

Original Research Article

Socio demographic and clinical profile of people living with HIV/AIDS registered at ART centre of Government Medical College, Nagpur

Uday W. Narlawar, Rushali Rajan Lilare*, Ganpat Mirdude

Department of Community Medicine, Government Medical College, Nagpur, Maharashtra, India

Received: 17 February 2018

Revised: 05 April 2018

Accepted: 06 April 2018

*Correspondence:

Dr. Rushali Rajan Lilare,

E-mail: rushalililare@gmail.com

Copyright: © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

Background: The human immunodeficiency virus (HIV), a lentivirus, subgroup of retrovirus causes HIV infection and over time acquired immunodeficiency syndrome (AIDS). Objective was to study socio demographic and clinical profile of people living with HIV/AIDS (PLHIV) registered at ART centre of Government Medical College, Nagpur.

Methods: The present was cross sectional record based among the people living with HIV/AIDS registered from 1st January 2011 to 31st December 2013 at ART centre of the hospital.

Results: There were total 2042 PLHIV subjects with Majority of subjects 37.76% were in age group 35-44 years with 80.26% were from urban area. Almost 46.34% study subjects were educated up to secondary class. Maximum subjects 38.29% belonged to IV socioeconomic class. The sexual mode of transmission being most common mode of transmission with 79.97 % subjects possibly acquiring infection through heterosexual route. About, 24.94% study subjects had opportunistic infections, out of that tuberculosis being was the most common opportunistic infection in 67.48% of study subjects. About 42.12% of the deaths of subjects were registered in year 2011.

Conclusions: The study found that most of the subjects were from age group 15 to 54 years and sexual route being the commonest possible mode of transmission. Tuberculosis was the most common opportunistic infection. Deaths were reported more in the year 2011 as compare to 2012 and 2013.

Keywords: HIV, AIDS, PLHIV, Opportunistic infections, Tuberculosis

INTRODUCTION

AIDS, the acquired immuno-deficiency syndrome is a fatal illness caused by a retrovirus known as human immuno-deficiency virus (HIV). According to WHO, globally there were approximately 36.7 million people living with HIV at the end of 2016. With the first case detected in 1986, India had responded promptly to the HIV/AIDS challenge and had under gone through milestone like at the initial stage itself by setting up an AIDS task force under the Indian Council of Medical Research and a National AIDS Committee. In 1990, a medium term plan (1990-1992) was launched. In 1992, the Government of India launched the first National

AIDS control programme (NACP-I) as a comprehensive programme for prevention and control of HIV/AIDS in India. To strengthen the management capacity, a National AIDS Control Board (NACB) was constituted and an autonomous National AIDS Control Organisation (NACO) was set up for project implementation. NACO implement and closely monitor the various components of programmes. Under NACP, ICTC were established & free ART initiative was launched under NACP II. Wider access to ART has led to 29% reduction in estimated annual AIDS-related deaths during NACP III period (2007-2011) after that NACP IV was launched for 5 years from 2012-2017. Even with the introduction & implementation of various phases of NACP, currently

national adult (15-49 years) HIV prevalence was estimated to be 0.26% and 67.6 thousand people died of AIDS-related causes however HIV prevalence has continued the steady decline from an peak of 0.38% in 2001-03 through 0.34% in 2007 and 0.28% in 2012 to 0.26% in 2015.^{2,3}

At ART center pre-ART care facility, ART treatment Facility, facility for monitoring efficacy of ART treatment is made available like CD4 cell count testing, other laboratory investigations, counselling and health education of patients. Hence this information was utilized to study Socio demographic and clinical profile of patient living with HIV AIDS.

Aim and objective

To study socio demographic and clinical profile of people living with HIV/AIDS (PLHIV) registered at ART centre of Government Medical College, Nagpur.

METHODS

The present cross sectional record based study was carried out among the people living with HIV/AIDS on-ART treatment registered from 1 January 2011 to 31 December 2013 at ART centre of Government Medical College and Hospital Nagpur. Data was collected from Record at ART center which is in the form of Patient treatment Record card, HIV care register (pre ART register), ART enrollment register. Data was analysed using Microsoft excel 2007 and statistical software Epi Info 7. Approval from the Institutional Ethics Committee was sought. Permission from National Programmed Officer (ART), National Aids Control Organization and from Head of Department of Medicine, Government Medical College and Hospital Nagpur was obtained. The study period was from September 2013 to January 2015.

RESULTS

In the present study total registered subjects were 3651, out of which the study subjects lost to follow-up were 755; the subjects transferred out to other ART centres were 275. The records of 240 subjects were found unsuitable as the entries in record were incomplete. Out of total registered PLHIV over three years, records of 339 subjects were untraceable. Thus this study was conducted on 2042 PLHIV subjects whose records were available for study. Out of 2042 study subjects 711 (35%) were on pre-ART care while 1331 (65%) were on ART care.

