

Study Of Sociodemographic & Clinical Features Of Tuberculosis Cases In Hiv Patients

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ABSTRACT: Background: Infection with HIV is the most potent risk factor for progression to active tuberculosis. Mycobacterium tuberculosis only have an approximately 10% lifetime risk of developing TB compared with 60% or more in persons infected with HIV and TB. Methodology: 100 HIV infected patients having symptoms of Tuberculosis were taken up for the study for a period of 18 months, meeting the criteria for the present study. Diagnosis of tuberculosis was based on clinical evaluation, sputum smear. Results: 100 HIV patients studied for period of 18 months. Majority of patients were in the age group of 30-41 years. 64% were males and 36% females. Labourers are commonly affected. Common presenting symptoms were fever(74%) cough (72%) and weight loss(62%). Associated clinical findings were pallor(63%), (12%) and oral thrush(14%). Pulmonary TB (69%) is the most common form. Conclusion: Majority of patients were in the age group of 30-41 years, 64% were males 36% females. Most common occupation affected was labourers. Fever (74%), cough (72%) and weight loss (62%), pallor (63%), lymphadenopathy (12%) and oral thrush (14%). Most common form of tuberculosis was pulmonary TB (69%). Among extra pulmonary tuberculosis pleural effusion (8%) was the most common presentation. [Siddaraya H NJIRM 2016; 7(4): 28-32]

Key Words: HIV patients, pulmonary TB, lymphadenopathy, Pleural effusion

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Introduction: HIV infection is a major threat in the global resurgence and in the control of tuberculosis in developing countries. It is estimated that world wide nearly two billion persons are infected with mycobacterium tuberculosis, sixteen millions are HIV infected and five to six million are dually infected. TB is the leading cause of death among adults. Normally 10% of those infected with TB bacilli will get TB disease in their life time, however coinfection with HIV increases this life time risk from 10% to 60%. 8% of new cases of TB are due to HIV and 12% of death of TB are due to HIV. Parallel epidemic of TB lead to further spread of TB among general population. In contrast to HIV infection, infection with M.tuberculosis can be spread via respiratory droplets and close non sexual contact, this epidemic of tuberculosis probably represents, the greatest health risk to general public and the health care profession associated with the HIV epidemic.¹

Therefore it is important to understand the effect of TB and HIV on each other and to take adequate measures to control this dual epidemic. HIV is the most powerful risk factor for progression from TB infection to disease. HIV epidemic will lead to increased number of TB cases including smear positive cases, reactivation of TB and susceptibility to new TB infection. TB is the most common serious opportunistic infection in HIV patients and is the first manifestation of AIDS in more than 50% of cases in developing countries. The risk of death in HIV infected

persons with tuberculosis is twice as high as that in HIV infected patients without tuberculosis. HIV fuels the spread of MDR and XDR TB. HIV stigma may lead to inadequate supervision of anti TB chemotherapy and delay in seeking care by TB suspects. HIV infection lead to high default rates because of adverse reactions. New TB cases in HIV could overwhelm budgets. Extra pulmonary TB is common in hospitalized patients and pulmonary TB common in community. Higher frequency of negative sputum smears common with dual infection, may requires sputum culture. Chest radiograph may be less useful Clinical presentation dependent on degree of immune suppression.²

Methodology: The Study was Conducted For Patients Admitted In Al-Ameen Medical College Hospital Vijayapur and District Hospital Vijayapur Combined Hospital From December 2013 to May 2015(18 MONTHS). All The Patients With Tuberculosis Co-Infected With HIV was Taken For The Study.

Sample Size: 100 HIV positive patients meeting the criteria for the present study.

Inclusion Criteria: Patients with HIV infection was taken for study. Patients between 15-60 years of age was taken for the considered. Both pulmonary and extra pulmonary tuberculosis was taken for the study. Both sputum positive and negative pulmonary Tuberculosis was taken for the study.

Exclusion Criteria: Patients without HIV infection are excluded. Patients less than 15 years and above 60 years was excluded.

OBSERVATION AND RESULTS:

Table I: Age distribution of patients studied

Age In Years	No.Of Patients	%
15- 20	9	9.0
21- 30	18	18.0
31- 40	46	46.0
41- 50	18	18.0
51- 60	9	9.0
Tot al	100	100.0

Table II: Gender distribution of patients studied

GENDER	NO. OF PAIENTS	%
FEMALE	36	36.0
MALE	64	64.0
TOTAL	100	100.0

Table III: Age & Gender distribution of patients studied

Age in years	Gender		Total
	Female	Male	
15-20	3(8.3%)	6(9.4%)	9(9%)
21-30	11(30.6%)	7(10.9%)	18(18%)
31-40	18(50%)	28(43.8%)	46(46%)
41-50	3(8.3%)	15(23.4%)	18(18%)
51-60	1(2.8%)	8(12.5%)	9(9%)
Total	36(100%)	64(100%)	100(100%)

Table VII: Symptoms distribution of patients studied

DISCUSSION: In this study, out of 100 people studied, 64% of patients were males and 36% females. This is comparable to study by Deivanayagam CN³ et al. in which 79.25% were males and 20.75% where females. NashabaMatin et al⁴ in which 62 % were males and 38% where females. NACO⁵ National Statistics also show 61% males and 39% females.

