

A STUDY ON IMPACT OF SOME SOCIAL EVILS AND DRINKING DURING TUBERCULOSIS AT VILLAGES OF UJJAIN (INDIA)

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ABSTRACT

Tuberculosis (TB) is a chronic infectious disease, afflicting humanity for over 35,000 years. Globally, there are more than 8 million new cases of tuberculosis each year. India accounts for nearly one third of the global TB burden. Mycobacteria cause over 3 million deaths each year, more than any other single infectious disease. Sometimes back, tuberculosis incidence had reduced considerably. The decline was attributed to the introduction of chemotherapy and probably due to many factors such as herd immunity, improved socio-economic conditions, housing and nutrition, isolation of infected individuals in sanatoria, pasteurization of milk, BCG vaccination and the introduction of effective anti-tuberculosis medicines. Of late, this disease has escalated due to impact of AIDS and increased occurrence of multi-drug resistance.

Smoking, tobacco chewing and alcohol drinking are highly prevalent habits found in Indian society and are commonly seen in all economic strata of society. They are considered as social evils and studies have shown that smokers and drinkers have higher death rates from heart diseases and various types of cancers. Moreover, they also cause economic burden on the family, especially in lower income groups. There are few studies which show that these habits are associated with tuberculosis patients, but no such study has been done in Ujjain district. Therefore, the present study was initiated to see the association between these habits in the tuberculosis afflicted population of Ujjain (India). Towards this, twenty villages were chosen for the study and the association of tuberculosis disease with smokers, tobacco chewers and alcohol drinkers was studied. The results show that more than 50% of the TB patients were habitual smokers, tobacco chewers and/or drinkers. The paper presents the results of this study and discusses the effect of this association on socio-economic conditions of the society.

Key Words : Tuberculosis, Smoking, Tobacco chewing, Alcohol drinking, Mycobacteria

INTRODUCTION

Mycobacterium tuberculosis is a lethal microbial pathogen of humans which is solely transmitted by human to human contact. cause of death from an infectious disease world wide^{2,3}. Tuberculosis (TB) may occur in any organ of the body, but is most prominent in lungs¹. TB is the major cause of illness and second largest population is infected with *Mycobacterium tuberculosis* and about 10-15% develop active TB⁴⁻⁶. The majority (95%) of all TB deaths

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occur in developing countries. Until recently, TB incidence had dropped considerably. However, the disease has resurfaced due to impact of AIDS and development of multi drug resistance⁷.

Smoking is the cause of premature death especially due to cancer, cardiovascular disease and chronic obstructive pulmonary disease, but of late, it is becoming evident that smoking is also a major risk factor for respiratory tract and other systemic infections⁸. Association of smoking with TB has been a matter of discussion since long. Several studies conducted world wide, found an association between smoking and TB⁹⁻¹⁴. An association between alcohol consumption and active TB in humans has also been suggested¹⁵⁻¹⁹.

Billions of people smoke globally and burden of tuberculosis is increasing in developing countries. In India, this habit along with tobacco chewing and alcohol intake is prevalent in all stratas of society. Besides causing ill effects on health, they also lead to economic burden on society, especially among lower income groups.

In developing countries, prevalence of smoking and TB go hand in hand. In order to control TB, it is important to understand the impact of smoking, tobacco chewing and alcohol drinking on tuberculosis. No such study has been done in Ujjain (India). Thus, the study was taken with the objective to find association between these habits and TB and to see if there is any relation between degree of tuberculosis and smoking.

MATERIAL AND METHODS

For the study, the survey was carried out in 20 villages of Ujjain (India). The patients suffering from tuberculosis were visited and their case histories were studied. Information on habits of smoking, tobacco chewing and alcohol drinking was collected from the patients of clinically confirmed pulmonary tuberculosis using a questionnaire.

RESULTS AND DISCUSSION

Forty patients of clinically confirmed tuberculosis were visited and information was collected from the twenty villages of Ujjain district. The age of the patients ranged from 23 to 95 years i.e. all were adults. All the patients belong to the lower economic groups and were either illiterate or had minimal education.

