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RESEARCH ARTICLE

The Failed Treatment of MDR-TB in Three Generations: A Case Study of the Household in Northeastern, Thailand

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Abstract:

Introduction: In Thailand TB and MDR-TB treatment was found in all levels of the unit of health service system, but the failed treatment especially for MDRTB was found 8.2% in the lower part of northeastern Thailand. In the complex situation, only the medical care cannot eradicate MDR-TB. This study was aim to explain the failure treatment of patient with MDR-TB over 3 generations within 1household. Method: This qualitative method collected data by in-depth in the province located at northeast Thailand; 5 patients and failure treatment of MDR-TB were investigated. The data was analyzed using content analysis. Result: One grandmother, 78 years old, have had twice received treatments and still alive. The mother failed treatment and died from MDR-TB at 54 years old aggravated by noncompliance to drug treatment. The father defaulted treatment due to alcohol consumption, and the second treatment was cured but the subject died at 61 years old. The son and daughter comprised default treatment caused from the household problem of low income, drug addiction, alcohol consumption and divorce. The elder brother did not return to treatment and his symptoms worsened. However, the younger sister, 21 years old, returned to treatment for 4 months. The supportive factors of failed treatment that led patients to cease taking drugs more than 2 months and deny continuing treatment included low income, household problems and drug addiction. Recommendation: Only the medication could not cure or achieve successful treatment, but socio-economic factors such as the understanding of the patient's context was crucial equally the same as the MDR-TB drug. This factor was effecting to compliance of MDR-TB patient care and treatment.

Keywords: Failure Treatment, MDR-TB

Introduction

Multi-Drug Resistance Tuberculosis (MDRTB) is the major problem of Tuberculosis disease. Global report was found MDRTB 29,243 cases from 127 countries; it was 7% of expectation case around 440,000 cases [1]. The survey of MDRTB in the year 2005-2006 was found the rate of MDRTB infection in MDRTB new case was 1.65%, where as in the TB patient who turn to be MDRTB was 34.54% [2].

The researches about the MDR-TB were found the factors influencing to the treatment outcome; the factor of patient's health behaviors, drink alcohol during treatment, lacking of the nutrient and low body weight, socio-economic and mental status, poor, the standard of DOTS, and community participation and cooperation on DOT-PLUS [3,4,5,6]. The risk factors for treatment failure were presence of extensive drug resistant, underlying comorbidity and higher level of albumin was inversely associated with the treatment failure [7]. The study about an intervention in France, carried out by NRC staff (National Reference Centre), was found the median duration of treatment was shorter than planed (12 months), favorable outcome treatment was 70% [8]. The study in resources limited setting of 5 countries, the project was approved by the Green Light Committee (GLC) for access to quality assured second-line drugs provided at reduce price. It was found treatment successful in 70%, divided in new patient 77% and previously treated patient 69% [9]. In conclusion of the research issues on MDR-TB, the crucial factors related to the successful treatment of MDR-TB were the cooperation from various parts from in the national to local level, especially for the community cooperation and participation to care of MDR-TB patient. As in Thai's community society the various parts in the community for care of the patient is namely as social capital. In Thai's society, social capital has been the most powerful for solving problem complicatedly in the community such as people living with HIV/AIDS in the Thai's community [10].

The report of MDRTB treatment patients, 121 cases, from the Office of Disease Prevention and Control region 7th Ubon Ratchathani (ODPC 7th) between 2006-2011 was cure and complete treatment 46.2%. The problem added were many systems of data record, lack of patient compliance to treatment, and the un-readiness of the public health personnel in the community to care of MDRTB patient. These reasons were causes of treatment failure and distribution of the disease. And we found the Failure Treatment of MDR-TB in Three Generations in one household in ODPC 7th region. This situation was led to the question what the causes of the MDRTB treatment failure within one household and the distribution of the disease within the household. The objective of this study was to explain the failure treatment of MDR-TB patient in three generations within one household

