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Original Research Article

Socio-demographic and clinical profile of HIV/AIDS patients attending the ART centre of Amritsar, Punjab

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ABSTRACT

Background: Due to the large population size, India has the third largest HIV epidemic in the world. There is a need to study the socio-demographic and clinical profile of HIV/AIDS patients for planning services for them. Moreover, it is important to understand the presentation of HIV disease in the local context and culture. There is paucity of studies related to socio-demographic profile of HIV/AIDS patients in Punjab.
Methods: This cross sectional study was conducted at anti-retroviral therapy (ART) centre, Government Medical College, Amritsar from January 2016 to December 2016. A total of 400 patients with age more than 18 years and residents of district Amritsar were interviewed by using semi-structured questionnaire.
Results: Most of the patients (73.8%) belonged to the age group 41-60 years, 57.75% were males and 42.25% were females. Out of the total patients, 63.8% were married and 29% were widow/widower. There was a predominance of patients from rural areas and from the lower middle and upper lower socio-economic classes. Heterosexual contact was the commonest mode of transmission (66.5%) and felt sick was commonest reason (56.8%) for being tested for HIV. The most common presenting complaints were fever, weakness and weight loss.
Conclusions: Majority of patients belonged to low socioeconomic status and productive age group with heterosexual contact being commonest mode of transmission. Females were usually infected secondarily and were diagnosed after the diagnosis of their husband.

Keywords: HIV, AIDS, Socio-demographic profile, Clinical presentation, ART centre

INTRODUCTION

HIV infection has become the pandemic affecting every region of the world and is a major cause of morbidity and mortality. It has affected all segments of the population, threatening the development and the prosperity of the nation.

The first few cases of HIV in India were detected in 1986 among sex workers in Chennai and the first AIDS case was reported in 1987 in Mumbai.[1] The adult HIV prevalence of India has declined from 0.38% in 2003 to 0.26% in 2015. The estimated number of people living with HIV in the country has remained stable over the last three years at 2.1 million.[2]

Though HIV prevalence in Punjab (0.19%) is lower than the national level (0.26%) but there is rise in prevalence in past years.[3] The fourteenth round of HIV Sentinel Surveillance (HSS) recorded an increase in prevalence from 0.14% in 2005-07 to 0.34% in 2010-15 among pregnant women. Similarly, the estimated adult HIV prevalence increased from 0.15% in 2007 to 0.19% in 2015.[4] Punjab had the highest (21.1%) HIV prevalence among injecting drug users (IDU's) which was three times the national figure of 7.14%.[5]

The epidemiology of the disease varies greatly from country to country and from region to region in the same country. For planning targeted interventions or any type of services, it is essential to know the socio-demographic and clinical profile of the HIV/AIDS patients in a particular area. However, numerous clinical/demographic studies have been carried out from across India; there is paucity of such studies in this region. Keeping this in mind, it was planned to study the socio-demographic and clinical profile of HIV/AIDS patients attending the anti-retroviral therapy (ART) centre of Government Medical College, Amritsar (Punjab).

METHODS

This cross-sectional study was conducted from 1st January 2016 to 31st December 2016, on patients receiving from ART Centre, Guru Nanak Dev Hospital, Government Medical College, Amritsar. All the HIV/ AIDS patients of age more than 18 years and residents of district Amritsar who started antiretroviral therapy before 31st December, 2012 in this ART centre, constituted the study population. Based on average number of eligible patients contacted and interviewed during pre-testing of the questionnaire and available time frame, a sample size of 400 patients was selected for the above mentioned study period.

Purpose of study was explained to eligible patients in vernacular language and the patients who gave written consent were included in the study. The patients were interviewed using a pretested, semi-structured questionnaire. Socio-demographic profile of the patient was obtained i.e. age, gender, marital status, place of residence, family history of HIV, education, occupation and income. Disease related information like date of diagnosis, reason for HIV testing, mode of transmission and presenting complaints were also obtained.

Modified Kuppuswamy's Socioeconomic Status Scale based on Consumer Price Index of 269 in January 2016 with base year as 2001 was used for classifying patients according to their socioeconomic status.[6] The collected data was entered in Microsoft Excel sheets and analysed.

