



## Correlation Between Sputum Smear AFB Status with CD4 Count Level in Patients of Tb- HIV Co Infection

### KEYWORDS

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### INTRODUCTION

Individuals who are infected with Mycobacterium tuberculosis have an approximately 10% lifetime risk of developing active tuberculosis, compared with 60% or more in persons infected with HIV and TB

**At low CD4 count due to low immunity classical clinical features of TB and sputum positivity lacking.**

### METHODS

Study of 50 patients of HIV-TB was conducted from Sept. 2013- Aug-2015

### AIMS :

Pattern of change in sputum status with respect to CD4 count and CXR in HIV-TB patients

### INCLUSION CRITERIA:-

**All patients of Pulmonary TB with HIV-Co infection**

### EXCLUSION CRITERIA

Patients < 14 years.

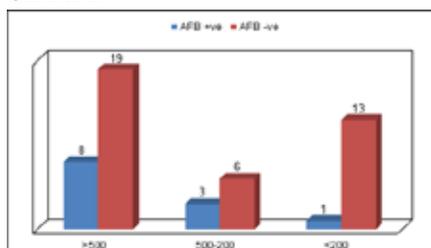
Extrapulmonary tuberculosis patients

### OBSERVATION

**TABLE-1**  
**SPUTUM SMEAR POSITIVITY. IT'S GRADING & NUMBER OF PATIENT**

Sputum	Grading				No. of AFB +ve Patient	Percentage
	SC+	1+	2+	3+		
Morning	0	7	2	2	11	22%
Spot	2	5	2	0	9	18%
Induced	1	5	4	2	12	24%

### GRAPH-1



### RESULTS

**AFB smear positivity to negativity with CD4 count 0-200, 200-500, >500 is 1:13, 1:2, 1:2.3 respectively.**

Mean CD4 counts was  $364 \pm 188$ , in patients with sputum positive TB was  $449 \pm 163$  cells/ $\mu$ l and in sputum negative TB was  $336 \pm 215$  cells/ $\mu$ l. Maximum no of 8(16%) of sputum AFB positivity present on CD4 count >500.

Induced sputum sample having maximum no. of AFB positivity 12(24%). Followed by Morning. In this study, at CD4 count > 500 maximum no. of AFB positivity were seen in that is 28(56%) sample i.e. 11(22%). Least number i.e. 9(18%) found on spot.

### SUMMARY / DISCUSSION

CD4 count correlated well for making a diagnosis, assessing prognosis, initiation of ART. Sputum negative PTB more common in CD4 count <200.

Sputum microscopy does not play major role specially at lower CD4 count

### CONCLUSIONS

My study showed that when CD4 counts were less than 200 cells/ $\mu$ l, sputum negative pulmonary TB and disseminated TB were more common.

So, a high level of clinical suspicion, and newer diagnostic modalities is required in diagnosis of TB with HIV infected patients especially when they are in the later stages of disease which is indicated by CD4 counts <200 cells/ $\mu$ l.