Conceptual framework

This study was focusing on the phenomena of MDRTB treatment failure in the lower part of northeast Thailand. The concept of social capital, an access to health care service of the MDRTB patient, and health belief model was applied for the conceptual framework of this study

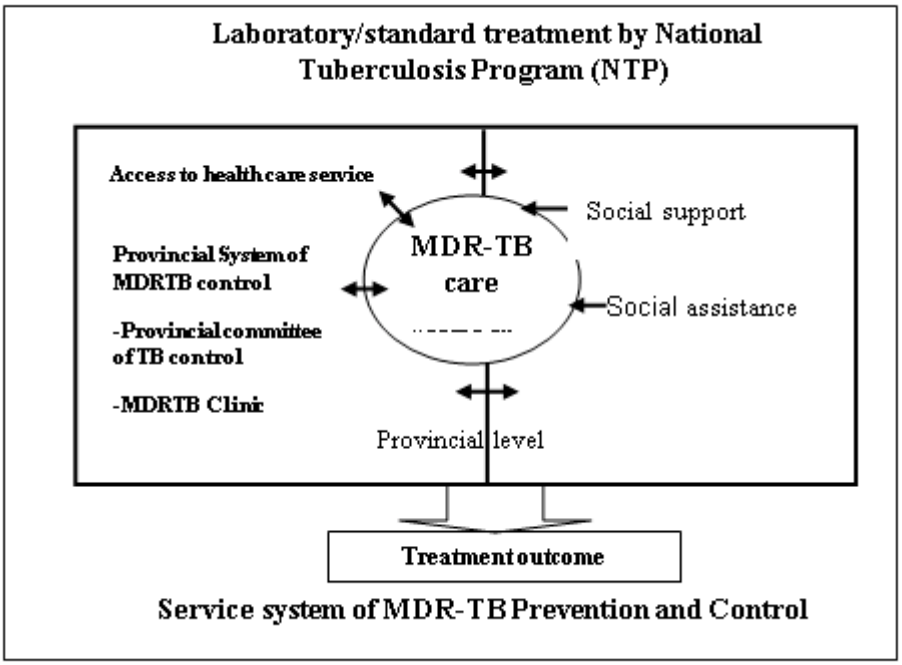

Figure1: Conceptual Framework

Methodology

This study was qualitative research. The study area was the province located in the lower part of northeast of Thailand that was found the MDRTB patient in tree generation within one household and their all were failure treatment or/and stop MDRTB drug more than 2 months. Target was one household with 5 people who diagnosis was MDRTB patient with the history of failure treatment and stop MDRTB drug more than 2 months.

The data collection tools was the semi-structure interview guide about how the patient access to treatment, self-care, perception of the risk from MDRTB disease, supportive from the public health clinic, community and neighborhood, family and the lineage about the self care and how to compliance to MDRTB drug, and the problem and obstacle from MDRTB care and treatment. The observation guides about the family relation the environment of the patient house and relationship to the neighborhood. The in-depth interview, participation and non-participation observation, and the documentary of patient history form were used for data collection method. Content analysis was used for data analysis.

Research Result

4.1 Household information:

5 people in the household were failure treatment and stop MDRTB drug more than 2 month, comprise of the grand mom, parent one daughter and one son. The house is located in Amphur Muang in the province of northeast Thailand. The parent, mother was the food seller in the school and the father was an employee, was pass away because of MDRTB treatment failure. Grand mom was cure from Tuberculosis with the history of twice time of TB treatment, due to failure of treatment one time. After the parent pass away the son and daughter was infected MDRTB and sickness with severe symptom from the disease. The son was married with Laos people after he sickness and work as the truck driver to sent the goods to another provinces. During treatment MDRTB not more than 6 months he stop taking drug due to the trouble to his work and he was a drug addicted at the same time and he got divorce with his wife. For his younger sister, she is a housewife. She was not concern to the disease until the symptoms was worse. The crucial problem of this family was the economic, non security career of employee and drug and alcohol addicted. All factors were effects to the disease and health status.