RESULTS

The study was conducted with 400 HIV/AIDS patients. HIV-infection was found to be higher among males (57.75%, 231) than in females (42.25%, 169) with a Male: Female ratio of 1.36. The distribution of patients according to the age showed that, the maximum number of patients 295 (73.8%) were in the age group of 41-60 years. The mean age of all HIV-infected patients was 43.3 years (SD=9.545) with male having mean age 44.74 years and female 41.63 years. Out of 400 patients, 297 (74.2%) were literate while 103 (25.8%) were illiterate. Among literate maximum number of patients i.e. 144 (36.0%) were educated up to primary school. More females (32.5%) were illiterate as compared to males (20.8%).

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

Socio-demographic indicators	Male (%) (N=231)	Female (%) (N=169)	Total (%) (N=400)
Age group (in years)			
18–40	49 (21.2)	28 (16.5)	77 (19.2)
41-60	170 (73.6)	125 (74.0)	295 (73.8)
>60	12 (5.2)	16 (9.5)	28 (7)
Education status			
Illiterate	48 (20.8)	55 (32.5)	103 (25.8)
Primary school	82 (35.5)	62 (36.7)	144 (36.0)
Middle and secondary school	28 (12.1)	12 (7.1)	40 (10)
Higher secondary	67 (29)	38 (22.5)	105 (26.2)
Graduation or above	6 (2.6)	2 (1.2)	8 (2.0)
Occupation			
Unemployed/homemaker	17 (7.4)	157 (92.9)	174 (43.5)
Farmer/ elf-employed	69 (29.8)	0 (0)	69 (17.2)
Unskilled worker/labourer	60 (26)	09 (5.3)	69 (17.2)
Truck driver/taxi driver	66 (28.6)	0 (0)	66 (16.5)
Skilled worker/job	12 (5.2)	02 (1.2)	14 (3.6)
Semi-professional/professional	07 (3.0)	01 (0.6)	08 (2)
Socio-economic class (modified Kuppuswammy scale)			
Upper	1 (0.4)	0 (0)	1 (0.2)
Upper middle	14 (6.1)	4 (2.4)	18 (4.5)
Lower middle	68 (29.4)	24 (14.2)	92 (23)
Upper lower	143 (61.9)	129 (76.3)	272 (68)
Lower	5 (2.2)	12 (7.1)	17 (4.2)

Continued.

Socio-demographic indicators	Male (%) (N=231)	Female (%) (N=169)	Total (%) (N=400)
Residence			
Rural	165 (71.4)	134 (79.3)	299 (74.8)
Urban	66 (28.6)	35 (20.7)	101 (25.3)

Table 2: Distribution of ever-married patients according to the HIV status of their spouse.

HIV status of spouse	Male patients (%) (N=214)	Female patients (%) (N=169)	Total (%) (N=383)
Positive	113 (52.8)	129 (76.3)	242 (63.19)
Negative	101 (47.2)	40 (23.7)	141 (36.81)

Table 3: Common presenting complaints of HIV patients (Multiple options allowed).

Symptoms	Male (%) (N=231)	Female (%) (N=169)	Total (%) (N=400)
Fever	152 (65.8)	103 (60.9)	255 (63.8)
Weakness	142 (61.5)	80 (47.3)	222 (55.5)
Unexplained weight loss	117 (50.6)	66 (39.1)	183 (45.8)
Anorexia	85 (36.8)	60 (35.5)	145 (36.3)
Oral ulcers or thrush	64 (27.7)	49 (29)	113 (28.5)
Recurrent cough	47 (20.3)	36 (21.3)	83 (20.8)
Diarrhoea	43 (18.6)	37 (21.9)	80 (20.0)
Night sweats	28 (12.1)	17 (10.1)	45 (11.3)
Myalgia	25 (10.8)	19 (11.2)	44 (11.0)
Nausea/vomiting	25 (10.8)	17 (10.1)	42 (10.5)
Unusual headaches	25 (10.8)	17 (10.1)	42 (10.5)
Sleep disturbance	19 (8.2)	16 (9.5)	35 (8.8)
Skin rashes	17 (7.4)	18 (10.7)	35 (8.8)
Chest pain	23 (10.0)	11 (6.5)	34 (8.5)
Numbness in hands or feet	20 (8.7)	14 (8.3)	34 (8.5)
Swollen lymph nodes	18 (7.8)	11 (6.5)	29 (7.3)
Shortness of breath	16 (6.9)	5 (3.0)	21 (5.3)
Pain abdomen	9 (3.9)	6 (3.6)	15 (3.8)