In the present study minimum study subjects were in age group less than 15 years i.e. 77 (3.78%) and maximum were in age group 35-44 years 77 (37.78%). Majority of study subjects were from urban area 1639 (80.26%); whereas 403 (19.74%) were from rural area. Maximum study subjects had education up to secondary school 925 (46.34%). As per Prasad's classification, 121 (38.29%) rural study subjects shows belonged to lower middle /IV

class followed by 96 (30.38%) belonging to upper middle /III and 25 (7.91%) belonging to poor/V class. Among the urban study subjects majority of study subjects 1160 (73.65%) were having income less than Rs. 5000/month followed by 302 (19.17%) subjects with income Rs. 5000 to 9999 per month. There were only 21 (1.33%) subjects whose income was more than Rs 20,000/month (Table 1).

Table 1: Distribution of study subjects according to socio demographic variables.

Variables	Frequency	%
Age group (years)		
<15	77	3.78
15-24	142	6.95
24-34	622	30.46
35-44	770	37.70
45-54	319	15.64
≥55	112	5.49
Place of residence		
Urban	1639	80.26
Rural	403	19.74
Educational status (information about 46 subjects were not known)		
Illiterate	259	12.98
Primary school	362	18.14
Secondary school	925	46.34
College and above	450	22.54
Socio economic class⁴ (information of 87 rural subject were not known)		
I	19	6.01
II	55	17.41
III	96	30.38
IV	121	38.29
V	25	7.91
Socio economic class (information of 64 urban subject were not known)		
<5,000	1160	73.65
5,000-9,999	302	19.17
10,000-14,999	69	04.38
15,000-19,999	23	01.46
≥20,000	21	01.33

The study reveals that 1622 (79.97 %) subjects possibly acquiring infection through sexual route with heterosexuality 1608 (79.27%) contributing maximally among sexual mode of transmission (Table 2).

In the present study 77(3.95%) subjects were registered with ART centre on the same day, 640 (32.84%) were registered on the next day of diagnosis. Maximum number of subjects was registered on the 2nd day to 7th day, 711 (36.48%) (Table 3).

The study reveals that out of total study subjects 489 had suffered from opportunistic infections. In about 330

(67.48%) subject opportunistic infection the being TB followed by candidiasis in 118(24.13%) (Table 4).

Table 2: Distribution of study subjects according to possible mode of transmission.

Possible mode of transmission	Frequency	%
Sexual	Heterosexual	1608
	Trucker	5
	Migrant	1
	Sex worker	3
	MSM	5
Unknown	276	13.62
Parent to child	72	03.55
Blood transfusion	56	02.76
Unsafe injections	2	00.10
Total	2026*	100.00

*Information of 14 study subjects were missing.

Table 3: Distribution of study subjects according to day of diagnosis and registration at ART centre.

Duration	Study subjects	
	Number	Percentage (%)
On the same day	77	03.95
On the next day	640	32.84
On 2nd day to 7th day	711	36.48
2nd week	131	06.72
3rd to 4th week	83	04.26
2nd to 6th month	106	05.44
7th month to 1 year	38	01.95
>1 year	163	08.36
Total	1949*	100.00

*Information on confirmed day of diagnosis was not available for 93 subjects.

Table 4: Opportunistic infections at the time of ART registration.

Opportunistic infections	Study subjects (n=489)	
	Number	Percentage
TB	330	67.48
Candidiasis	118	24.13
Diarrhea	19	3.89
PUO	12	2.45
Herpes zoster	12	2.45
ARI	6	1.23
PCP	4	0.82
Genital warts	2	0.41
Meningitis	1	0.20
CMV	1	0.20

Present study reveals that majority 806 (39.77%) of subjects were in stage 1 at the time of ART registration whereas 451 (33.96%) were in stage 3 of WHO clinical staging at the start ART (Table 5).

Table 5: Distribution of study subject according to WHO clinical stage at the time of ART registration.

WHO clinical staging	At the time of ART registration.		At the start of ART	
	Frequency	(%)	Frequency	(%)
Stage 1	806	39.77	366	27.56
Stage 2	497	24.56	350	26.36
Stage 3	523	25.74	451	33.96
Stage 4	201	9.93	161	12.12
Total	2027*	100	1328**	100

*Information on WHO clinical stage was not available from records of 15 subjects. **Information on WHO clinical stage was not available from records of 3 subjects.

Table 6: Distribution of study subjects according to year of registration and mortality at the time of data collection.

Year of registration	Frequency	%
2011	115	42.12
2012	77	28.21
2013	81	29.67
Total	273	100.00

In the present study 115 (42.12%) of the study subjects died in the year 2011 followed by 81 (29.67%) in 2013 and 77 (2.12%) in 2012 (Table 6).

DISCUSSION

In the present study, "Socio demographic & clinical profile of people living with HIV/AIDS (PLHIV) registered at ART centre of Government Medical College, Nagpur" there were total 2042 study subjects. About 68.16% subjects were between 24 - 44 years of age group. Out of total 80.26% subjects were from Urban. Majority 46.3% subjects were educated up to secondary class. Among the rural subjects 68.67% were in socioeconomic class IV and V whereas 73.65% subjects of urban area had income of <5000.

