

**Research Article**

**HIV IN ELDERLY**

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**ABSTRACT**

The prevalence of HIV/AIDS is increasing over 50 years of age group as a consequence of young aging with HIV because of ART treatment, their exclusion from targeted HIV testing programmes and the general misconceptions that they are not sexually active and hence not at significant risk. Most cases are missed because of cross over of symptoms between HIV and aging. Five years retrospective study was done to study the seroprevalence of HIV in above 50 yrs age group. HIV testing was done by three E/R/S tests as per NACO guidelines after pretest counselling. Out of total of 5048 elderly persons tested (above 50 years), 380 (7.52%) were found to be seropositive for HIV-1 antibodies. 3438 (68.10%) were males and 1610 (31.90%) were females. Seropositivity was more in females 139 (8.63%) as compared to males (7%). 311 (81.85%) had rural background. Main route of transmission was heterosexual with h/o multiple sex partners. Various public health initiative including preventive and educational programmes which must be developed and undertaken in order to curtail the spread of HIV in this particularly vulnerable, fragile and always growing segment of population. The article is intended to focus on the most ignored population affected of HIV i.e. above 50 years.

**Keywords:** *HIV, Elderly*

**INTRODUCTION**

As the global HIV epidemic continues, the number of patients with HIV infection is likely to increase. However, the size of the problem in elderly population is not so well known.

Most seroprevalence studies have targeted intravenous drug users, men having sex with men, pregnant women and STI/RTI clinic attendees and have not included elderly people (Cloud *et al.*, 2003).

With the passage of time, as the young people infected with HIV/AIDS get older, this problem graduates to becoming a problem affecting the elderly. This may be attributed to living longer due to advanced HIV/AIDS therapy.

Conversely the perception that people aged 50 years and older are sexually inactive could mean that they are not targeted for screening. Furthermore, symptoms of HIV/AIDS amongst the elderly are often confused with those attributable to normal ageing process (Antonie, 2011).

Indian data regarding human immunodeficiency virus (HIV) infection in elderly are lacking. Hence a retrospective study was performed in persons more than 50 years with reference to their age distribution, gender and mode of transmission.

**MATERIALS AND METHODS**

A retrospective five year (2006-2010) analysis of elderly clients (above 50 years of age) tested for HIV at ICTC, GMC Amritsar was done and seroprevalence of HIV in these elderly people was rated. All these cases were referred from various departments of attached hospitals of GMC Amritsar.

Blood samples were taken for HIV testing after written informed consent. Testing was done as per NACO guidelines (Guidelines for HIV Testing, 2007) and three E/R.S tests were performed in HIV seropositive cases. Strict confidentiality of results was observed and reports were given after post test counselling and all seropositive cases were referred to ART centre.

**RESULTS AND DISCUSSION**

**Results**

From January 2006 to December 2010 a total of 30477 samples were tested for HIV. 5048 (16.56%) were above 50 years of age. There was gradual rise in number of people tested for HIV over time (Table 1).

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Out of a total of 5048 elderly persons tested for HIV; 380 (7.52%) were found to be seropositive for HIV-1 and none for HIV-2. Out of the 380 seropositive persons, 372 (97.89%) belonged to 50-60 years of age group whereas 08 (2.11%) belonged to 60-70 years age group and none of them was beyond 70 years of age. Regarding mode of transmission of infection, 367 (96.57%) had heterosexual route of transmission, 8(2.10%) through blood transfusion and 5 (1.31%) had history of intravenous drug usage or through infected syringes and needles. Spouses of 86/380 (22.6%) seropositive cases had already died but death of none of them was attributable to HIV infection.

Out of total elderly persons tested, 3438 (68.10%) were males and 1610 (31.98%) were females. Seropositivity was more in females 139 (8.63%) as compared to males 241(7%).

Regarding urban/Rural distribution of seropositive patients, 311 (81.85%) had rural background and 69(18.15%) belonged to urban background.

### **Discussion**

The age distribution of Human immunodeficiency virus (HIV) infected individuals is generally younger. However, HIV prevalence and incidence among people aged 50 years and older (elderly group) seem surprisingly high from the scant data that exist (Schmid *et al.*, 2009; Gebo, 2009; Manfredi, 2004). The prevalence data are limited because elderly people are rarely included in demographic health surveys in the developed, not to mention the developing countries. There were only 13 of 30 surveys which included older males; none included older females, in a world Health Organization (WHO) report (Schmid *et al.*, 2009). Nevertheless, the incidence of HIV epidemics in elderly individuals appears to be increasing. Although the developing countries have limited case reporting systems, in the United States, the HIV positive cases through reporting system have climbed from 20% to 25% from 2003 to 2006 in the elderly group (Schmid *et al.*, 2009; CDCP, 2008). Similar case reporting data from the WHO's European Region in elderly individuals in 2005 show 8% (Gordon and Thomson, 1995). By estimation, there is a consistent pattern that prevalence in elderly individuals is one-quarter to one – third that of 15-49 year age group, which is unexpectedly high (Schmid *et al.*, 2009).

