

Discontinuation of Tuberculosis Treatment in Co-Infected TB with HIV

Umer Usman,¹ Muhammad Saqib,² Aneela Chaudhary³

Abstract

Objective: To determine the factors for discontinuation of TB medication in patient with TB/HIV co-infection.

Methods: A cross sectional study conducted in department of pulmonology DHQ hospital, Faisalabad. We analyze the reasons that lead to co-infected TB/HIV patients to discontinue TB medication and to find out the action of health team. Forty-five professionals participated in the study who serves patients with TB/HIV comorbidity. All patients were informed about the procedure.

Result: After compiling the results, it was noted that low socioeconomic conditions, lack of information about the disease, possible side effects are frequent reasons leading to discontinuation.

Conclusion: Global progress in implementation of TB/HIV activities is encouraging but still limited and late. The need of the hour is to strengthen the existing strategies to overcome the current issues.

Keywords: Tuberculosis. Endemic diseases. Acquired Immunodeficiency Syndrome. Patient's refusal to treatment. Patient care team.

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Introduction

Tuberculosis (TB) is an old disease; however, it is still a major public health problem, not only in Pakistan but also worldwide. The increased incidence of TB is related to several factors, including poverty and social inequality, negligence and / or inadequate diagnosis and treatment of new cases, proper information about the disease, demographic variations, and impact of HIV infection. Failure in global TB control due to ineffective control programs has contributed to mortality and multidrug resistance.¹

Pakistan with 179.2 million² population is ranked fifth among the 22 high burden countries.³ Pakistan accounts for 63% of TB cases in eastern Mediterranean region. Total new cases reported were 258251,

composed of 101887 smear positive cases and 112948 smear negative cases. According to WHO report of 2018 total TB cases in Pakistan were 369548, among them new cases were 360472 and 80 % were found to be pulmonary cases.⁴ The highest incidence was in Sindh province while KPK showed estimated 55000 and Baluchistan showed 27000 new cases every year. According to provincial TB control program all type of estimated TB cases was 167799 in Punjab, this area with the highest rate of co-infection with the human immunodeficiency virus (HIV), so the data is more alarming.

TB treatment withdrawal is frequent, becoming a serious problem in Pakistan, especially when this dropout occurs in patients with TB / HIV co-morbidity. Studies conducted in Pakistan showed that dropout rates were ranging from 38%⁵ to 42%.⁶ These rates are extremely high since the Ministry of Health recommends only 5% of dropout as acceptable.⁷ Discontinuation is considered as the patient who after starting treatment ceased to attend the Health Unit for more than thirty consecutive days after the due date for return.⁷ Discontinuation of treatment is considered to be one of the main obstacle and challenge in the fight

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against the disease, with the direct consequence of increasing the cost of treatment, mortality, relapse rates, and facilitating the development of resistant bacillus strains. Generally, factors associated with abandonment are related to the patient, the treatment modality employed and the Health Services.⁸

The conduct of the health team especially in TB with co-infected with HIV, is highly relevant to the success of treatment, aiming to clarify the patients about the nature of their disease, duration of treatment, the importance of regular use of drugs and the serious consequences of stopping treatment. Follow-up with psychologist, supervised doses of medications and monthly bacteriological examinations are team actions that benefit the achievement of cure of TB, enabling greater quality survival for patients with TB / HIV co-infection and avoiding death.

In October 1998, the Ministry of Health launched the National Plan to Combat Tuberculosis (PNCT), bringing among other goals the implementation of the Directly Observed Treatment Short Course (DOTS) strategy which comprises a set of measures defined and recommended by the World Health Organization was the prime focus of treatment. This strategy is based on five pillars: political commitment to TB control, availability of bacilloscopic diagnosis, regular drug supply, efficient Directly Observed Treatment, and Information System. In several countries with cure rates below 50% (China, Peru, Bangladesh) the adoption of this strategy led to increase in cure rates between 80% and 95%.⁹

This research addresses the role of various factors in the discontinuation of TB treatment in patients with TB / HIV co-infection. In HIV-infected patients, health care assistance should be more attentive and careful, as patients need to be encouraged to complete the TB treatment regimen to achieve cure, achieve longer survival, and prevent transmission to others.