The results show that, 35% of the total TB patients were habitual smokers and interestingly they were all males. 12.5% of the patients were habitual tobacco chewers. 12.5% of the patients had both the habits i.e. smoking and tobacco chewing, 7.5% patients had the habit of smoking and alcohol drinking, 2.5% patients were both tobacco chewers and alcohol drinkers, 2.5% had all the three habits i.e. smoking, tobacco chewing and drinking alcohol, while 27.5% of the patients had none of these habits. The results are shown in **Table 1**. The results indicate that, there is a strong association of smoking with TB as 57.5% of the TB patients were smokers. In our study, it does not appear that there is a strong association between tobacco chewing and alcohol drinking with TB.

The study also shows that 80% of the TB patients were males and 20% were females. This indicates that tuberculosis is less prevalent in females as compared to males. These results are similar to the results of Kolappan and Gopi¹², who have also reported that in India prevalence of tuberculosis in adult men is 2-4 times higher than in women. The study also reveals that none of the women had smoking or drinking habit, only 2.5% women had a habit of tobacco chewing while 17.5% women had none of the above habits. From these results, it is tempting to suggest that fewer TB cases in women could be because they are not habitual smokers.

A very interesting fact that has emerged from this study is that there is a corelationship between degree of tuberculosis and smoking

Table 1 : Association of Smoking, Tobacco chewing and Alcohol drinking with TB.

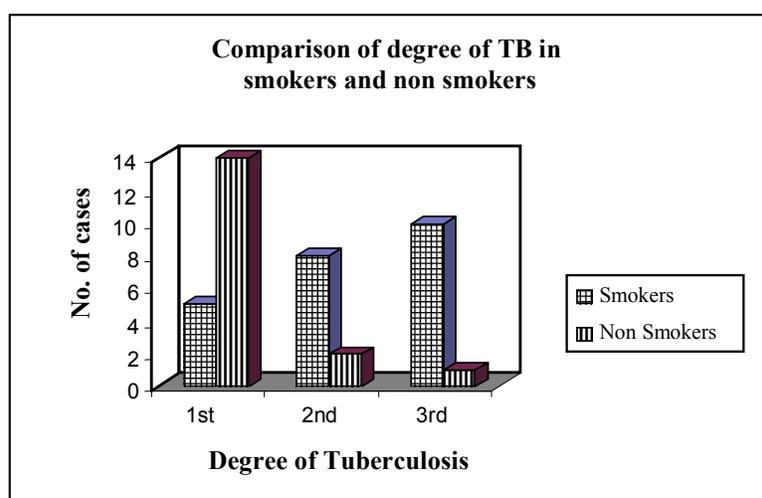
S.No.	Habit	Percentage of cases suffering from TB
1.	Smoking	35%
2.	Tobacco chewing	12.5%
3.	Alcohol drinking	0
4.	Smoking + Tobacco chewing	12.5%
5.	Smoking + Alcohol drinking	7.5%
6.	Tobacco chewing + Alcohol drinking	2.5%
7.	Smoking + Tobacco chewing + Alcohol drinking	2.5%
8.	None of the above habits	27.5%

habit. According to RNTCP Manual²⁰, degree of tuberculosis is related to number of acid-fast bacilli found in the patients sputum sample and is an indication of degree of infectivity of patients and sensitivity of tuberculosis disease. The study shows that, first degree TB was present in 12.5% smokers and 35% non smokers, second degree TB was present in 20% smokers and 5% non smokers and third degree TB was present in 25% smokers and 2.5% non smokers. These results are shown in

Fig.1. Thus, it appears that majority of the smokers had third degree tuberculosis while majority of non smokers had first degree TB. Hence, there is a direct relationship between smoking habit and severity of the disease i.e. smoking appears to increase severity of disease.

CONCLUSION

All the patients in the study were from lower economic group and were uneducated

**Fig. 1 :** Comparison of degree of tuberculosis in smokers and non-smokers

or had minimal education. Most of them were habitual smokers, tobacco chewers or alcohol drinkers. It appears that smoking habit not only increases the severity of disease but also puts economic burden on the family. Therefore, it is important that there is need of education and awareness, so that the patients and public in general should give up smoking which may help in reducing the severity and spread of disease. Moreover, if the family saves the money, they can probably use it for better treatment and healthy diet.

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