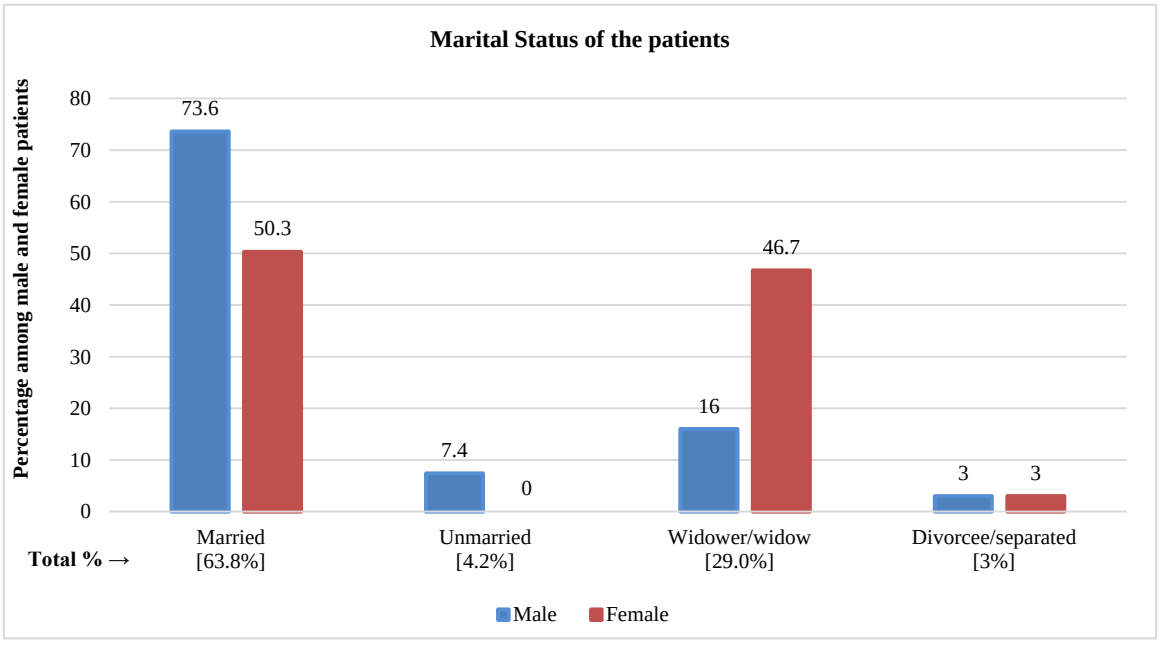

Figure 1: Distribution of the patients according to the marital status.