4.2 History of MDRTB disease of the patient:

Case1; grand mom, 78 years old after cured from TB treatment twice times she was moved to another house that 200 meters from that one and still alive.

Case 2; mother, 54 years old, pass away on 2005. The major cause of failure treatment of MDRTB was discouraged with the treatment. She moves to another house in order to hide herself from the public personnel and treatment. After she dies her daughter was found big amount of the pill under her bed.

Case 3; father, 61 years old, pass away on 2013. He was failure treatment and re-treatment of MDRTB twice times. This case found the problem of the delay detection of MDRTB plus with he was alcohol addicted. This was the major cause of treatment failure. However, this case was cure treatment in the twice times of treatment. At the third time of recurrent MADRTB he did not access to treatment because he was a dunker and deny to treatment and he dies finally.

Case 4; the son, 24 years old, he was treatment of MDRTB twice time. Because of his career of the truck driver and he was a drug addicted. It made him got worse the most with drug resistance. The disease was getting worse and resists more drugs that were Ofloxacine and Ethionamidethus, normally was resistance to INH and Rifampicine. The doctor was order injection drug continue for 6 months. The patient was discouraged and wants to earn the money from truck driver, so he discontinuous treatment by himself.

Case 5; the daughter, 21 years old, she was treatment twice times. The first time of treatment was taking drug for 1 month and she stop taking drug. Two year after stop treatment her symptoms was getting worse the most with cough and suffocate, then she turned to treatment MDRTB.

Causes of TB distribution was originate from the grand mom who infected Tuberculosis then distribute to her daughter who was the mother and the major cause of MDRTB distribute to all family's members. Three of 5 MDRTB patients in this household were dying. The cause of dying was stop treatment

simultaneous with they were lacking of self health care, drug and alcohol addicted, economic problem, divorces, lacking of willpower and discouraged to treatment.

4.3 Causes of treatment failure, non-adherence, and MDRTB distribution in the household

The cause of MDRTB distribution in family, non adherence to drug, and treatment failure from the study household was the problem of the family in term of economic, divorces that was led to the obstacle of access to care and treatment of MDRTB and led to physical and mental state, and daily life of the patient. The result of these factors was the patient stop taking drug and failure treatment finally as a detail in the Figure2.