Table IV: Occupation distribution of patients studied

Occupation	Gender		Total
	Female	Male	
Labourer	12(33.3%)	22(34.4%)	34(34%)
House wife	20(55.6%)	0(0%)	20(20%)
Farmer	0(0%)	14(21.9%)	14(14%)
Self Employee	0(0%)	10(15.6%)	10(10%)
Student	3(8.3%)	7(10.9%)	10(10%)
Employee	1(2.8%)	6(9.4%)	7(7%)
Driver/Conductor	0(0%)	5(7.8%)	5(5%)
Total	36(100%)	64(100%)	100(100%)

Table V: Type of TB dist ribution of patients studied

Type of TB	Gender		total
	Female	Male	
Pulmonary	26(72.2%)	43(67.2%)	69(69%)
Extra pulmonary	8(22.2%)	16(25%)	24(24%)
Disseminated	2(5.6%)	5(7.8%)	7(7%)
Total	36(100%)	64(100%)	100(100%)

Table VI: EP Site distribution of patients studied

EP Site	Gender		Total (n=100)
	Female (n=36)	Male (n=64)	
No	28(77.8%)	48(75%)	76(776%)
Yes	8(22.2%)	16(25%)	24(224%)
Pleura	3(8.3%)	5(7.8%)	8(8 %)
Abdominal	2(5.6%)	5(7.8%)	7(7 %)
Lymphnode	2(5.6%)	3(4.7%)	5(5 %)
Meningitis	1(2.8%)	3(4.7%)	4(4 %)

Most of the people were in the 31-40 age group, with mean age of males being 37.87 years and mean age of females 34.25 years. This is comparable to the study done by. Deivanayagam CN et al.^{3, 4} Shalini M at el⁶, Soumya Swaminathanet al⁷. This age reflects the sexually active age group which is commonly affected by the disease.

Most common occupation were unskilled labourers (34%), farmers (14%), drivers (5%), which indicates the co-infection affected people of low socioeconomic status.

Mohanty et al⁸. and Zuber Ahmad et al⁹. found a similar occupation profile.

Symptoms	Gender		Total (n=100)
	Female (n=36)	Male (n=64)	
CONSTITUTIONAL SYM			
Fever	28(77.8%)	46(71.9%)	74(74%)
Cough	27(75%)	45(70.3%)	72(72%)
Breathlessness	19(52.8%)	35(54.7%)	54(54%)
Weight loss	22(61.1%)	40(62.5%)	62(62%)
C- Pain	7(19.4%)	18(28.1%)	25(25%)
HEM SYM	3(8.3%)	9(14.1%)	12(12%)
CNS SYM			
Nil	34(94.4%)	58(90.6%)	92(92%)
Headache	1(2.8%)	6(9.4%)	7(7%)
Seizure	1(2.8%)	4(6.3%)	5(5%)
Focal deficits	1(2.8%)	2(3.1%)	3(3%)
Altered sensorium	1(2.8%)	6(9.4%)	7(7%)
GIT SYM			
Nil	27(75%)	40(62.5%)	67(67%)
Diarrhoea	7(19.4%)	17(26.6%)	24(24%)
Anorexia	6(16.7%)	15(23.4%)	21(21%)
Nausea/Vomiting	7(19.4%)	16(25%)	23(23%)
Abd. Distension	3(8.3%)	9(14.1%)	12(12%)

Comparison of symptoms with other authors

	Present study	Deivinayagam	Soumya Swaminathan ^{MS}	Bharatwal
Fever	74%	63.06%	79%	79%
Weight loss	62%	49.69%	94%	58%
Cough	72%	85.43	97%	29%
Haemoptysis	12%	11.5	18	-

Most common constitutional symptom was fever (74%) and cough (72%) was the most common respiratory symptoms. Symptoms were comparable with almost all of the studies. The difference in

reporting cough as a respiratory symptom in this study may be due to the more number of pulmonary tuberculosis cases in studies by Deivanayagam CN et al³ and Soumya Swaminathan et al.⁷ (83.88% and 83.33% compared to 69% in the present study).In this

study Diarrhoea dominated (24%) among the gastrointestinal symptoms, which is comparable to the Deivanayagam CN et al. study.³ MeghaAntwalet al.¹⁰

This may be due to low CD4 counts and greater immuno-suppression in the present study. Malnutrition as evidenced by BMI < 18.5 kg/m² was found in 58% patients.

Comparison of clinical manifestations with other Authors.

	Present study	Soumya Swaminath et al. ⁷	Arora VK et al. ¹¹
Oral thrush	14%	38%	
Lymphadenopathy	12%	29%	33.7%

Oral thrush and lymphadenopathy was found in 14% and 12%. The low incidence of these are due to higher percentage of people (51%) with CD4 > 200 cells/micro l.

In this study, sputum positivity was found to be low compared with other similar studies in India and abroad. Lesser sputum positivity in the present study may be due to the reason that sputum culture is not done in this study, and could be less number of patients with cavitary lesions.

