

ABSTRACT

The advent of multi-drug resistant tubercle bacilli has renewed an age old public health problem. Its association with the HIV epidemic has further jeopardized the situation. Persons infected with HIV are especially vulnerable to developing active tuberculosis. And in areas where tuberculosis is a major health problem, HIV infected persons are very likely to develop drug resistant problem. Thailand has a very high disease burden of both HIV infection and tuberculosis and its consequences may lead to a big public health problem.

The primary objective of this study was to determine the predisposing factors for the development of drug resistant tuberculosis in patients with AIDS. This hospital based retrospective case control study was conducted at Bamrasnaradura Infectious disease Hospital, Nonthaburi from November 16th 1998 to January 8th 1999. A total of 180 culture proven case records of TB/HIV co-infections were available for study for a period of one year beginning January 1st 1997 to 31st December 1997. Of all the patients, 61 patients were at least resistant to one or more anti-TB drugs. The remaining 119 patients were sensitive to all the six anti-TB drugs tested for (Isoniazid, Rifampacin, Ethambutol, Streptomycin, Ofloxacin and Kanamycin).

Drug resistant tuberculosis was found to be common in patients with AIDS. One third of the patients in this study had drug resistant tuberculosis. And more than 50% of them had multi drug resistant tuberculosis. In this study a previous history of chemotherapy for Tuberculosis was significantly more common in patients with drug resistant tuberculosis (65%) compared to that of patients with drug sensitive

tuberculosis (21%). Thus HIV positive patients with previous chemotherapy for Tuberculosis were significantly at a greater risk for developing drug resistant Tuberculosis (OR =6.76, 95% CI 2.07-22.86). Similarly a past history of Tuberculosis was also more common in the drug resistant group (68%) than the drug sensitive group (37%) and HIV positive patients with past history of tuberculosis were also at a greater risk of developing drug resistant tuberculosis (OR = 5.87, 95% CI 1.94-18.24). Incidental chest radiographs revealed hilar and/or mediastinal lymphadenopathy, atypical of reactivation Tuberculosis, to be more common in patients with drug resistant tuberculosis (30%) than patients with drug sensitive tuberculosis (14%). However localized pulmonary infiltrate of the upper lobe, typical of adult onset reactivation Tuberculosis, was more common in patients with drug sensitive tuberculosis (17%) than patients with drug resistant tuberculosis (2%). Thus suggesting chest radiographs of HIV patients with drug resistant Tuberculosis were atypical of adult onset reactivation tuberculosis (OR= 9.56, CI 95% 1.26-199.56). Although mortality was seen to peak within the first three months after the initiation of Tuberculosis chemotherapy in both the groups, there was no significant difference in the median time of death between the drug resistant and drug sensitive group (p=0.45).

The result of this study suggests that resistance to anti-TB drugs in HIV patients is related to past history of TB and previous exposure to anti-TB drugs. This group of patients presented more commonly with atypical pulmonary lesions than those with drug sensitive tuberculosis.

Precautions should be taken while prescribing anti-TB drugs for HIV patients and at least a full six months course should be completed.