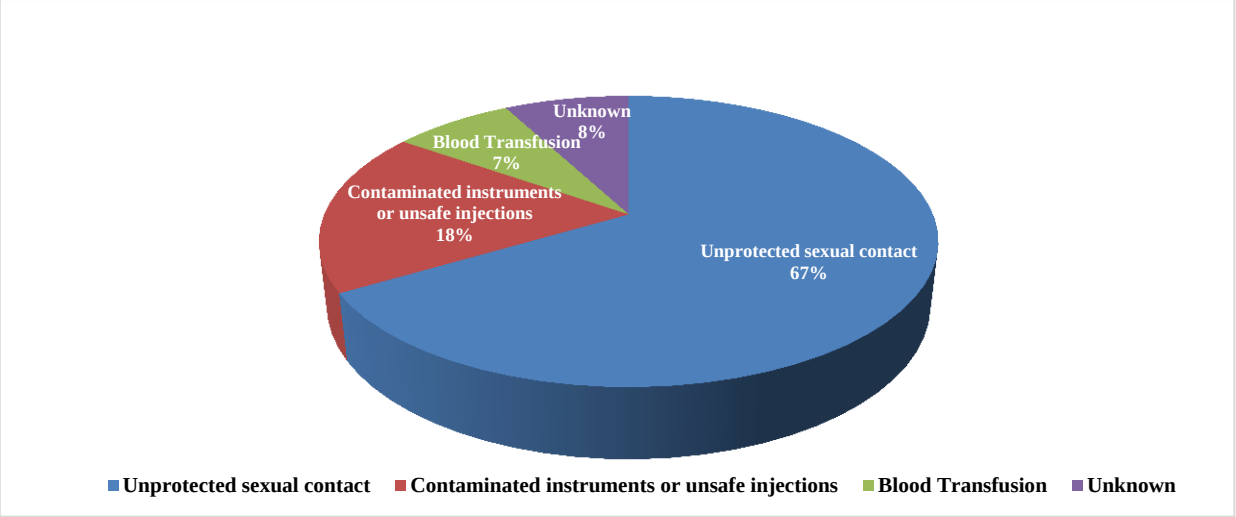

Figure 2: Distribution of the patients according to the probable mode of HIV transmission [N=400].

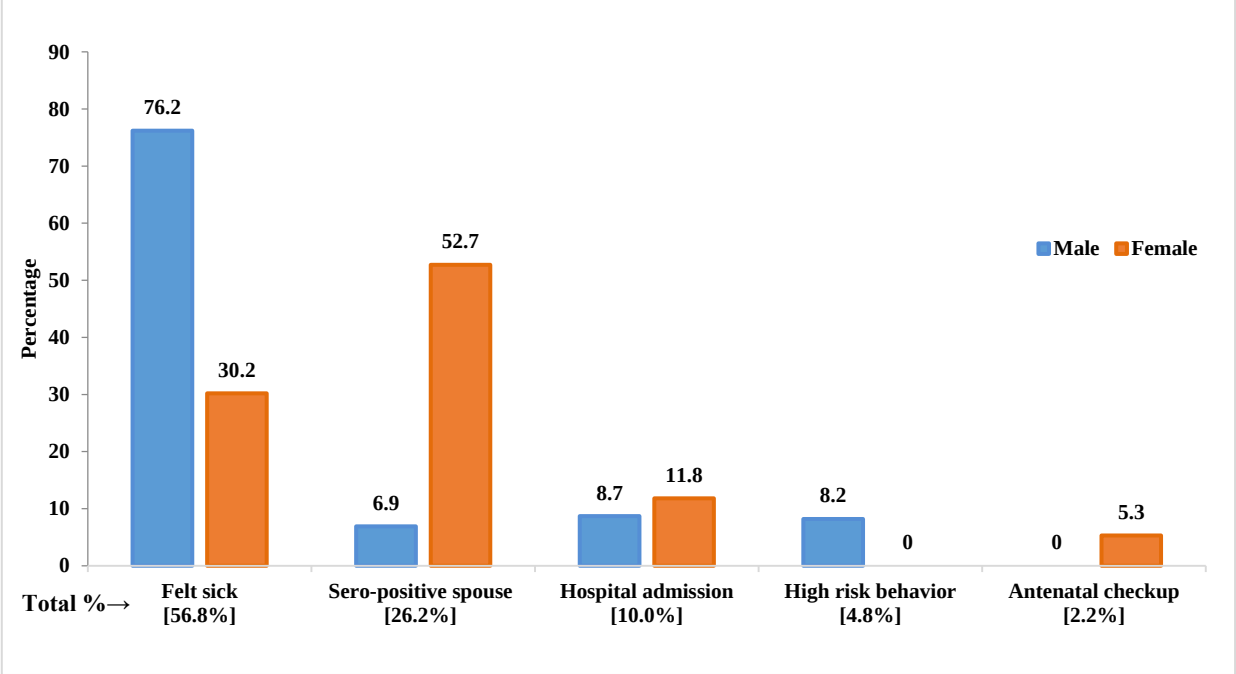

Figure 3: Reasons for HIV testing among male and female patients [N=400].

The distribution of patients by occupation depicts that majority (29.8%) of the male patients were associated with farming or were self-employed. Other common occupations among males were drivers (28.6%) and labourers (26.0%). Among females majority (92.9%) were homemakers. Socioeconomic status of the patients reveals that majority (68%) were from upper lower class and 23% patients belonged to lower middle class. Very few patients were from upper socioeconomic status. Maximum patients i.e. 299 (74.7%) were residing in rural area while 101 (25.3%) in urban area (Table 1).

