



ORIGINAL RESEARCH PAPER

Psychiatry

DEPRESSION IN PATIENTS WITH PULMONARY TUBERCULOSIS: A HOSPITAL BASED STUDY

KEY WORDS: TB, Depression, co-morbidity, BDI

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ABSTRACT

Background Tuberculosis is a chronic infectious disease caused by Mycobacterium tuberculosis. Depression has been known to be widely associated with chronic systemic conditions. This common psychiatric co- morbidity is often neglected in medical set up which increases the healthcare burden and adversely affects the treatment outcome of patients suffering from tuberculosis. **Material and methods** 100 consecutive patients suffering from pulmonary TB admitted in Chest and Tuberculosis Department, ANMCH, Gaya giving written informed consent were assessed using a form for sociodemographic details and for depression using Beck's Depression Inventory (BDI). Statistical evaluation was done using Statistical package for Social Sciences (SPSS) software and results analyzed and tabulated. **Results** Depression was found in 41% of the patients suffering from pulmonary tuberculosis. In terms of severity, moderate level of depression was reported among the patients in highest fraction i.e 57%. **Conclusion** The relation between tuberculosis and Depression is bidirectional .The chronicity of TB is likely to be associated with psychological problems like depression which adversely affect the prognosis of TB in the affected patients.

INTRODUCTION

Tuberculosis (TB) is a leading cause of morbidity and mortality throughout the world.. Annual risk of TB infection in northern part of India is 1.9%. India produces maximum new cases of TB each year than any other country in the world and accounts for one-fourth of global TB burden. Based upon the chronicity of the disease and stigma associated with it, psychological problems like depression are bound to occur with it.¹

The lifetime prevalence of mood disorder in patients with chronic disease is 8.9% to 12.9%, with a 6-month prevalence of 5.8% to 9.4%.²

The prevalence of tuberculosis is more common in India because of poor sanitation and hygiene, overcrowding, low education level, malnutrition. It can result in unemployment, prolonged hospitalization resulting in abstinence from job, isolation, perception of being infected, significant weight loss, decreased libido, hopelessness, resulting in decreased social interaction.³

Bhatia *et al* studied psychiatric problems in tuberculosis patients, reported that 78% of patients had co-morbid psychiatric problems.⁴ Purohit *et al.* in his study of hospitalized TB patients reported a prevalence of depression to be 54%. Depression was found to be related with the severity and duration of tuberculosis.⁵ A study from Himachal Pradesh, India observed 49% patients with tuberculosis were found to be suffering from depression.⁶ In a study from Nigeria 45% patients with tuberculosis were suffering from depression, factors related to which were elderly age , extensive disease, unmarried status and longer duration of illness.⁷ A study from Bangladesh reported 40 % prevalence of depression in patients suffering from tuberculosis.⁸

Depression as a co- morbidity would affect the treatment outcome of patients with tuberculosis. So a comprehensive assessment of depression is essential to prevent morbidity and mortality associated with this chronic illness which is the aim of the present study.

MATERIAL AND METHODS

The study was done Department of Chest & TB, ANMCH, Gaya and approved by the ethical committee of the institution. 100 consecutive patients suffering Pulmonary TB and admitted for treatment were assessed after taking their written informed

consent. Sociodemographic details were assessed using a proforma along with possible sources of depression and depression evaluated using the BDI.

Inclusion criteria

- Giving written informed consent
- Inpatient
- Age 18- 60 years

Exclusion criteria

- Not giving written informed consent
- Suffering from other medical co- morbidities
- Age >60 years
- Extremely ill to be assessed by interview

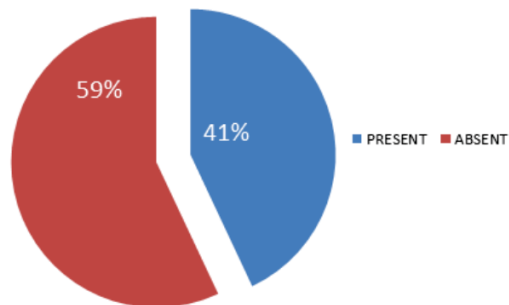
The Beck's Depression Inventory (BDI) is a well validated scale for measurement of depression. Being subjective in nature it has the advantage of easy and efficient way to assess depression and takes 10 minutes for application It is composed of 21 questions with each item rated on a likert score of 0-3. Maximum score is 63. Clinically significant level of depression was defined by score of BDI: 14-20- mild depression, 21-29- moderate depression and >29- severe depression.⁹ Statistical analysis was done using SPSS software.

RESULTS

The frequency and percentages of various socio-demographic variables were as shown in table 1.

SOCIODEMOGRAPHIC VARIABLES	FREQUENCY (N)
1. AGE GROUP	
18-40 YEARS	68
41-60 YEARS	32
2. SEX	
MALE	79
FEMALE	21
3. EMPLOYMENT STATUS	
EMPLOYED	58
UNEMPLOYED	42
4. RESIDENCE	
URBAN	34
RURAL	66
5. MARITAL STATUS	
SINGLE	24
MARRIED	65

WIDOWED	10
DIVORCED	1
6. TYPE OF FAMILY	
NUCLEAR	44
JOINT	56



Pie Chart Showing Patients Suffering From Depression (graph 1)

41% of patients suffering from tuberculosis reported as having depression. (Graph 1) The severity of depression using BDI was found to be as shown in the graph below (Table 2). Maximum patients reported moderate level of depression (53%).

Severity Of Depression Among Patients With Mdr Tb (Table 2)

Severity of depression among patients with MDR TB	Frequency (n)	Percentage (%)
Mild	14	35
Moderate	22	53
Severe	5	12
Total	41	100

DISCUSSION

Depression was reported among 41% patients suffering from pulmonary tuberculosis. Of these, 53% reported moderate levels of depression while 32% reported mild depression, 9% reported severe depression and 6% minimal depression. Our findings are lower than that by Purohit et al while comparable to findings from Nigeria and another study from northern India.

The above findings suggest high levels of co- morbid depression in patients with TB. Factors associated with depression among the patients suffering from TB in the cross sectional interview were stigma of the disease, long duration of treatment and financial problems and job loss. This shows that in a developing economy like India , even with awareness regarding the disease and constant efforts of the health system ,availability of free treatment ,the issue of stigma about the disease, fear of losing job to the illness and long duration of illness with multiple side effects of drugs; early identification of psychological problems like depression which itself is a health burden may have significant effect on the chronology and outcome of the disease.

CONCLUSION

We have come a long way in the field of diagnosis and management of TB. However, an attempt to evaluate the co-morbidities associated with it in the earliest stages would help in ensuring treatment adherence, better prognosis and early recovery of patients. This would help in reducing healthcare costs as well as early resumption of patient to his workplace thereby reducing stigma associated with the disease.

Limitations

- Sample size
- Cross sectional nature of study

Conflict Of Interest: None

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