Thus, this study aims to analyze through the vision of the health team of a Reference Unit, the reasons that lead TB patients with TB / HIV comorbidity to abandon TB treatment and to know what the team's conduct is in the face of this discontinuation.

Methods

It is a qualitative observational research conducted at the Civil Hospital Rehmat ward Punjab Medical University Faisalabad from 1st of January 2018 to 31st December 2018, where people with HIV and TB

/ HIV co-infection are treated.

Rehmat ward provides care from Monday to Saturday from 8:00 am to 2:00 pm and has been operating for 22 years providing multi-professional assistance, including doctors, nurses, social workers, pharmacists, physiotherapists, occupational therapists, nutritionists, and health technicians. HIV is treated in Allied Hospital Faisalabad.

The research was approved by the Ethics Committee of the hospital.

Forty-five professionals participated in the study: 06 social workers, 09 nurses, 06 doctors, 04 psychologists and 20 nursing technicians who work in the morning and afternoon shifts and serve patients with TB / HIV co-morbidity. The statements were obtained through semi-structured interviews through script of open questions.

The first contact was made with the professionals in the unit inviting them to participate in the research and scheduled interviews with those who agreed to collaborate with it. The interviews were held at the Rehmat Ward itself during their working hours. All were given the free and informed consent form with information about the research objectives and how it would be developed. To respect anonymity and safeguard identification, each interviewee chose a pseudonym, seeking to meet the ethical standards of the research.

The information was worked through the thematic analysis that allows to know a reality through the communications of individuals who are linked to it.

Results

Total of 352 patients were enrolled in the study. Male was predominant with 62% of patients comprising of it. The mean age in our study was 38.6+10 years with highest number of patients between 20 to 30 years of age i.e., 40%, followed by 30 to 60 years 30%. Majority of patients completed the treatment 72.3%, while the remaining who abandoned the treatment most of them were in first month of their treatment (43.9%).

Discussion

As a result of the analysis of the testimonies, two thematic units were constructed for discussion, patient-related factors that make it difficult to adhere to tuberculosis treatment and service-related factors that contribute to the discontinuation of tuberculosis treatment.

1. Patient-related factors that make adherence to tuberculosis treatment difficult

This unit was elaborated from the grouping of some factors related to the patients, which according to the deponents, propitiate the interruption of the treatment, either individual reasons related to the socioeconomic conditions, cultural or those related to the patient, such as drugs side effects, illicit drug use and lack of motivation.

Low socioeconomic conditions were the most frequent reasons leading to the discontinuation of TB treatment which was 60%. Many patients had very low socioeconomic status, sometimes they had no food, and said: "How am I going to take medicine if I have no money to eat?" Socioeconomic factors significantly interfere with the discontinuation of TB treatment. When low socioeconomic factors combine with low education level, the situation worsens by many folds. These factors are manifested in patients' perception of health problems and interfere with their adherence to therapeutic procedures.¹¹

TB drugs side effects appear as the second mentioned factor influencing the discontinuation of TB treatment, either due to minor reactions (nausea, vomiting, diarrhea) or the occurrence of major side effects e.g. drug induced hepatitis. It accounts for 12% of cases regarding discontinuation of treatment. Among this the number of pills (9% of the cause) and side effects of antiretrovirals, associated with the adverse effects of TB drugs facilitated discontinuation. Common side effects that led to medication discontinuation were gastritis, vomiting, diarrhea. Most TB patients are able to complete within the recommended time frame without experiencing any side effects, but when this treatment is associated with antiretroviral treatment, drug interactions and adverse reactions are greater compared to HIV negative subjects. Because of this, it is important to consider that proper adherence in both regimens is a major challenge for the patient when taken concomitantly due to the high number of tablets to be taken daily and the occurrence of side effects, particularly in the first weeks of treatment.¹²

A third important and frequent factor is the use of illicit drugs promoting treatment discontinuation. In our study, it was estimated to be 7% of the cause. Many patients were alcoholics and smokers, so they prefer to get addicted than to take their medication.

2. Service-related factors that contribute to the

discontinuation of tuberculosis treatment.

