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Original Research Article

Socio-demographic and clinical profile of HIV seropositives in tertiary care teaching hospital of South India

Deivam S. Gounder[1*], Abirami Dhakshinamoorthy[2], Prabhu Nagarajan[3], Balasubramanian Narasimhan[1]

[1]Department of Skin and STD, Chennai Medical College Hospital and Research Centre (SRM Group), Tiruchirapalli, India

[2]Department of Skin and STD, Mahatma Gandhi Medical College and Research Institute, Puducherry, India

[3]Department of Microbiology, Chennai Medical College Hospital and Research Centre (SRM Group), Tiruchirapalli, India

*Corresponding author email: leptoprabhu@gmail.com

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Abstract

Background: Since the inception of the integrated counselling and testing centre (ICTC) at all teaching reference institutions and associated hospitals, there was very few cases observed on the clinical experiences in HIV/AIDS positive cases in institution.

Aim: The aim of this study was to delineate the epidemiological profile of HIV/AIDS seropositive cases and which included to study the number of HIV seropositive patients from February 2013 to June 2014; common signs and symptoms of HIV/AIDS seropositive patients; age and sex distribution of all seropositive cases; mode of transmission of HIV infection; residence and profession profile of seropositive cases and different types of opportunistic infections in these patients.

Material and methods: Present study was documental and analytical descriptive and it was conducted at the tertiary care teaching institution and associated hospitals through data collection of 105 records of individual who tested positive for HIV by three rapid test methods using three different antigens at integrated counselling and testing centre (ICTC). Demographic variables such as age, sex and occupation, data on mode of transmission and clinical manifestation were examined together.

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Results: A total of 105 patients included in which 59 (56.2%) male and 46 (43.8%) females. The peak incidence was found in the age group of 26 to 45 years (62.8%). Majority of HIV positive patients belonged to skilled workers followed by unemployed and agricultural workers. Transmission of infection was through sexual contact and 54.2% expressed that they do not know how they acquire this infection. One case identified that the transmission occur through homosexuals. Vertical transmission and blood transfusion accounted in 0.9% cases. The educational categories were mainly observed among the secondary schoolings (47.6%). Spouse testing also done where 16 subjected were included among them 8 were concordant couples and 8 were discordant. Among the patients attended the ART centers, it was found that 64 out of 105 were under ART treatment and 11 died due to opportunistic infections. Among 105 cases, 55 were symptomatic (6 were having tuberculosis infection) and 50 were asymptomatic.

Conclusion: Tuberculosis and candidiasis were common opportunistic infection followed by herpes zoster and varicella. This study highlighted the burden of HIV/AIDS patients in the study place. The results can be useful for various programs in health promotions in patients of HIV/AIDS from this region.

Key words

Clinical profile, HIV/AIDS, Seropositive cases, Opportunistic infections.

Introduction

Acquired Immune Deficiency Syndrome (AIDS) was first discovered in 1981 and today become a deadly pandemic. Humankind has not been able to turn away this grave disease as no successful immunization, drugs or anti-toxins have been developed to prevent this disease. The AIDS epidemic targets people in their most productive years that are strong young adults, which lead to disastrous economic, political and socio-demographic consequences [1]. It is sexually transmitted, and such infections are known for being difficult to control, even when treatment is available [2, 3]. Science has responded to the challenge of AIDS by rapidly identifying etiology, describing pathogenesis and transmission routes, and developing diagnostic tests and treatment but this has not stopped the universal spread. Although the annual number of new HIV infections (2.6 million in 2009 to 3.1 million in 1999) has been steadily declining since the late 1990s, this decrease is offset by the reduction in AIDS-related deaths (2.1 million in 2004 to an estimated 1.8 million in 2009) due to the significant scale up of antiretroviral therapy over the past few years [3].

Prevention of HIV transmission in India is hampered due to certain factors like traditional culture, diversity in religions and languages, ignorance, illiteracy, fear of discrimination and denial for testing and treatment because of that the task of controlling HIV/AIDS in India is gigantic [3, 4, 5].

