Evaluation of Treatment Response of Freshly Diagnosed Pulmonary TB in Seropositive Patients Under Standard ATT

KEYWORDS

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ABSTRACT TB-HIV has become a lethal combination.Standard ATT regimens are effective in HIV TB; also Quality of Life and Life span increase in HIV positives when treated with standard ATT.We studied 472 non HIV and 50 HIV positive case having diagnosed pulmonary Tuberculosis and compared the outcome data.

Introduction

Mankind was getting good control over TB during later part of 20th century , when there was emergence of HIV .Since then TB cases are again on the rise and TB-HIV has become a lethal combination. HIV-infected are at greatly increased risk of TB. Without HIV, the lifetime risk of developing TB is about 10%, compared with at least 60% in HIV infected people. The HIV epidemic could rapidly increase the incidence of TB.(1,2,3,4)

Pratima Gupta et al reported rising trend of HIV seroprevalence in Pulmonary TB patients from 1.19% in 1999 to 4.19% in 2005(5).

In south India an increase in HIV prevalence rate from 0.8% in 1991 to 3.4% in 1993 was noted(6).

As previous literature suggests standard ATT regimens are effective in HIV TB; also Quality of Life and Life span increase in HIV positives when treated with standard ATT. Case fatality is reported to be high when the person is treated with 12 month regimens that do not contain Rifampicin as compared to Short course chemotherapy. Relapse rate in HIV positive similar to HIV negative (3-5%) (7,8).

Aims & Objectives

1. To find out sputum positivity rate in HIV infected TB patients .
2. To find out Cure rate as well as Treatment completion rate in HIV TB patients .
3. To study the Mortality rate & Default rate under standard ATT.

Material & Methods

The present study was undertaken at a tertiary care center in Pune over a 20 months period.

50 adult HIV positive cases which were freshly diagnosed to have Pulmonary TB were selected for the study.

Pulmonary TB was diagnosed by using standard guidelines.

HIV was tested by the ICTC. We did not take CD4 count data for this study.

All retreatment & extra pulmonary TB cases were excluded from the study.

All cases included in study were given standard short course chemotherapy.

Cases under study were broadly divided into new sputum positive (NSP) cases & new sputum negative cases & treatment outcome was as per standard guidelines.

Cases which were transferred out were omitted from the study.

At the end of study the data of 472 adult non HIV patients treated under same setting over the same period of time was collected & again divided into NSP &NSN cases. Treatment outcome was also derived according to standard guidelines .

Statistical analysis was done by using Fisher's exact test, & p value was calculated . P value <0.05 was considered to be significant.

TableI : Comparison of HIV & non HIV cases for sputum positivity
Suggestive of high number of sputum negative cases in HIV patients.

	Non HIV		HIV	
New Sputum Positive cases	287	61%	15	30%
New sputum negative cases	185	39%	35	70%
Total	472		50	

Table II : Age and gender distribution of study subjects

Age (yrs)		20-30	31-40	41-50	51-60	Total
New Sputum Positive cases	Male	2	4	2	2	10
	Female	4	1	0	0	5
New sputum negative cases	Male	7	11	3	1	22
	Female	7	4	2	0	13
Total		20	20	7	3	50

Table III : Combination treatment outcome of NSP & NSN cases.

Suggestive of low rate of treatment success & high default rate in patients with HIV & TB which is statically significant (p < 0.05) as well as it suggests equal failure rate.

	Non HIV		HIV		P Value
Cured /Treatment Completed	411	87.08%	34	68%	0.0009
Died	25	5.30%	8	16%	
Failure	13	2.75%	2	4%	
Default	23	4.87%	6	12%	0.0485
Total	472		50		

Conclusion

In HIV cases sputum positivity is low in pulmonary TB. The cure rate in this study is still lower than the recommended 85% target. Also the overall treatment success is low. Mortality rate & default rate in TB/ HIV positive patients was higher than in HIV negative patients. As treatment Failure rate is almost equal, regimens can be considered to be equipotent, but as the Default rate is concerned the option of strengthening the DOTS so as to ensure adherence to TB treatment may be considered.

Large multicenter study with wide data is needed to support above conclusion.

REFERENCE 1. WHO TB/HIV a clinical manual 2nd edition 2004 | 2. WHO Tomans tuberculosis 2nd edition | 3. Crofton j, Horne n, f. Clinical tuberculosis . 2nd edition . London, Macmillan press limited ,1999. | 4. Schlossberg d, 5th ed : tuberculosis & non tuberculosis mycobacterial infections.5th edition . Philadelphia, WB saunders, 2007 | 5. Pratima Gupta,Jagdish Rawat, Girish Sindhawani, Ramjee Prasad & Manju Talekar hiv sero-prevalence & tuberculosis in Uttaranchal [inaian j tuberc 2006;53:96-100] | 6. Solomon s, Anuradha s. Rajasekaran s. Trend of HIV infection in patients with pulmonary tuberculosis in south India. Tuberc & lung dis 1995;76:17 | 7. Tuberculosis ,Sharma, Mohan. | 8. Textbook of pulmonary and extra pulmonary tuberculosis Satyashri S |