

## HIV in Older Adults-Challenges to Diagnosis and Treatment

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### Abstract

**Objective:** The wide access of antiretroviral treatment has led to an increase in the number of people living with HIV who aged 50 or older. This study aims to understand the clinical profile of HIV/AIDS in older adults thereby attempting to close the knowledge gap that prevents early detection and prompt therapy in this particular age group.

**Materials and methods:** A total of 41 patients'  $\geq 50$  years of age admitted to medical wards of a tertiary care centre diagnosed to have HIV infection were included in this prospective cross-sectional study.

**Results:** Majority of the patients belonged to the age group of 50-55 years with a male: female ratio of 2.15:1. Ninety percent were married with good family support and reported adherence to drug regimens. 68% of males had multiple sexual partners. Most of the patients belonged to a low socioeconomic status, were illiterate and had no knowledge of the disease prior to initial diagnosis. Fever and weight loss were the commonly reported symptoms and pallor, generalized lymphadenopathy and hepatosplenomegaly were the common signs at presentation. Twenty patients were newly diagnosed with AIDS. The mean CD4 count in treatment naïve and treatment experienced patients were 159.03 cells/ $\mu$ l and 265.13 cells/ $\mu$ l respectively. In our study population, 32 subjects presented two or more concurrent opportunistic infections at clinical presentation.

**Conclusion:** HIV awareness programs must be directed to include not only high risk groups and young adults but also the elderly and women, especially those of poor socioeconomic strata.

**Keywords:** Elderly; Older adults; HIV; Diagnosis

### Introduction

The wide access of effective antiretroviral treatment is leading to an increase in the number of people living with HIV aged 50 and older. While 50 years of age is not generally used to identify "elderly" patients, this age cut-off is often used by the CDC in HIV/AIDS statistics for older adults [1]. In 2013, people aged 50 and over accounted for 21% of HIV diagnoses in the United States (8,575 of an estimated 47,352). Of these, 3,747 were among those aged 50 to 54 [2].

In developed countries, the life expectancy of a person living with HIV who maintains viral suppression on antiretroviral therapy now approaches that of a person who has not acquired HIV. Meanwhile, the rate of new HIV infection in ages 15-49 years has reduced shifting the demographics of the HIV epidemic to that of an aging one.

Many older adults have the same risk factors for HIV as compared to young adults namely lack of awareness of the disease process and decreased use of safe sex practices. HIV is not considered prevalent among the elderly; sexual and drug habits are seldom discussed, even during the course of frequent doctor visits [3,4]

The challenges faced by health care providers while treating HIV in elderly are many. Older people are more likely to be diagnosed with HIV infection late in the course of the disease resulting in poor prognosis and greater immune system damage at presentation. Symptoms related to HIV may be mistaken for those of normal aging. Compliance to antiretroviral therapy poses challenges with

concomitant chronic illnesses, polypharmacy, adverse drug reactions, opportunistic infections and malignancies. Diagnosis with HIV is still considered a stigma and is often associated with loss of financial and social support systems.

HIV in elderly requires a multipronged approach where the antiretroviral treatment is integrated into the primary health care system. We need to close the knowledge gap with respect to drug regimens in different age groups and how the presence of other illnesses affect HIV related treatment.

### Materials and Methods

#### Study design

This was a one year prospective cross-sectional study done on all older adults with HIV infection admitted to the medical wards of a tertiary care health centre in South India.

Patients who were 50 years of age or older admitted to medical wards of St Johns Medical College and Hospital and diagnosed to have HIV infection according to National Aids Control Organization (NACO) guidelines for serological diagnosis 4 were included in the study. After obtaining informed consent, patients were subjected to a detailed clinical examination. Routine laboratory examination like blood routine, chest x-ray, liver function tests, renal function tests and CD4 count estimation were performed. Opportunistic infections and malignancies were diagnosed applying the NACO guide lines. Associated comorbid conditions were also documented.