Among the patients studied, 63.8 % were married and living with their spouse followed by 29.0 % widow/widower, 4.2% unmarried and 3.2% divorced/ separated. 46.7% of the females were widow in contrast to 16% widower males (Figure 1). The most common probable route of HIV transmission was found to be unprotected sexual contact (66.5%) followed by contaminated instruments or unsafe injections (18.2%) and blood transfusion (7.5%) (Figure 2).

The distribution of patients according to HIV status of their spouse shows that, out of 400 patients, 383 patients had spouse, excluding 17 male patients who were unmarried. Out of 383 patients, spouses of 242 (63.2%) were HIV positive and spouses of 141 (36.8%) were HIV negative. Among the spouses of male patients, 52.8%

were HIV positive and among the spouses of female patients, 76.3% were HIV positive (Table 2).

Common reasons for getting tested for HIV were feeling sick (56.8%) and spouse being diagnosed HIV positive (26.2%). Other reasons were hospital admission (10.0%), voluntarily due to high risk behaviour (4.8%) and during antenatal check-up (2.2%). Major reason for getting tested among male patients was feeling sick (76.2%), however among female patients, spouse being diagnosed HIV positive (52.7%) was the major reason (Figure 3).

The most common presenting complaints were fever, weakness, weight loss, loss of appetite, oral ulcers, cough and diarrhoea. Other complaints were night sweats, myalgia, nausea/vomiting, unusual headaches, sleep disturbance, skin rashes, chest pain, numbness, swollen lymph nodes, shortness of breath and pain abdomen (Table 3).

DISCUSSION

This study demonstrates the importance of socio demographic features of HIV/AIDS patients who were attending an ART centre in tertiary care hospital. HIV-infection was found to be higher among males (57.75%, 231) than in females (42.25%, 169). However percentage of females was slightly higher than the national average of 40.5% and study done by Kumar et al (38.5%).[7,8]. The male female ratio in present study is 1.36 which is lower than that found by study of Toshniwal et al and Kumar et al.[8,9] HIV epidemic is gradually shifting from High risk groups and bridge population to the general population. This might be reason for rising HIV prevalence among females.

Majority (73.8%) of patients in present study were within the age group of 41- 60 years. These findings are different from the studies done by Vaseem et al and S Joge et al which reported that maximum number of patients were within the age group of 21- 40 years.[10,11] However studies in recent past suggest that the number of people living with HIV who are aged 50 years and older is increasing.[12–14] There are a number of potential reasons for an increase in the HIV prevalence in older population. Increased coverage and low cost availability of antiretroviral therapy (ART) allows people to live longer. This, in conjunction with declining incidence of new HIV infections among younger adults, increases the proportion of people living with HIV in the older age groups.

The educational status of HIV patients showed that the sero-positivity was higher among the patients with lesser education. About 60% of the patients were found to be educated below middle school. These findings are similar to the study conducted by Haider et al, in Ranchi and Deshpande et al.[15,16] in Maharashtra, India. Low education status and less awareness regarding disease prevention can be the reason for high prevalence among this group of people. However, no trends for education level in relation to the sero-positivity were observed by Cauldbeck et al in their study in Bangalore.[17]

Out of total female patients, 78.2% were housewives. Similar results were also found in other studies.[18,19] Among males, 29.8% were farmers or self-employed, 28.6% were drivers and 26% were unskilled workers / labourers. Rajasekaran et al in their study in rural South India found that majority of their patients were from the farming profession while Kumar & Rao and Sharma et al found that majority of patients were labourers.[20-22] The variation in the percentage of occupation in different studies is due to the differences in the occupational patterns and the source from where the patients were selected.

Majority of the HIV patients in present study belonged to the lower socio-economic class. Similar findings were also reported by Haider et al and Vaseem et al.[10,15] Possible reason for higher number of patients from lower socio-economic class might be due to availability of free services in the ART centre. Also, due to less awareness and education HIV infection is more prevalent in lower socioeconomic groups.

