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Clinical profile of patients with Tuberculosis: A descriptive study

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Abstract
Introduction: Tuberculosis is an ancient disease which continues to be a major health problem in most developing countries. In developed countries, it is gaining importance with the emergence of HIV pandemic
Methodology: The data was collected from the 100 patients by the detailed clinical history, clinical examination of the patients and relevant investigation in a specially designed proforma
Results: Out of 100 cases of PTB, 44 patients were positive for sputum for AFB and 53 cases negative. 3 patients were positive for MDR TB
Conclusion: Mean duration of the tuberculosis in our study 13.42 months since first detected to have TB.

Keywords: tuberculosis, HIV, clinical profile

1. Introduction

Tuberculosis (TB), which is one of the oldest diseases known to affect humans and is likely to have existed in pre hominids, is a major cause of death worldwide. This disease is caused by bacteria of the *Mycobacterium tuberculosis* complex and usually affects the lungs, although other organs are involved in up to one-third of cases. If properly treated, TB caused by drug-susceptible strains is curable in virtually all cases. If untreated, the disease may be fatal within 5 years in 50–65% of cases [1]. Transmission usually takes place through the airborne spread of droplet nuclei produced by patients with infectious pulmonary TB [2].

Tuberculosis is an ancient disease which continues to be a major health problem in most developing countries. In developed countries, it is gaining importance with the emergence of HIV pandemic. Pulmonary tuberculosis (TB) is caused by the bacteria *Mycobacterium tuberculosis*. According to the defenses of the host and virulence of the organism tuberculosis can occur in the lungs or extra pulmonary organs. Various forms of sequelae and complications may result from primary and post-primary pulmonary tuberculosis in both treated and untreated patients [3]. *Mycobacterium tuberculosis* can affect almost every organ in the body. Major manifestations of the disease usually occur in the lung. Pulmonary tuberculosis can manifest for the first time as a complication. A variety of complications can occur in pulmonary tuberculosis [4].

In 2005, of the 8.8 million new cases of tuberculosis, 1.9 million cases occurred in India. Estimates of the urban and rural distribution of the annual risk of tuberculosis infection suggest that, on average, smear-positive tuberculosis incidence in India is 69.2% higher in urban compared with rural areas. Crowded living conditions in urban districts are one possible factor. However, the increased prevalence of diabetes in urban areas may also play a role.

2. Methodology

The data was collected from the 100 patients by the detailed clinical history, clinical examination of the patients and relevant investigation in a specially designed proforma.

a) Inclusion Criteria

All cases of pulmonary tuberculosis, irrespective of duration and type of treatment received will be included in the study.

b) Exclusion Criteria

- Primary lung pathologies
- All primary cardiac diseases
- Occupational lung diseases
- Malignant lung diseases
- Less than 18yrs

The data was entered in Microsoft excel and analyzed using SPSS

3. Results

In the present study 80 patients were male and 20 were female.

Table 1: Gender Distribution

	Sex wise distribution of study subjects	
Sex	**Frequency**	**Percent**
Male	80	80.0
Female	20	20.0
Total	100	100.0

The study group consists of varied duration of tuberculosis from less than 1 month to 5 years duration i.e. months since TB was first diagnosed.

Table 2: Duration of TB Distribution of the patients based on duration of TB (months since TB was first diagnosed)

Duration	Frequency	Percent
< 6 months	44	44.0
7 - 12 months	28	28.0
13 - 36 months	22	22.0
37 - 60 months	6	6.0
Total	100	100.0
Mean ± SD	13.42 ± 13.86	

Majority of the patients were taking Cat-1 ATT on DOTS. 3 cases of MDR tuberculosis had been encountered.

Table 3: Treatment

	Distribution of the patients based on type of treatment	
Treatment	**Frequency**	**Percent**
Cat 1	71	71.0
Cat 2	24	24.0
MDRT	3	3.0
Conventional	2	2.0
Total	100	100.0

In this study group 22 patients were diabetic and 11 patients were suffering from retro viral infection.

Table 4: Co Morbidities Distribution of the patients based on presence of co-morbidities

Comorbidity	Frequency	Percent
DM2	17	17.0
HTN	3	3.0
HTN,DM2	5	5.0
HIV	11	11.0
Nil	64	64.0
Total	100	100.0

In the study group 54 patients were on treatment and 45 have declared cured.

Table 5: TB status

	Distribution of the patients based on present TB status	
Status	**Frequency**	**Percent**
Cured	45	45.0
Defaulter	1	1.0
On treatment	54	54.0
Total	100	100.0

Out of 100 cases of PTB, 44 patients were positive for sputum for AFB and 53 cases negative. 3 patients were positive for MDR TB.

Table 6: Sputum positivity Profile

Sputum for AFB	Number of patients	Percentage (%)
Positive	44	44
Negative	53	53
MDR TB Positive	3	3

All patients had cough with sputum production. 15 patients had insomnia of which 11 patients had bilateral pitting pedal edema suggesting 3 patients may be in impending Cor pulmonale.

Table 7: Symptoms

Symptoms	Number of cases	Percentage (%)
Breathlessness	25	25
Cough with Expectoration	100	100
Pedal edema	11	11
Distension of abdomen	6	6
Hemoptysis	20	20
Fever	70	70
Loss of appetite	50	50
Insomnia	15	15

4. Discussion

In our study among 100 cases, 80 were males and 20 females. Out of 11 cases of cor pulmonale 10 were males and one female. Various statistical studies have shown that cor pulmonale is more common in males than females. A study done by R. Vishwanathan showed cor pulmonale was more common in males compared to females.[5] In study done by J.C. Banerjee out of 75 cases, 60 were males and 15 were But cor pulmonale secondary to PTB has no gender difference [6].

In the sputum positivity profile, present study had 44 cases with sputum positive for AFB, 53 cases were negative and 3 cases were positive for MDR TB. In case of Eldin H Ahmed *et al.* study on PHT in PTB no case sputum positive at the time study, but all were sputum positive when diagnosed initially [7].

According to Padmavathi, Stuart and Kamath series breathlessness, cough, abdominal distension and peripheral edema were the chief presenting complaints.[8] Whereas K.Vishwanathan study showed cough and edema were the predominant symptoms [5]. In our study, predominant symptoms were cough with expectoration and peripheral edema. The present study shows 11% of the patients with features right heart failure signs like pedal edema, raised JVP and tender hepatomegaly as compared to Abhishek *et al.* study [9].

In our study 71 patients were on cat 1 ATT, 24 were on cat2 ATT, 2 patients were on conventional AKT-4 therapy and 3 patients were on MDR treatment.

Mean duration of the tuberculosis therapy in our study is 13.42 months. Incidently all patients who are on conventional therapy and MDR therapy had shown features of cor pulmonale.

In our study out of 100 cases 22 cases had diabetes mellitus, 8 cases had hypertension and 11 patients had retro viral infection on ART. Of which one case each of diabetes and HIV had shown features of cor pulmonale.

In the present study out of 11 cases, 10 cases had fibrocavitory lesion in the chest x ray and also fibrosis involving more than 3 zones. These findings are consistent with observaion made by S C Kapoor [10]. Out of 100 cases 16% of the patients had cardiomegaly.

5. Conclusion

- Out of 100 cases, 44 patients had sputum positive, 53 had negative and 3 patients were suffering from MDR TB.
- With respect to the presenting complaints breathlessness, cough and edema of the feet were the most common symptoms in cor pulmonale

6. References

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