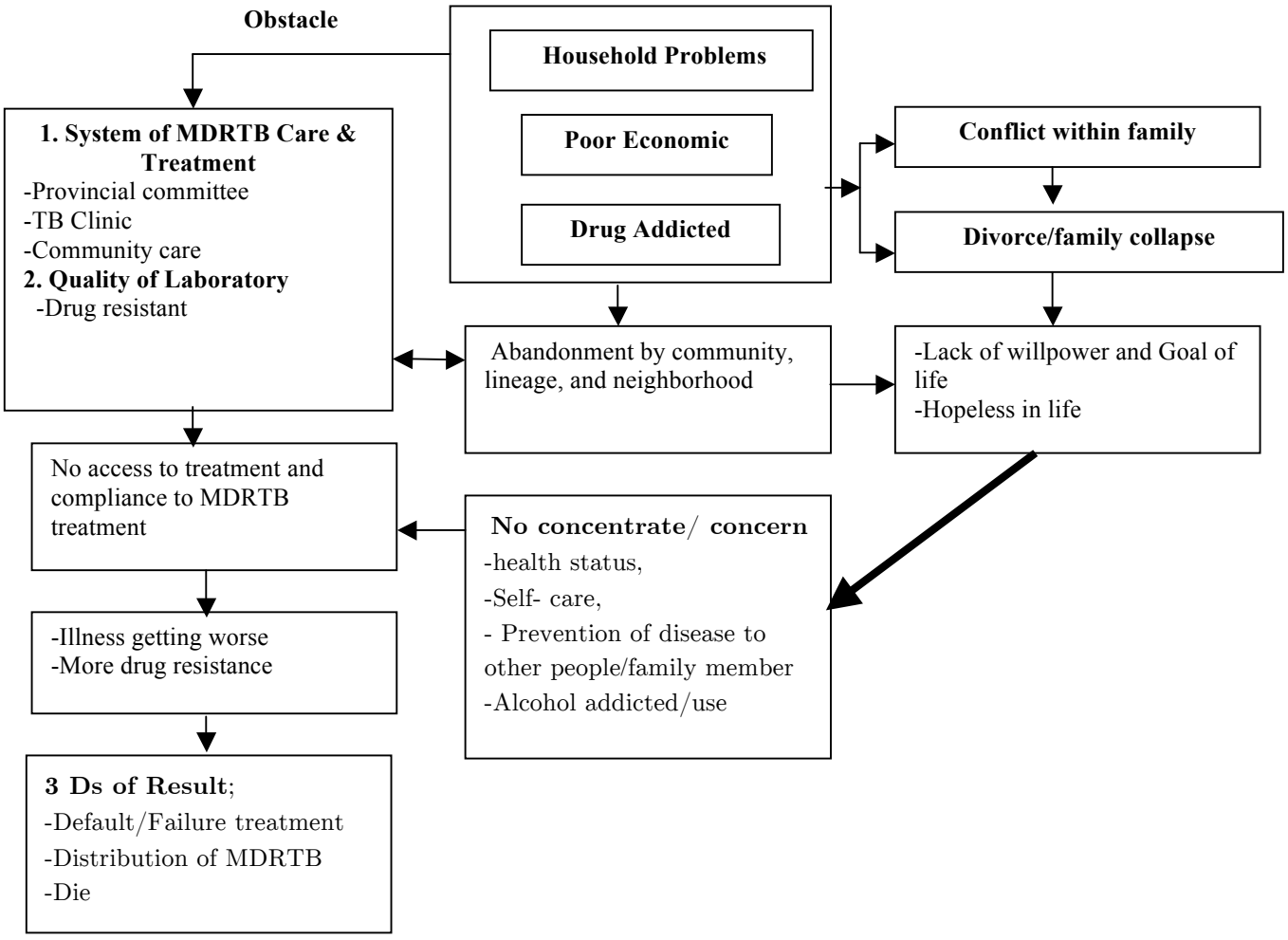

Figure2: Causes Model of default and failure treatment of MDRTB treatment in case of the patient with complexity problem

Discussion

This study was shown the crucial causes of non adherence to drug and failure treatment of MDRTB in three generations within one household were the problem's family in term of economic, drug addicted, and lacking of DOTs in the family. The free of charge for MDRTB treatment and the improvement of quality of Lab investigation system was unsuccessful for MDRTB treatment especially for the patient who has had the complex problems as in this study. The comprehensive care and social capital support to the mental state, willpower, and living with full meaning of the patient as well as the stability of family economic during on treatment of MDRTB were the crucial factors that influence to the successful outcomes treatment.

This study was found that for the patient who has had complex problems should be concern to the importance components of the problem and find out the way of hoe to solving the problem the same as the medical treatment. Beside for the medical treatment it should be strengthen to the DOTs with care giver in the MDRTB clinic, in the community, and in the family by the cooperation and participation of the community.

Recommendation

(1) It should be the model of multidisciplinary team with the community participation to care and treatment of MDRTB patient, especially for the patient with complex problem. The method of DOTs and socio-economic support was importance the most for care of MDRTB patient.

(2) It should be encourage the community to concern about the risk and the health status effecting to the people in community and support the new technique and multidisciplinary team to solving problem in the community.

(3) It should be building the local policy to setting up the multidisciplinary team by the community participation to prevention and control of MDRTB in the community.

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