In the present study 7.52% of HIV positive cases were above 50 years of age. Gordon and Thomson (1995) reported 9.80% positivity in 50-60 years of age, while study by Moss<sup>10</sup> showed 10% positivity.

Male preponderance in our study can be attributed to under utilization of health care services by females. Moreover demographics are parallel to HIV infection. Most of the persons (81.85%) were from rural population which may be because of majority of the population in India lives in rural areas (66% in Punjab, 2004). Similar results were reported by Becker (Becker *et al.*, 2007) who reported that HIV prevalence was more in rural area than urban areas. This is because of limited access to information and medical treatment.

96.5% of the HIV infected persons in our study acquired their infection through heterosexual contact in contrast to west where homosexual contact route is common. In spite of high prevalence of sexually transmitted diseases (STD), diagnosis of HIV infection is often not considered in elderly by clinicians (Gordon and Thomson, 1995). Clinicians who take care of elderly patients should take a complete sexual history and offer safe sex practice education. Irrespective of age, HIV testing and counselling should be considered for all individuals with history of STD or high risk behaviour.

Most of females contracted the infection by heterosexual contact. Generally women are at a greater risk of heterosexual transmission of HIV. Biologically women are twice more likely to become infected with HIV through unprotected heterosexual intercourse than men. In many countries women are less likely to negotiate a condom use and more likely to be subjected to non consensual sex (Cao, 2010).

Many senior women are sexually active and some are injection-drug users. Older women can actually be at greater risk for HIV infection than younger women with the same behaviours because after menopause, condom use for birth control becomes unimportant and normal aging changes such as decrease in vaginal lubrication and thinning vaginal walls can put them at higher risk during unprotected sexual intercourse (Women HIV & AIDS, 2009).

Through blood products 2.10% persons got the infection. Unfortunately, blood transfusion has emerged as the most distinctive transmission source among the elderly, particularly given that screening of blood

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products for HIV did not begin until 1985. In addition, several factors compound the diagnosis and treatment of transfusion-related cases in the elderly. For example, it has recently been reported that an average of 16-18 years can pass between initial HIV infection and the onset of transfusion related AIDS (Schmidt, 1989). Many elderly may not even be aware of being given transfusion during surgery, as neither hospitals nor insurance companies are required to report transfusions to their patients (Linsk, 1994).

**Table 1: Year wise HIV positivity in study groups**

Year	No of samples received	No.> 50 years	No. of HIV positive
2006	4270	504	31
2007	5517	758	109
2008	6408	1088	88
2009	6390	1135	85
2010	7892	1563	67
Total	30477	5048	380

**Table 2: Demographic profile of seropositive elderly**

	50-60 years	60-70 years	Males	Females	Urban	Rural	Married	Unmarried
Seropositive persons detected	380	372	08	241	139	69	311	380
Percentage	97.89%	2.11%	63.42%	36.56%	18.15%	81.85%	100	

**Table 3: Mode of transmission of HIV in seropositive elderly**

MODE OF TRANSMISSION	NUMBER	%AGE
Heterosexual	367	96.58
Blood transfusion	08	02.10
Intravenous drug users	03	0.79
Infected syringes and needles/ Quack treatment	02	0.53

**Table 4: HIV seropositivity according to age and gender**

Age group	Male	Female
50-60 years	233	135
60-70 years	8	4
>70 years	NIL	NIL
Total	241	139

5 (1.3%) had h/o of I/V drug usage or through infected syringes & needles. The percentage of persons over 50 who report I/V drug use has also increased significantly in the last several years (CDCP, 1993), dispelling myths that this type of activity is limited to younger age groups. As such, the risk of transmission through the sharing of needles also presents as a risk factor for older adults, whether the I/V

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drug use took place several years ago or continues to pose a problem for the elder. Given the above, HIV and AIDS are likely to continue to be a concern for the elderly of today, as well as those just beginning to enter their later years. Moreover, it has been additionally critical to consider and assess due to other health problems that, in themselves, may compromise the elder's immune system.

### **Conclusion**

In conclusion, the percentage of the elderly in HIV/AIDS infected individuals seems to be increasing. Considering the limited information available for this group, it is imperative to pay more attention in terms of disease prevention and early detection of HIV infection. At the same time, combining close surveillance of the HIV/AIDS epidemiological trend and proper treatment protocols, we might be able to control and improve the life quality in the long-term treatment of this chronic viral disease in the elderly.

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