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A Retrospective Record Based Study of TB Patients Attending Handignur PHC of District Belgaum

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Abstract

Background: Tuberculosis remains a major cause of morbidity & mortality in many countries & a significant public health problem worldwide.TB kills more adults in India than any other infectious diseases. Controlling it in India is a tremendous challenge & the burden is still staggering. **Aims & Objectives:** To study the status of RNTCP at Handignur PHC- Belgaum District. **Materials and Methods:** Present study is a retrospective study. The data was collected from the records maintained at PHC Handignur from 2004 to 2009 (6 years) and analysed.The results were compared with performance of RNTCP at National level figures. **Results:** PHC Handignur covers a population of 25,606 & prevalance of TB in this PHC during last 6 yrs has ranged from 2.6% to 7.7% average being 5.5% .Out of total 166 TB patients 103 were males & 63 females(sex ratio of 1.6:1). Amongst the total OPD patients 3.3% has been symptomatic cases who were subjected to sputum examination, amongst them the prevalance of sputum positive cases has been 2.6%. 2/3rd of the cases i.e. 65.7% belonged to category-I,17.4% category- 2 & 16.9% category- 3. Overall compliance for treatment has been 90.3%.The case fatality amongst these patients was 8.4%.Although the mortality was more in males (11.6%) than in females (4.7%) it was not statistically significant with Z score 1.51 & p>0.05. (95% CI for difference in mortality rate is -3.9% to 15.9%). HIV screening was started from 2008, out of 57 cases 5 were HIV-TB coinfected 7 deaths were reported in these 2 years. Out of which 3 were HIV infected . This difference in mortality between HIV & non HIV TB cases was statistically significant with Fischer exact P=0.011. **Conclusion:** The prevalance of TB was more in males than females . In spite of compliance being as high as 90% the mortality has been high. Reasons for mortality need to be studied by doing prospective studies.

Keywords: RNTCP; HIV-TB Co-infection; TB mortality.

Introduction

Tuberculosis remains a major cause of morbidity & mortality in many countries & a significant public health problem worldwide.[1] TB kills more adults in India than any other infectious diseases. Controlling it in India is a tremendous challenge & the burden is still staggering.[2]

RNTCP, based on DOTS strategy was implemented in the country since 1993 & on March 24, 2006 it was completely introduced nationwide in all states & districts of India. [3]The therapeutic regimens given under direct observation as recommended by WHO have been shown to be highly effective for both preventing and treating TB but poor adherence

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to anti-tuberculosis medication is a major barrier to its control.[4]

Materials and Methods

Under Public Private Partnership Jawaharlal Nehru Medical College, Belgaum entered into an agreement with Government of Karnataka in the year 2004 and adopted 3 Primary Health Centers of Belgaum District namely Kenya,Vantmuri and Handignur. The present retrospective record based study was carried out at PHC Handignur.

Records of the patients who were diagnosed either by clinical examination or by sputum examination in Handignur PHC or elsewhere and who were registered at Handignur PHC under RNTCP from the year 2004 to 2009 were analyzed.

Statistics: The data collected was computerized and developed on Microsoft office excel 2007 software on regular basis. Results were analyzed by rates and ratio. Statistical tests used were Fischer exact test and Z score.

Results

A total of 166 TB patients were registered during last 6 years from 2004 to 2009 at Handignur PHC, which covered a population of 25,606. Majority were male patients i.e. 103 (62.0%) & 63 (38.0%) (Table 2) were female (1.6: 1). Among the patients who visited the OPD, 3.3% of them had chest symptoms, out of which 2.6% turned out to be sputum positive. Two third of the patients i.e. 65.7% belonged to Category I, 17.4% to Category II and 16.9% to Category III (Table 4).

Success rate for treatment has been 90.3% while case fatality 8.4%, in which mortality was more among males (11.6%) when compared to females (4.7%), which was not statistically significant. (Z score 1.51 & P>0.05).

HIV screening for all the TB patients was started from 2008. Out of 57 TB cases totally screened in 2 years, 5 were HIV- TB co-infected (Table 5). 7(12.2%) deaths were reported in these 2 years, out of which 3 (5.3%) were HIV infected which was statistically significant with Fischer exact p=0.011.

Table 1: Year wise Distribution of Number of Patients Screened for AFB & Case Detection Rate

Year	Number of patients screened	Number of sputum positive category1 cases		Percentage of sputum positive cases detected
		Target	Detected	
2004	175	12	12	100%
2005	169	12	12	100%
2006	180	12	12	100%
2007	144	12	12	100%
2008	154	12	12	100%
2009	181	14	14	100%

Table 2: Year wise Distribution of Number of Patients according to Sex

Table 3: Age wise Distributions of Tuberculosis Patients.

Table 4: Category wise Distributions of Tuberculos is Patients

Year	HIV-ve Cat-I	HIV +ve Cat-II	Cat-III
2004 Total 36 (100%)	28 (96.5%)	1 (3.5%)	
Total 29 (100%)			
2009	25 (89.2%)	3 (10.8%)	
Total 28 (100%)			
2005 Total 28 (100%)			
Positive	17 (47.2%)	8 (22.2%)	11 (30.6%)
Negative	10 (58.8%)	5 (62.5%)	0 (0.0%)
2006 Total 25 (100%)	7 (41.2%)	3 (37.5%)	11(100.0%)
Positive	19 (67.8%)	3 (10.7%)	6 (21.5%)
Negative	13 (68.4%)	3 (100.0%)	0 (0.0%)
2007 Total 20 (100%)	6 (31.6%)	0 (0.0%)	6 (100.0%)
Positive	18 (72.0%)	5 (20.0%)	3 (8.0%)
Negative	12 (66.6%)	2 (40.0%)	0 (0.0%)
2008 Total 29 (100%)	6 (33.4%)	3 (60.0%)	2 (100.0%)
Positive	16 (80.0%)	2 (10.0%)	2 (10.0%)
Negative	13 (81.3%)	1 (50.0%)	0 (0.0%)
2009 Total 20 (100%)	3 (18.7%)	1 (50.0%)	2 (100.0%)
Positive	20 (68.9%)	2 (24.5%)	2 (6.8%)
Negative	9 (45.0%)	5 (71.4%)	0 (0.0%)
	11(55.0%)	2 (28.6%)	2 (100.0%)
2009 Total 28 (100%)	19 (67.9%)	4 (14.3%)	5 (17.9%)
Positive	13 (68.4%)	3 (75.0%)	0 (0.0%)
Negative	6 (31.6%)	1 (25.0%)	5 (100.0%)

Discussion

Male preponderance found in this study was similar to other studies, the probable reason being greater exposure.[5,6]

In the present study maximum patients were in Category – 1 which was similar to the observation made by Bhagyalaxmi et *al*.[7] where in 61.83% of them were in Category-1.

The percentage of sputum positive among chest symptomatic patients was found to be 11.5%, which was more in a study conducted by Bison Sen*et al*.[8] in West Bengal in comparison with the present study, which was 2.6%.

Male patients outnumbered females in all the unfavorable outcomes like death, failure and default as was observed in a study conducted by Mukerji et *al*.[9]

As TB is one of the most common and dreadful opportunistic infection in HIV infection,the mortality of HIV infected patients with TB was comparatively higher than that of HIV-TB negative patients.[10,11]

Conclusion

Though the case detection and cure rate (target 2015) of Handignur PHC are similar to that of Belgaum district, India and World the mortality has been observed to be high. Reasons for mortality need to be studied by doing prospective studies.

Conflicts of Interest

Nil

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