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To Study the Clinical Profile of Tuberculosis in HIV Positive Patients and Impact of Antitubercular Therapy

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Abstract

Background: *There is paucity of data from peripheral centres on clinical profile of Tuberculosis in HIV positive patients and outcome of those patients to chemotherapy.*

Methods: *An observational study of HIV TB co infected patients compared to patints suffering from Tuberculosis alone.*

Results: *Most of the patients having TB/ HIV co infection as well as TB without HIV are males belong to the age group of 21 to 60.Most of TB/HIV coinfected patients are drivers and labourers belonged to low socioeconomic group and were illiterate. Common presenting symptoms in the studied patients are fever, cough, appetite loss and weight loss. Most common route of transmission of HIV infection was found to be from sexual route. Most of patients have history of exposure to commercial sex worker. Extra pulmonary tuberculosis was seen in significant number TB patients co infected with HIV. Most of the TB/HIV co infected patients were found to sputum negative atypical radiological presentation was seen in significant number. Common complications seen in TB/HIV co infected patients was Gastrointestinal side effects and hepatotoxicity. Outcome (favourable) in HIV positive tuberculosis was found to be almost similar to HIV negative tuberculosis patients. In TB/HIV co infected patient better outcome with higher CD4 count was seen. In TB/HIV co infected patients sputum negativity was found to have higher favourable outcome (76%) as compared to sputum positive HIV patients (36%).*

Conclusion: *HIV tb coinfection is more common in sexually active age group and commonest mode being heterosexual transfer. Extra pulmonary TB is common among HIV co infected patients with better treatment outcome with higher CD4 count, sputum negativity.*

Introduction

HIV has increased the burden of TUBERCULOSIS, especially in populations where HIV has become common, and where prevalence of tuberculosis infection is high[1], Tuberculosis is the commonest opportunistic infection occurring among HIV positive persons in INDIA and it is estimated that 60-70% of HIV positive persons will develop tuberculosis in their lifetime.[2] Also tuberculosis is the commonest cause of death in HIV infected patients. HIV and Tuberculosis have an ominous connection because of the rapidity with which the mycobacterium tuberculosis proliferates and disseminates in HIV.

HIV infected individuals co infected with TB have an annual risk of 5-15% of developing active TB and lifetime risk of 50-70% of developing tuberculosis as compared to a 10% risk in HIV negative individuals.[2]

Material and Methods

The Duration of Study was from October 2014 to September 2015. At Department of Medicine, NSCB MCH Jabalpur. Patients from ART CLINIC, RNTCP clinic and patients admitted in wards of Medicine Departmentin NSCB MCH Jabalpur.Patients not willing to be part of the study, patients with condition like diabetes, cirrhosis and other immunosuppressant conditions are excluded from the study. The demographic data, detailed History, clinical examination routine lab investigations were done. The patients were divided in two groups one comprising of HIV/TB co infection and the other who were diagnosed with Tuberculosis alone. The patients were given anti Tuberculosis therapy as per RNTCP guidelines. Standard international defination were followed in defining outcome

Results

Total 103 patients were studied out of which 49 patients had TB/HIV co infection while 54 suffered from Tuberculosis alone. Most patients having TB/ HIV co infection as well as TB without HIV are males (77.8%) Most of the patients having TB/HIV co infection belong to the age group of 21 to 40(65%) and most of them are drivers and labourers and belonged to low socioeconomic group and were illiterate. Most common route of transmission of HIV infection was found to be from sexual route [77%]. Also most of patients gave history of exposure to commercial sex worker. (77%) Common presenting symptoms found in the study was fever, cough, appetite loss, weight loss. Common associated findings are Pallor, icterus and lymphadenopathy. Higher incidence of Extra pulmonary tuberculosis wereseen in TB/HIV co infected group(38.8%) than in TB without HIV(31%).Significant weight reduction was found in TB/HIV co infected patients.A larger section of patients with CD4 count <200 were found to have pulmonary tuberculosis as compared to extra pulmonary tuberculosis. In TB/HIV co infected patients significant reduction in mean total leucocyte count and reduced mean haemoglobin levels was found.Most of patients in the TB/HIV co infected group were found to be sputum negative(.77.6%) In TB without HIV patients sputum negativity was seen in [51.9%]. Radiologically Atypical radiological presentation was seen in significant number of TB/HIV co infected patients (57.1%) while most of the HIV negative tuberculousis patients showed typical radiological findings.Common complications seen in TB/HIV patients was Gastrointestinal side effects and Hepatotoxicity. Favourable outcome was found similar in TB/HIV co infected as well as TB without HIV patients (70%). Favourable outcome was seen in 64.8% of sputum positive and 72.72% of sputum negative patients. In TB/HIV co infected patient better outcome with higher CD4 count was seen. In TB/HIV co infected patients sputum negative patients had better favorable outcome.(76% vs 36%).

Discussion

Total 103 patients were studied out of which 49 patients had TB/HIV co infection while 54 suffered from Tuberculosis alone. Most of the patients having TB/ HIV co infection as well as TB without HIV are males. Most of the patients in the study group having TB/HIV co infection belong to the age group of 21 to 40. and patients with TB without HIV belong to age group 41 to 60. Most of TB/HIV coinfected patients are drivers and labourers while most of the tuberculosis without HIV are farmers and laborers. Most of the patients studied belonged to low socioeconomic group and were illiterate Common presenting symptoms in the studied patients are fever, cough, appetite loss and weight loss.Most common route of transmission of HIV infection was found to be from sexual

route. Most of patients have history of exposure to commercial sex worker. Common associated findings are Pallor, icterus and lymphadenopathy Among the TB/HIV co infected group, extra pulmonary tuberculosis was seen in 38% of the cases which Is significant number and consistent with other studies. Significant weight reduction was found in TB/HIV co infected patients. Among TB/HIV co infected patients pulmonary tuberculosis patients had lower mean CD4 count as compared with extra pulmonary tuberculosis patients. In TB/HIV co infected patients significant reduction in mean total leucocyte count was found and reduced mean haemoglobin levels was found. Most of the TB/HIV co infected patients were found to sputum negative. Atypical radiological presentation was seen in significant number of TB/HIV co infected patients while most of the HIV negative tuberculousis patients showed typical radiological findings Similar findings were observed in different studies earlier conducted at various centers[2,3,5,6,7]. Common complications seen in TB/HIV co infected patients was Gastrointestinal side effects and hepatotoxicity. Outcome (favourable) in HIV positive tuberculosis was found to be almost similar to HIV negative tuberculosis patients. In TB/HIV co infected patient better outcome with higher CD4 count was seen. In TB/HIV co infected patients sputum negativity was found to have higher favourable outcome as compared to sputum positive HIV patients. In TB without HIV patients who were sputum positive outcome was similar in both sputum positive and negative patients. The limitations of the study were high levels of attrition and difficulty in retrieval of these patients and inherent weakness associated with any retrospective study. Thus, considering our expanding population and economy there is need to strengthen and expand our reach to accommodate huge number of HIV positive patients and providing them with HAART keeping an special eye to prevent default.

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