

TB AND HIV: SYNDEMIC ON THE WAY

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The intersection of epidemics of tuberculosis and the HIV, termed as “the syndemic”, is a rising health concern. It has resulted in a striking increase in the incidence of TB worldwide. Morbidity and mortality are thus increased remarkably in some countries. Two-thirds of TB-infected individuals reside in Asia and 40 percent of AIDS-related deaths occur due to TB. Similarly, one-third of all TB cases occur in Africa. In a study, about 19% were found to have evidence of TB in 825 participants of HIV treatment program in South Africa.¹

TB is the most common opportunistic infection in HIV positive cases. Since the emergence of AIDS, TB and HIV have been closely linked. TB is the most common cause of death in patients with AIDS. The reciprocal interactions as a result of dual infection with TB and HIV significantly influence the outcome. In HIV infection, there is a progressive decline in cell mediated immunity, due to which TB incidence has been synergistically increased worldwide. It also affect the pathogenesis of TB, greatly increases the risk of infections, leading to more extra pulmonary involvement and disseminated TB. Clinical presentation as well as radiographic appearance of TB depends mostly on the CD4 count. Patients with HIV-infection and increased immunosuppression can have a normal chest x-ray in 15 percent of cases or they may have atypical radiographic presentations. The chest infiltrates may be non-cavitary and specific predilection for the involvement of upper lung areas may not be present. All these can lead to considerable delay or missing the diagnosis of TB in such cases.

HIV infection can also leads to enhanced progression of TB, with a resultant increase in the occurrences of multidrug-resistant and extensively drug-resistant (XDR) tuberculosis. Before the diagnosis of TB being established, the calculated duration of TB was found to be 03 times shorter in HIV-infected patients in

contrast to HIV sero-negative patients. Consequently, TB is considered “sub-acute illness” in HIV-infected patients as compared to a chronic disease in HIV sero-negative patients. Therefore the clinicians need to be extra vigilant with a low threshold for diagnosis of TB in HIV-infected patients. Although antiretroviral therapy may be associated with decreased TB risk, however still the incidence of TB is greater in HIV-infected patients as compared to the general population. Similarly, TB affects the HIV disease and the risk of AIDS or death in these patients are enhanced several folds.

Although HIV related TB is also a preventable disease, its incidence increases in developing countries where HIV and TB are endemic and resources are limited. Moreover interaction between TB and HIV drugs, overlapping side effects and immune reconstitution inflammatory syndrome (IRIS) complicate the treatment of both TB and HIV together.

According to WHO every third person in the world is infected with TB, resulting in an estimated 10.4 million new cases of TB in 2015. Worldwide 14.8% of TB patients have positive HIV co-infection and up to 50-80% have HIV of them are in some parts of Africa.

Pakistan ranks the fifth in highest TB burden countries in the world. The annual incidence of 270 per 100,000 and prevalence of 341 per 100,000 population.⁸ Unfortunately, the country is facing a progressive epidemic of HIV/AIDS as well. Therefore the emerging problem of TB-HIV co infection or “syndemic” needs consideration. Rapid detection and appropriate treatment are vital for patients with TB-HIV co-infection. In view of the meager resources, this will pose a real challenge to control TB as well as HIV infection.

HIV infection is a great and potent risk for causing TB. It not only increase the risk of acquired infection but

also increases the risk of rapid progression. The risk of rapid progression is much greater among patients with HIV infection because HIV impairs the host ability to compete with TB infection because of defective macrophages function. HIV infected individual, having latent TB are 20-30 times more prone to develop TB than those who are not HIV infected.⁴ In a recent study in Pakistan conducted in about 13000 persons, it was found that 42 (0.3%) infected with HIV. A study by Riaz et al published in this issue also pointed out the burden of HIV of about 1.47% (74 cases) in total of 5822 registered tuberculosis patients. According to data presented in TB-HIV coordination committee meeting in December 2016, 622 (8.2%) patient were having active TB in 19,399 positive HIV patients who are registered in National AIDS control program. HIV infection in TB patients showed an estimated prevalence of 0.42%.

TB is the leading killer of HIV positive patients. In 2015 There were an estimated 1.4 million TB deaths, and an additional 0.4 million deaths resulting from TB disease among people living with HIV.⁸

The problems of TB and HIV needs a proper mechanism to be in place for effective management and advocacy at all levels of health care. There should be improved collaboration between TB and HIV/AIDS programs at all levels. Moreover further studies and operational research are the need of the day in order to control these infections and for in depth analysis of the problem prevailing in the country.

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