Deaths of young adults have an especially damaging impact on their families and communities, skills are lost, workforce shrinks and children's are orphaned [6, 7]. Though, ART does not cure HIV/AIDS, but effective ART regimens inhibit the efficient replication of the HIV virus, and reduce viremia to undetectable levels. Successes achieved by ART in terms of delaying the onset of AIDS have transformed the common perception about HIV from being a “virtual death sentence” to a “chronic

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manageable illness". The Government of India launched the free ART program on 1 April 2004, since then more and more patients are put on ART treatment with rapid expansion of the program [8]. However due to prevailing socioeconomic conditions, poor awareness & lack of facility for diagnosis in rural setup the incidence of HIV infection is highly underreported from the areas. Early diagnosis, ART, chemoprophylaxis and treatment of opportunistic infections are important for control of HIV replication, disease progression and ultimately containment of epidemic. The present study was conducted in a rural tertiary health care hospital with the objective to assess the socio-demographic and clinical profile of HIV/AIDS patients.

Material and methods

This cross sectional study was conducted at rural tertiary care teaching hospital, situated in Tiruchirapalli region of Tamil Nadu state of India, from February 2013 to June 2014. The clearance from Ethics Committee was obtained before starting the study. The HIV positive patients coming to ART centre for treatment were included in the study. Patients visiting to various wards were excluded from the study due to ethical considerations. The NACO guidelines for diagnosis of HIV were followed. As per the NACO guidelines all the samples were processed according to the standard Microbiological procedures.

Over a period of one year and five months, such 105 HIV positive patients were studied. For these patients a preformed open questionnaire (interview) was made to enquire about socio-demographic characteristics such as age, sex, literacy status, marital status, occupation, socioeconomic status and clinical presentation ensuring confidentiality at their homes after informed consent and guarantee of anonymity to the individuals. Subjects were staged as per the World Health Organization's (WHO) staging system. An informed consent was obtained and proper counselling was done. Socio-demographic data and clinical signs and symptoms were recorded for all subjects on a predesigned proforma, at the time of recruitment.

Results

The socio-demographic characteristics of the study subjects were as per **Table - 1**. The percentage of male to female analysis of the study subjects recruited was 56.2 and 43.8 respectively. The peak incidence was found in the age group of 26 to 45 years (62.8%).

The distribution of patients according to the age showed that the maximum number of males 59 (56.2%) as well as females 46 (43.8%); also it was maximum in the age group of 26 to 45 years. Age of the patients ranged between 15 and 70 years. Maximum patients 64 (61%) were residing in urban area while 41 (39%) in rural area. In the present study, out of 105 patients, 20 (19%) were literate while 85 (81%) were illiterate. Among literate maximum number of patients [50 (47.6%)] were educated up to secondary school. The illiteracy numbers of females was high [14 (13.3%)] as compared to males [6 (5.7%)].

The distribution of patients by occupation depicts that majority of patients, who harbored the HIV infection; were agricultural laborers 20 (19%) flowed by unemployed of same percentage. Among males, agriculture cultivators 13 (22%), Service in Government and private persons 9 (15.2%) and semiskilled workers 8 (13.6%) were observed in this study. Among females maximum were depicted as house wives 15 (32.6%) and agricultural workers 12 (26.1%).

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The most common route of transmission was found to be heterosexual in 55 (52.3%) patients, 1 patient determined as homosexuals and 1 patient had given a history of tranplacental. Apart from this 57 (54.3%) patients were unknown about their route of transmission as per **Chart - 1**.

The distribution of patients according to HIV status of their spouse showed that, out of 105 patients, 16 (15.2%) patient's spouse were tested where 8 (50%) are considered as concordant couple and 8 (50%) are discordant couples. Out of 105 patients, 64 (60.9%) were on antiretroviral therapy (ART) and 11 (10.5%) died due to opportunistic infections. Among the subjects included, 55 (52.4%) were symptomatic and 6 (10.9%) of them supported to the clinical manifestations and other investigations of tuberculosis and 50 (47.6%) were asymptomatic as per **Chart - 2**. One case is referred from the blood bank. Among the 105 reactives, voluntary testing was done for 5 patients and ANC screening was observed in 3 patients.

Discussion

This investigation demonstrates the importance of socio demographic and clinical features of HIV/ AIDS patients who were attending the tertiary care rural teaching hospital at Tiruchirapalli. The overall male patients outnumbered the female patients (59/46). The male predominance was also observed in other studies [7], this male preponderance might have been due to the fact that in the existing social setting, females do not seek medical care fearing banishment, gender bias, social stigma and neglect attached with the disease which decreases the number of females attending the HIV clinic. So the less entry of females may not be true representation of the female proportions. These observations are in accordance with findings reported from various studies conducted at different parts of the country [8, 9, 10].

