

CHAPTER II

LITERATURE REVIEW

Many studies have been conducted about the factors causing noncompliance of treatment among tuberculosis patients in different countries. Each of them is different in the purpose, method and application. The following is the review of related literatures:

Burman WJ, Cohn DL, et al in their study titled “ Noncompliance with directly observed therapy for tuberculosis. Epidemiology and effect on the outcome of treatment.” found that 52 (18%) out of 294 patients who received outpatient DOTS did not comply to treatment. 33 patients missed ≥ 2 consecutive weeks of DOTS; 16 additional patients did not have a prolonged absence from therapy but missed sufficient doses so that treatment was prolonged > 30 days and 3 patients were incarcerated for presenting an immediate threat to public safety. Using multivariate logistic regression, risk factors for noncompliance found were alcohol abuse (Odds ratio 3.0; 95% confidence interval, 1.2 to 7.5; $p = 0.02$) and homelessness (Odds ratio 3.2; 95% confidence interval, 1.5 to 7.2; $p = 0.004$).⁽²⁷⁾

Teklu B in his study “ Reasons for failure in treatment of pulmonary tuberculosis in Ethiopians ” carried out from April 1981 to March 1982 at the tuberculosis demonstration and training center in Addis Ababa, found that out of 7466 pulmonary tuberculosis patients 460 were non compliant to anti tubercular treatment.

Major reasons for discontinuing anti tubercular drugs in 460 patients were clinical improvement (21.5%), sickness or death of relative or friend (15.9%), lack of transportation or guide (15.4%), Other illness or injury or too sick (9.3%) and missed appointment or lost treatment card (7.8%).⁽²⁸⁾

Pamra SP, et al in their study “ Causes of failure of domiciliary chemotherapy in pulmonary tuberculosis” analyzed the results of 984 consecutive patients of pulmonary tuberculosis attending the New Delhi tuberculosis center and found that 35% of the patients dropped out before completing 24 months treatment. The reasons were nearly 4/5th of these patients were obliged to move out of the area before completing 24 months treatment. 9.6% patients stopped attending the center but took treatment elsewhere.⁽²⁹⁾

Brainard D, et al in their study “ Long term outcome of in patients with tuberculosis assigned to out patient therapy at a local clinic in New Orleans” enrolled 61 patients from January 1, 1993 to July 1994 and followed until no patients were actively receiving treatment. Of the 61 patients, 26(43%) completed treatment, 15(25%) were lost to follow up, 11(18%) died and 9(14%) were referred out of the area during treatment. Among those lost to follow up, 60% received only one month of treatment. Homelessness was the only factor significantly related to whether or not a patient completed therapy with almost 60% of all homeless patients becoming lost to follow up.⁽³⁰⁾

Brudney K and Dubkin J, prospectively studied 224 consecutive patients with tuberculosis admitted to a large public hospital in New York over the first 9 months of 1998. All patients were tracked after discharge to determine compliance and cure rates.

Among the patients, male were predominant (79%), with high rates of alcohol use (53%), intravenous drug users (64%) and homelessness or unstable housing (68%). A total of 178 patients were discharged on tuberculosis treatment, but 89% of those patients were lost to follow up and failed to complete therapy.⁽³¹⁾

Mehrotra ML, Gautam KD, et al in their study “ Shortest possible acceptable, effective ambulatory chemotherapy in pulmonary tuberculosis: preliminary report 1” observed that 16% of patients developed toxicity and side effects of anti tubercular drugs during the initial 3 months period and in 3.4% patients toxicity necessitated cessation of treatment. In the remaining 12.6% patients adverse side effects could be managed without cessation of treatment.⁽³²⁾

Michalowska-Mitczuk D and Kus J in their article “ Reasons for chronic sputum culture positive tuberculosis – evaluation based on personal experience” undertaken a retrospective analysis of the records of 59 patients to verify the reasons of treatment failure. According to the retrospective analysis 44 patients showed more than one reason for treatment failure. In 36 cases improper therapy was responsible for treatment failure involving insufficient number of drugs in 28 cases, untimely termination of treatment in 14 cases, inadequate drugs in 11 cases, poor control of treatment in 5 cases and insufficient doses of drugs in 1 case. The patient’s noncompliance was the main reason in 33 cases, allergy and adverse reaction to drugs were the reasons of failure of the therapy in 21 cases.⁽³³⁾

Michalowska- Mitczuk D and Kus J studied on 48 chronic pulmonary tuberculosis patients aged between 22 and 87 years. Out of 48 chronic patients, 13 patients dropped out due to: drug toxicity in 5 cases, noncompliance in 5 cases and death in 3 cases.⁽³⁴⁾

Cummings KC, et al determined the treatment outcomes (Completed, defaulted, died and others) for 131 of 147 patients who moved from one local health jurisdiction to another. Patients who moved, defaulted more often (RR 5.5; 95% CI, 4.1 to 7.4) than patients who did not move. Additionally, diagnosis of TB in a state prison emerged as the strongest risk factor for defaulting from treatment. Patients who moved or defaulted were more likely to abuse drugs or alcohol, to be homeless or to be associated with congregate settings such as jails and prisons. On an average, patients who defaulted after moving received less than three quarters of their recommended treatment regimens.⁽³⁵⁾

Chluger N, et al studied on 113 patients who were referred to the onsite directly observed therapy program (DOTS), located at Bellevue hospital. Among those patients HIV infection, homelessness, illicit drug use and alcoholism were common. Follow up revealed that 11 patients were non compliant and completely lost to follow up; of the remaining 102 patients, 99% achieved bacteriologic cure.⁽³⁶⁾

Ngamvithayapong J, et al in their study “ Adherence to tuberculosis preventive therapy among HIV infected persons in Chiang Rai, Thailand” enrolled 412 HIV-infected persons in a tuberculosis preventive therapy program in Chiang Rai provincial hospital. A 9-month isoniazid regimen was prescribed. Adherence to treatment was determined by pill count. The adherence rate was defined as the proportion of those who took more than 80% of pills. Of the 412 persons, 286 (69.4%) completed the 9-month

preventive therapy, 109(26.5%) defaulted and 17(4.1%) developed clinical AIDS (including tuberculosis) or died before either completing the program or defaulting. 72 persons failed to collect drugs for more than one month. Among the 72 persons out-migration for job search (34) was the predominant reported reason for non- adherence. Other significant reasons included denial of HIV-infection status (11), perceived side effects of isoniazid (10) and misunderstanding about duration of the preventive therapy (5).⁽³⁷⁾