

HIV/AIDS-TB Co-Infection: What Prevalence Indicates?

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Co-infection of TB (tuberculosis) has been a major concern in HIV/AIDS patients. TB remains an important public health problem and has been exacerbated by the HIV epidemic, resulting in increased morbidity and mortality worldwide. HIV-TB co-infection is “bidirectional and synergistic” and is often designated as “Cursed Duet” (1). HIV/AIDS leads to immunosuppression and is a strongest of all known risk factors for the development of TB. Indeed, after decades of consistent decline in incidence, a resurgence of TB is occurring globally. 9% of new TB infections worldwide are attributable to HIV, in region with higher HIV prevalence—about 31% of new TB cases are attributable to HIV(1). HIV/AIDS increases the risk of progressive disease following primary TB, leads to reactivation of latent bacilli and can also increase the risk of TB from exogenous infection. The course of HIV infection is accelerated subsequent to the development of TB. Risk of death and development of other opportunistic infections is higher in HIV-TB co-infected patients. Even increase in replication of HIV has been demonstrated locally in such patients. Drug interaction incidence is also high. More than that, direct & indirect cost of illness can have catastrophic impact (1). Unlike other opportunistic infections which occur at CD4+ count below 200/mm³, active TB occurs throughout the course of HIV disease. Extra-pulmonary tubercular manifestations occurs in 46 to 79 per cent of patients with pulmonary TB and HIV co-infection and is more frequent in severely immunocompromised patients. Disseminated form is also seen frequently. HIV/AIDS can effect natural course of disease and pose diagnostic difficulties and may effect negatively the treatment due

to frequent drug interactions in advanced state of disease. Hence, it is important to identify them early to reduce the morbidity, delay mortality and improve quality of life in HIV/AIDS patients.

Table-1. Co-infections of TB among HIV/AIDS patients

Author	Place	Year	Prevalence
Indian Studies			
Solomon et al (2)	Madras	1995	3.4%
Ghate et al (3)	Pune	1997,1998 & 1999	11.8%,9.94%& 7.4% respectively
Sircar et al (4)	Lucknow	1998	54.8%
Kumar et al (5)	Delhi	2002	42/301
Deivanayagam et al (6)	Chennai	2002	MDR-TB (4.42%)
Hira et al (7)	Mumbai	2003	25.4%
Dey et al (8)	Calcutta	2003	27.7%
Khandekar et al (9)	Pune	2005	40%
Mahajan et al (10)	Jammu	2006	16.52%
Outside India			
Haar et al (11)	Netherlands	1993-1995, 1996-1998 & 1999-2001	4.1%, 3.8% & 4.4%
Vander Werf MJ (12)	Ukraine	2002 2004	6.3% 10.1%
Ige et al (13)	Nigeria	2005	28.12%
Mugisha et al (14)	Uganda	2006	5%
Richards et al (15)	Atlanta, Georgia, USA	2006	1%

The prevalence of co-infection with HIV varies widely across regions as shown in different studies within India and outside India (Table-1), mainly due to the variation in the distribution of risk factors, geographic location, awareness levels etc of the study population (2-15). The highest prevalence has been reported by Sircar et al (4). The study done from Jammu also reported substantial (16.52%) prevalence of TB co-infection

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among HIV population. Whereas; Solomon et al (2) reported the lowest in India. The lower incidence of tuberculosis can be attributed to the early diagnosis; increasing awareness and high index of suspicion about the presence of TB and timely prophylaxis. Another important aspect for health care providers to realize while planning effective regional strategies to combat this combination is that the reported prevalence may not be the true prevalence. As extra-pulmonary or disseminated TB infection is much common in advanced HIV/AIDS patients and it may not be possible to screen every patient taking help of advanced & costly diagnostic technology like MRI, CT etc is resource salvation in developing countries like India. The results of Indian studies when compared with the data from outside India clearly suggest that prevalence of TB co infection in HIV population is much less in countries like Netherlands (11), Ukraine (12), Uganda (14), and it is least in USA (15) whereas, in Nigeria (13) being African country, it is higher. HIV really threatens control of TB in developing countries like India. Thus, it should be mandatory to screen every HIV/AIDS patients for TB co-infection and vice versa. Hence, prevalence of Co-infection definitely indicates that early diagnosis, high level of suspicion and effective and aggressive treatment of HIV-TB co-infection according to available guidelines, strong commitment, a focused approach as well as strong coordination between national TB and HIV/AIDS control programme is the need of the hour specially in country like India. However, besides advanced research, a lot more needs to be done at all possible levels to combat the menace of this dreadful co-infection.

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