active tuberculosis occurs throughout the course of HIV disease. As HIV related immunosuppression increases, the clinical pattern of TB changes with increasing number of smear negative and extrapulmonary tuberculosis cases. Thus clinical radiological presentation depends upon the degree of immunosuppressant.

Objectives: to know the prevalence & spectrum of clinical radiological presentation of tuberculosis in HIV positive patients and find out correlation with CD4 cell counts.

Methodology: The present study was carried out at Government Medical Colleges in Rajasthan, included indoor 153 HIV positive patients during Sep.2009 to Sep.2010. Written consent was taken with proper counseling. HIV sero-status was done in all the patients as per NACO guidelines. Routine blood tests, sputum examination for AFB & Culture, chest X-ray, USG, tuberculin test with 5 TU, were performed. FNAC, Biopsy, fluid Cytology, Biochemistry were used to diagnose EPTB and CD 4 counts were performed.

Results: Out of 153, 138 patients were diagnosed to have HIV-TB co-infection, amount that 78.99% males and 21,01% were females, Pulmonary lesions were present in 82.61% patients; Extra-pulmonary alone in 17.39% and 53.62% have both pulmonary & Extra-pulmonary tuberculosis. 42.98 (49) had sputum smear positive for AFB whereas 57.07% were smear negative. Overall 50/138 (36.23%) had lymph node TB, followed by pleural (22.46%) & abdominal tuberculosis (19.57%).

The most common presenting symptoms was cough (82.61%), followed by fever (68.12%), loss of appetite & shortness breathlessness (52.17% & 42.75%) respectively. 79.73% of pulmonary & Extra-pulmonary patients had CD4 cell counts <200/cumm.

Conclusion: Most of the HIV-TB co-infected patients were belong to productive age group of 21 to 40 yrs and were sexually active. Driving was most common occupation (28%) & females were housewives. This study highlights the higher prevalence of HIV & TB in patients who lack basic education and awareness. Patients with low CD4 counts (<200/cumm) had more incidence of Extra-pulmonary & pulmonary tuberculosis with atypical radiological presentation.