Pleural effusion is the most common manifestations among extrapulmonary tuberculosis. similar findings are seen in other studies like Arora et al.¹¹ and Barthwal MS et al.¹³ Soumya Swaminathan et al.⁷

Conclusion: In this study, most common manifestation of TB in HIV infected was pulmonary TB with more number of sputum negative TB. A high proportion of extra pulmonary TB was also found.

Majority of patients were in the age group of 30-41 years. Out of 100 Patients 64% were males 36% females. Most common occupation affected are labourers. Most common presenting symptoms were fever (74%) cough (72%) and weight loss (62%). Most common associated clinical findings were pallor (63%), lymphadenopathy (12%) and oral thrush (14%).

Comparison of pulmonary tuberculosis with other authors

Studies	Percentage of pulmonary Tuberculosis
Present study	69%
Soumya Swaminathan et al. ⁷	72%
Deivanayagam CN et al. ³	83.88%
Rajasekharan et al. ¹²	55.6%

Pulmonary tuberculosis ranked as the most common clinical manifestation 69% had only pulmonary tuberculosis, extrapulmonary tuberculosis in 24% and 7% had Disseminated tuberculosis. Type of Tuberculosis distribution were comparable with Soumya Swaminathan et al.⁷ In this study sputum positivity was seen in 23% of cases.

Comparison of sputum positivity with other authors.

Studies	Percentage
Present study	23
Deivanayagam C N et al. ³	15
Soumya Swaminathan et al. ⁷	72
Rajasekharan et al. ¹²	32.3

Most common form of tuberculosis was pulmonary TB (69%). Among extra pulmonary tuberculosis pleural effusion (8%) was the most common presentation. Sputum positivity was seen only in 23% of patients

Reference:

1. Kahn JO. Walker BD. Acute human immunodeficiency virus type 1 infection. N Engl J Med 1998;339:33-9.
2. Tripathy S, Menon P, Joshi DR. Preliminary observation on lymphocyte subpopulations in HIV positive and HIV negative tuberculosis patients in Pune, India, Indian J Med Res 2000;111:195.
3. C.N. Deivanayagam, S. Rajasekaran, V.Senthilnathan, O.R. Krishnarajasekhar, K. Raja, C. Chandrasekar, S. Palanisamy, A. Samuel Dinesh, G. Jothivel and S. V.Elango Clinico-radiological spectrum of tuberculosis among HIV sero-positives – a Tambaram study .Ind. J Tub., 2001,48, 123.
4. Clinical Profile of HIV/AIDS-infected Patients Admitted to a New Specialist Unit in Dhaka, Bangladesh—A Low-prevalence Country for HIV

- NashabaMatin,LubabaShahrin, Mohammed Pervez,SaveraBanu, Dilruba Ahmed, Mahmuda ,and Mark Pietroni.
5. National AIDS Control Organization. Ministry of Health and Family welfare, Government of India. HIV/AIDS surveillance in India.
 6. Human Immunodeficiency Virus Infection among Tuberculosis Patients with Special Reference to Cd4 Count Shalini M *, Vaishnavi Suresh Rao B, and MounikaKilari.
 7. SoumyaSwaminathan, M. Sangeetha, N. Arunkumar, P.A. Menon, Beena Thomas, K. Shibi, ,Ponnuraja and S.Rajasekar.Pulmonary tuberculosis in HIV positive individuals:Preliminary report on clinical features and response to Treatment Ind.J Tub.,2002,49,189.
 8. Mohanty K.C., Sundrani R.M., Nair S. HIV infection in patients with respiratory disease. Indian J Tuberc 1993; 40:5-12.
 9. Zuber Ahmad, Rakesh Bhargava, D.K Pandey and K. Sharma HIV infection 123 seroprevalence in tuberculosis patients Ind.J.Tub.,2003,50,151.
 10. Clinical profile of HIV infected patients attending a HIV referral clinic in Pune, India
 11. MeghaAntwal, Rohan Gurjar, Shweta Chidrawar, JyotiPawar, Sunil Gaikwad, Narayan Panchal ,Varsha Kale , MadhuriThakar , ArunRisbud&SrikanthTripathy.
 12. Arora VK, Gowrinath K, Rao SR. Extrapulmonary involvement in HIV infection: Clinico-radiological profile and\ prognostic significance. Ind J Chest Dis and All Sci 1993; 35: 103.
 13. Rajasekaran S, Uma A, Kamakshi S, et al. Trend of HIV infection in patients with tuberculosis in rural south India.Indian J Tuberc 2000; 47:223-26 145.
 14. Lt Col MSBarthwal, Col KE Rajan, Lt Col RB Deoskar, Brig SK SharExtrapulmonary Tuberculosis in Human Immunodeficiency Virus Infection MJAFI, Vol. 61,No. 4, 2005.

Conflict of interest: None

Funding: None

Cite this Article as: Siddaraya H, Sanganna L Study Of Sociodemographic & Clinical Features Of Tuberculosis Cases In Hiv Patients. Natl J Integr Res Med 2016; 7(4): 28-32
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