Similarly, in the study by Dr Dinesh Kumar et al at Jabalpur out of total 269 subjects, 88.55% were in the age group between 20-49 years, 71.7% were educated up to 12th class and 73.60% were having <836 per capita per month.⁵ Kumari et al in their study at Varanasi found that out of 5308 subjects 80.5% of in the age group between 25-49 years, 36.2% were illiterate followed by 34.9% who were educated up to secondary class.⁶

In our study sexual route was most common mode of transmission with maximum number of subjects 79.27% acquiring the infection via heterosexual mode. Similarly in the study by Kumari et al heterosexual route being the commonest mode of transmission contributed to 70.5% Whereas in the study by Baghel et al, Srivastava et al heterosexual route being the commonest mode of transmission contributes to approximately 82%.^{6,7}

In this study we found that maximum number of subjects 36.48% was registered on the 2nd day to 7th day 711 and overall approx. 73% study subjects were registered within a week of their diagnosis.

The present study reveals that tuberculosis was the most common opportunistic infection among 67.48% subjects followed by candidiasis in 24.13% and diarrhoea in 3.89% subjects. The other documented opportunistic infections were PUO, herpes zoster, ARI, PCP in 2.45%, 2.45%, 1.23%, 0.82% study subjects respectively.

The opportunistic infection with TB in the present study was found similar with study by Deshpande et al 67 (62.03%), higher than study of Kumar et al 408 (49.09%), whereas lower with finding of Zaheer et al (70.8%).^{8,10,11}

In the present study infection with candidiasis was found in 118 (24.13) patients. It is similar with study finding of Zaheer et al 11 (22.9%) and lower in the study by Kumar et al with oro-pharyngeal candidiasis 334 pts (40%) and Deshpande et al 3 (2.77%).^{8,10,11}

In present study herpes zoster was in 12 (2.45%) subject, Deshpande et al found herpes zoster in 8 (7.45%) and Zaheer et al found in 3 (6.3%).^{8,10,11}

In the present study maximum 64.33% and 53.92% of subjects were in stage I and II at the time of ART registration and at the start of ART respectively. Similarly in the study by Kumawat et al and Haider et al 80.66% and 76.1% of subjects were in stage I and II of WHO clinical staging respectively.^{12,9} In the present study majority 42.12% of subjects died in the year 2011.

CONCLUSION

The study found that most of the subjects were from age group 15 to 54 years with sexual route being the commonest possible mode of transmission. Majority of subjects 80.26% were from urban area; whereas 19.74% were from rural area. Tuberculosis was the most common opportunistic infection.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

1. Weiss RA. How does HIV cause AIDS? Science. 1993;260(5112):1273-9.
2. GOI (2015), India HIV estimations 2015. Technical report. NACO. Department of AIDS Control, Ministry of Health and Family Welfare, New Delhi. Accessed on 1 December 2017.
3. National AIDS Control Organisation. Department of AIDS Control. Annual Report 2012-13. New Delhi: ministry of Health & Family Welfare.
4. Agarwal AK. Social classification: The Need to Update in the Present Scenario. Indian J Comm Med. 2008;33(1):50-1.
5. Malviya DK, Tated S. To Study the Clinical Profile of HIV/AIDS Patients. JMSCR. 2017;5(11):30923-9.
6. Kumari R, Kumar M, Mohapatra SC. Clinico-demographic profile of HIV patients at ART centre of a tertiary care referral hospital in North India. Int J Community Med Public Health. 2017;4(9):3166-73.
7. Baghel SS, Srivastava S, Verma A. Socio-Demographic, Clinical Profile And Quality Of Life Of People Living With Hiv/Aids In Uttarakhand. Int J Curr Res. 2015;7(2):12337-42.
8. Kumar S, Wanchu A, Abeygunsaesekera N. Profile of presentation of Human Immunodeficiency Virus Infection in North India, 2003-2007, Indian Journal of Community Medicine, 2012;37:158-6.
9. Haider S, Kumar V, Singh SB, Sunderam S. A Study on Socio-demographic Profile and CD4 Count of HIV Infected Patients Attending ART Centre RIMS, Ranchi. Healthline J. 2015;6(1).
10. Deshpande JD, Giri PA. Clinico-epidemiological profile of HIV patients attending ART centre in rural Western Maharashtra. South East J pub Health. 2012;2(2):16-21.
11. Zaheer MS, Rabbani MU, Ahmed Zuber, Khan T, Rewari BB, Pandey DK. Clinical and demographic profile of patients of AIDS in and around Aligarh. J Indian Acad Clin Med. 2003;4(2):121-5.
12. Sunita Kumawat, Anju Kochar, Parmendra Sirohi, Jyoti Garhwal. Socio-demographic and clinical profile of HIV/AIDS patients in HAART era at a tertiary care hospital in North-West Rajasthan, India. Int J Community Med Public Health. 2016;3(8):2088-93.

Cite this article as: Narlawar UW, Lilare RR, Mirdude G. Socio demographic and clinical profile of people living with HIV/AIDS registered at ART centre of Government Medical College, Nagpur. Int J Community Med Public Health 2018;5:1929-32.