Majority of the patients were within the age group of 26 to 45 years which is sexually active, productive age group and the social structure is patriarchal. These findings are very much similar to the national level statistics in which NACO has reported that 89% of the cases were in the age group of 15 to 44 years [11]. Migration for work for extended periods of time takes migrants away from the social environment provided by their families and community. This can place them outside the usual normative constraints and thus they are more likely to engage in risky behavior [12]. Living away from the family has been reported to be an independent predictor of HIV acquisition in men. Migrated males are more likely to indulge in promiscus sex and this put them at greater risk of acquiring HIV infection.

This may be because in male dominated society like in India women are expected to be faithful to their husbands, however such trustworthiness for male is not so rigid. In a cohort study in sero-discordant couples the incidence of HIV infection was observed to be 1.97 per cent per year, much lower compared to that reported in Africa [13, 14]. Married women do not have adequate understanding or perception of risk of STD/HIV from their spouses [15, 16].

A significant number of our subjects were in the economically productive age group and majority of patients were males indicating that this disease is causing a great loss to the nation's booming economy [4, 7, 8]. The other socio-demographic determinants found to be associated with HIV positivity were literacy status, occupation, socio-economic status and place of residence. Since higher literacy helps in getting a better job and increased per capita

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income, which leads to improvement in the socio economic status of the individual, so just by working on improvement of literacy status we will able to modify the other socio-demographic determinants; authorities need to focus on this. Also, increases literacy will help in better understanding about the disease, its mode of transmission, personal protective measures to be employed and societal responsibilities at the individual level, which will help to a great extend in preventing the spread of this pandemic [7, 8, 9, 14].

Conclusion

The study suggests that counselling and supportive therapy could play a pivotal role in controlling anxiety, stress, depression and rehabilitating people with HIV/AIDS. The commonest mode of acquiring infection was heterosexual contact, emphasizing the need to strengthen our Information education and communication (IEC) strategies to contain HIV/AIDS. 66.3% of our cases were in WHO clinical stage I & II at the time of registration in the ART clinic. This is a positive sign as this reflects heightened awareness among those affected and highlights the good counselling services of our ICTC centers.

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Chart - 1: Routes of transmission of HIV infection.

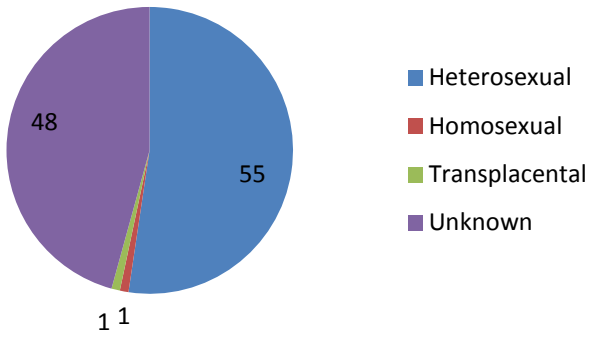

Chart - 2: Symptomatic verses asymptomatic profile of HIV patients.

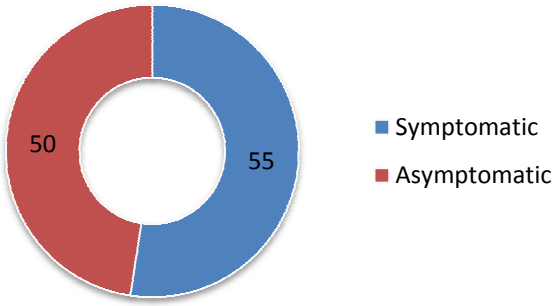

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Table - 1: Socio-demographic profile of HIV positive cases.

Characteristics		Number	Percentage
Gender	Males	59	56.2
	Females	46	43.8
Age	< 15	1	0.9
	16-25	4	3.8
	26-35	34	32.4
	36-45	32	30.5
	46-55	23	21.9
	56-65	9	8.6
	> 65	2	1.9
Residential status	Rural	41	39
	Urban	64	61
Occupational status	Agricultural laborers	18	17.2
	Non Agri laborers	1	0.9
	Domestic servant	1	0.9
	Semi skilled workers	14	13.3
	Petty business	7	6.7
	Govt./ private services	13	12.4
	Student	3	2.9
	Truck drivers	6	5.7
	Auto/ Taxi workers	3	2.8
	Hotel staff	4	3.8
	Agricultivators	17	16.2
	Unemployed	18	17.2
Education	Illiterate	20	19
	Primary	29	27.7
	Secondary	50	47.6
	Graduate	6	5.7

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