Majority (63.8%) of the patients were married mainly because of universality of marriage in this part of region. Among widow/widowers, 46.7% females were widow while widower males were only 16%. Bahl et al and Joge et al.[11,23] also reported similar findings in their studies. Females are usually diagnosed at earlier stage after the diagnosis of their husband. Their treatment is started earlier, thus prolonging their life expectancy in comparison to their infected husbands. This might be the reason for more percentage of widows than widowers.

In this study, the most common mode of acquiring HIV infection was found to be unprotected sexual contact (66.5%). More or less similar findings were reported by Rashmi et al (70.5%), Deshpande et al (92.3%) and Nayak et al (95%) also reported sexual route as predominant route of HIV transmission.[16,24,25] Large number (18.2%) of people reported contaminated instruments and unsafe injections as probable risk factor associated with HIV transmission, which might be due high prevalence of IV drug abuse in the region.

Spouses of 52.8% male patients were HIV positive while spouses of 76.3% female patients were HIV positive. In most of the cases of heterosexual transmission, infection spreads from male to female partners.[26] If a female is HIV positive, it is more likely that she had contracted infection from her husband. This might be the reason for higher percentage of females with seropositive spouses as reported by similar studies.[10,11] Majority (76.2%) of males got HIV tested because they felt sick while majority of female tested because of HIV positive status of their spouse. More or less similar findings were reported by Sivaram et al and Pradhan & Sundar.[27,28]

We found that fever was the most common presenting complaint followed by weakness, weight loss, loss of appetite, oral ulcers, cough and diarrhoea. These findings were comparable with previous studies done by Nayak et al, Tsega and Deshpande et al.[16,25,29]

It can be concluded that majority of patients belonged to low socioeconomic status and productive age group with heterosexual contact being commonest mode of transmission. Females were usually infected secondarily and were diagnosed after the diagnosis of their husband.

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Ethical approval: The study was approved by the Institutional Ethics Committee of Government Medical College, Amritsar