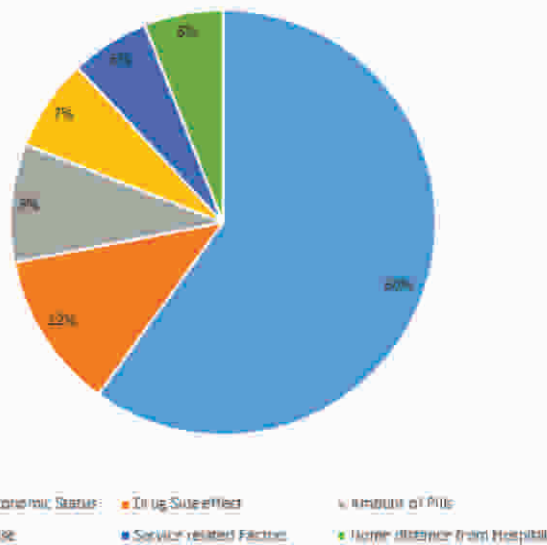
Service-related factors accounts for only 6% of the drop out from treatment. The service-related factors were: little or no information from professionals to the patient about TB treatment, little organization in the service for specific TB control, given that HIV treatment was a priority, physical structure that does not guarantee privacy, absence of teamwork and difficulties in accessing the service.

Lack of information about disease was the commonest complain by the patients and attendees. This lack of information was about the disease, possible side effects, the importance of completing the treatment regimen, even if symptoms improve and the serious consequence of stopping the treatment. Thus, adequate information to the patient and family members about the disease will greatly reduce the likelihood of discontinuation.^{6,14}

Poor organization in the management of TB / HIV cases also contributes to the discontinuation of TB treatment. Here we do not have a structured TB program. Tuberculosis is treated as opportunistic disease, therapy is more ancillary, there is no search for the absentee, when it comes to the HIV consultation, they have already discontinued treatment. Lack of resources was the biggest point raised by the staff there in this regard.

There was no mechanism no strategy to check for adherence to TB treatment. Reason for non-checking the adherence was inadequate space in the building, where supervised treatment would be checked. There are large number of co-infected patients treated at Rehmat Ward Allied Hospital Faisalabad, however there is no physical structure to support this demand, and there are not enough offices to ensure the privacy of both patient and professional, often having to be divided the space for care. In the Rehmat ward this can be minimized by using "Therapeutic Home Care program" consisting of a multi professional health team, with the purpose of providing comprehensive care, bring treatment to patients at their door step who are unable to move to the unit. This strategy can be used to minimize the problem of dropout in cases of TB / HIV coinfection. Using only self-administered treatment increases the likelihood of discontinuation compared to supervised treatment,⁸ because this treatment strategy is an important tool in the fight against TB considering that the patient cannot be solely responsible for their treatment and allows other

Factors leading to treatment Disruption



actors (family, community and health professionals) to participate actively, and it must be done flexibly respecting patients' choices.¹³

Distance was another important factor that hampers adherence. The fact that Rehmat Ward meets most of the district demand also causes many difficulties of access to those residing in the rural areas and especially those who need to move from small municipalities up to DOTS facility. This limited access ends up making it impossible to attend the monthly consultations and evaluations, coupled with this, there are also difficulties to obtain Out-of-Home Treatment for those residing in the rural areas.¹⁴ How a patient who is poor, meager resource, lives far from the place where the treatment center come to treatment by spending money and time? Result is the patients, ends up in discontinuation of treatment thus, making treatment and control difficult.¹⁶

Conclusion

The results of this study point to the need to change the practices developed in the services and patient's perspective. For services related issues changing simple attitudes such as: strengthening existing strategies, encouraging adherence new strategies, following supervised treatment, and seeking more therapeutic possibilities to reduce the unpleasant effects that are potentiated in interactions between antiretroviral and tuberculosis drugs can greatly enhance better outcome. While those related to patients are more difficult to change as they are related to individual vulnerabilities, social and economic factors which are more complex and require governmental actions and health

education through mass media for their change.

Conflict of Interest: None

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Authors Contribution

MSM: Conceptionlization of Project

UU: Data Collection

CA: Literature Search

MSM,CA: Statistical Analysis

UU: Drafting, Revision

UU: Writing of Manuscript