REFERENCES

1. Solomon S, Solomon SS, Ganesh AK. AIDS in India. Postgrad Med J. 2006;82(971):545–7.
2. National AIDS Control Organization. Mid Term Appraisal of National AIDS Control Programme - Phase IV. 2016; Available at: http://www.naco.gov.in/sites/default/files/Report%20of%20the%20MTA%20of%20NACP%20IV%20-%20August%202016.pdf. Accessed on 10 February 2018.
3. Punjab State AIDS Control Society. Overview of HIV/AIDS in Punjab.2017; Available at: http://www.punjabsacs.org/Document/Overview_HIV_Punjab_Jan16.pdf. Accessed on 6 February 2018.
4. National AIDS Control Organization. State Epidemiological Fact Sheets: Volume III. 2017; Available at: http://www.naco.gov.in/sites/default/files/FHI%20booklet%20VOl%203%20-%20Revised.pdf. Accessed on 04 February 2018.
5. National AIDS Control Organization. HIV Sentinel Surveillance 2014-15: A Technical Brief.2015; Available at: http://www.naco.gov.in/sites/default/files/HIV_Sentinel_Surveillance_report.pdf. Accessed on 02 February 2018.
6. Labour Bureau Government of India. Consumer Price Index (India), Year 2016; Available at: http://labourbureaunew.gov.in/LBO_indexes.htm. Accessed on 06 February 2018
7. National AIDS Control Organization. Annual Report 2016-17.2017; Available at: http://naco.gov.in/sites/default/files/NACO%20ANNUAL%20REPORT%202016-17.pdf. Accessed on 03 February 2018.
8. Kumar A, Kumar P, Gupta M, Kamath A, Singh S, Maheshwari A. Profile of Clients Tested HIV Positive in a Voluntary Counseling and Testing Center of a District Hospital, Udupi, South Kannada. Indian J Community Med Off Publ Indian Assoc Prev Soc Med. 2008;33(3):156–9.
9. Toshniwal H, Modi K, Talsania N, Shevkani M, Shah V, Sengal V, et al. Clinico-epidemiological and socio-demographic profile of HIV positive patients, visiting clinic in Ahmedabad, Gujarat, India. Int J Health Sci Res. 2013;3(6):77–84.
10. Vaseem BN, Madhusudan S, Bhardwaj AK, Rathore M, Kasyap A. A study on socio-demographic profile and risk factors present in hiv infected patients attending art centre in tertiary care hospital in Rajasthan, India. Natl J Community Med. 2012;3(2):5.
11. S Joge U, S Deo D, N Lakde R, G Choudhari S, R Malkar V, H Ughade H. Sociodemographic and clinical profile of HIV/AIDS patients visiting to ART Centre at a rural tertiary care hospital in Maharashtra state of India. Int J Biol Med Res. 2012;3(1):5.
12. Mahy M, Autenrieth CS, Stanecki K, Wynd S. Increasing trends in HIV prevalence among people aged 50 years and older: evidence from estimates and survey data. AIDS Lond Engl. 2014;28(4):S453–9.
13. Negin J, Bärnighausen T, Lundgren JD, Mills EJ. Aging with HIV in Africa: the challenges of living longer. AIDS Lond Engl. 2012;26:1-5.
14. Joint United Nations Programme on HIV/AIDS. HIV and aging. 2013; Available at: http://www.unaids.org/en/media/unaids/contentassets/documents/unaidspublication/2013/20131101_JC2563_hiv-and-aging_en.pdf. Accessed on 02 February 2018
15. 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. Heal J. 2015;6(1):6.
16. Deshpande JD, Giri PA, Phalke DB. Clinico-epidemiological profile of HIV patients attending ART centre in rural Western Maharashtra, India. South East Asia J Public Health. 2012;2(2):6.
17. Cauldbeck MB, O'Connor C, O'Connor MB, Saunders JA, Rao B, Mallesh VG, et al. Adherence to anti-retroviral therapy among HIV patients in Bangalore, India. AIDS Res Ther. 2009;6:7.
18. Kumawat S, Kochar A, Sirohi P, Garhwal J. 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;2088–93.
19. Vyas N, Hooja S, Sinha P, Mathur A, Singhal A, Vyas L. Prevalence of HIV/AIDS and Prediction of Future Trends in North-west Region of India: A six-year ICTC-based Study. Indian J Community Med Off Publ Indian Assoc Prev Soc Med. 2009;34(3):212–7.
20. Rajasekaran S, Uma A, Kamakshi S, Jeyaganesh D, Senthamizehelvan A, Savitri S, et al. Trend of HIV infection in patients with tuberculosis in rural South India. Indian J Tuberc. 2000;43(4):223–6.
21. Kumar R, Rao DN. Clinico-epidemiological profile of hiv positive patients on anti retroviral treatment at VIMS, Bellary, Karnataka. J Evol Med Dent Sci. 2013;2(1).

22. Sharma S, Kadhiravan T, Banga A, Goyal T, Bhatia I, Saha P. Spectrum of clinical disease in a series of 135 hospitalised HIV-infected patients from north India. BMC Infect Dis. 2004;4:52.
23. Bahl R, Singh B, Singh R. Prevalence of HIV infection among patients of pulmonary tuberculosis attending chest diseases hospital, Jammu (Jammu and Kashmir). Indian J Community Med. 2007;32(4):288.
24. Kumari R, Kumar M, Mohapatra S. 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.
25. Nayak UB, Lenka S, Achappa B. Clinical and Socio demographic profile of attendees at ART centre in a tertiary care hospital in Mangalore, India. Asian J Med Sci. 2015;6(5).
26. Gangakhedkar RR, Bentley ME, Divekar AD, Gadkari D, Mehendale SM, Shepherd ME, et al. Spread of HIV Infection in Married Monogamous Women in India. JAMA. 1997;278(23):2090–2.
27. Sivaram S, Saluja GS, Das M, Reddy PS, Yeldandi V. Reasons for Seeking HIV-test: Evidence from a Private Hospital in Rural Andhra Pradesh, India. J Health Popul Nutr. 2008;26(4):431–41.
28. Pradhan BK, Sundar R. Gender impact of HIV and AIDS in India. 2006; Available at http://www.undp.org/content/dam/india/docs/gender.pdf. Assessed 1 February 2018.
29. Tsega E. The demographic, social and clinical presentations of one hundred Ethiopian patients with human immunodeficiency virus (HIV) infection. Ethiop Med J. 1990;28(2):81–8.

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