## Statistical analysis

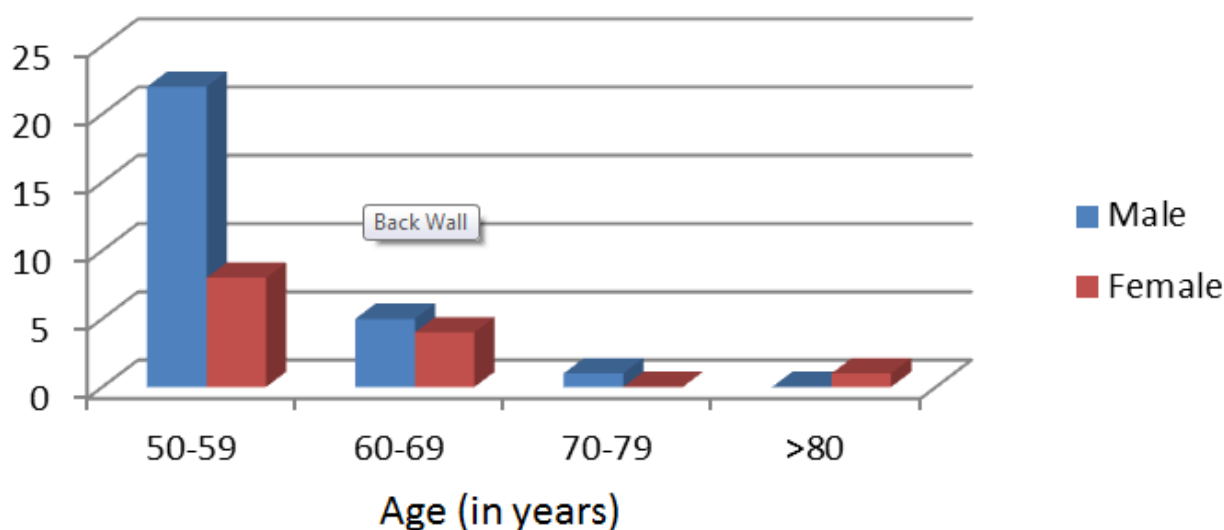
Mean and Median were used as measures of central tendency.

older HIV infected patients (73.17%) were between 50-60 years of age (Figure 1).

## Results

### Demographics

During the study period 2533 patients over the age of 50 years were admitted to the medical ward of which 41 had HIV. The majority of the



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**Figure 1:** Age distribution of study population with HIV infection.

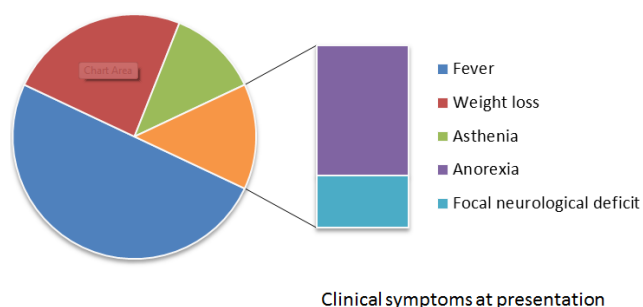
The male to Female ratio was 2.15: 1. Majority of the participants were illiterate (61%). The knowledge of HIV/AIDS among the older adults as assessed by a five point questionnaire was dismal (39%). 81% of study population belonged to lower socioeconomic strata earning a monthly income of rupees 5000 or less. In this study group 59% (24) of subjects were habituated both to ethanol and nicotine on a regular basis, 5% of subjects were only habituated to nicotine. The commonest mode of acquiring the disease was through sexual route. 69% of males had more than one sexual partner.

### Clinical presentation

Fever, weight loss, cough and asthenia were common presenting symptoms and anemia and lymphadenopathy were common clinical signs (Figure 2). Although wasting is a common feature of AIDS/HIV, only 17% of the study population had a low body mass index. Co morbid conditions like Type 2 Diabetes Mellitus, Hypertension and Dyslipidaemia were present among the study population (Figure 3). Twenty patients were newly diagnosed to have HIV infection of which 16 were males. Based on WHO classification 56% of the older adults were in stage 3 of the illness. Mean CD4 at initiation of HAART was 133.06 cells/ $\mu$ L [5-10].

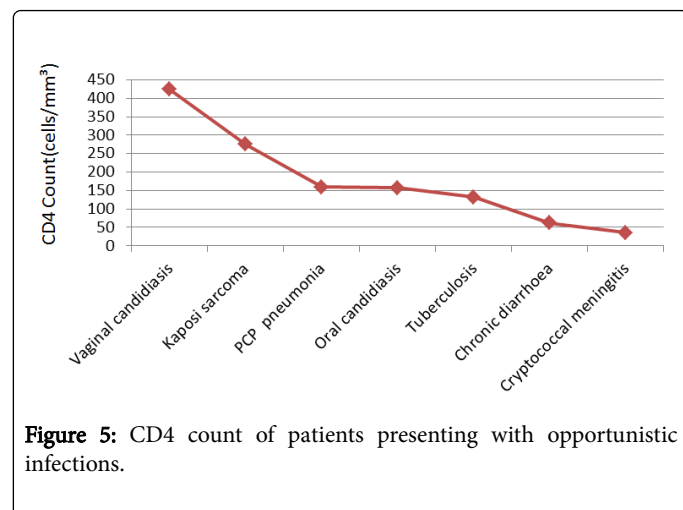
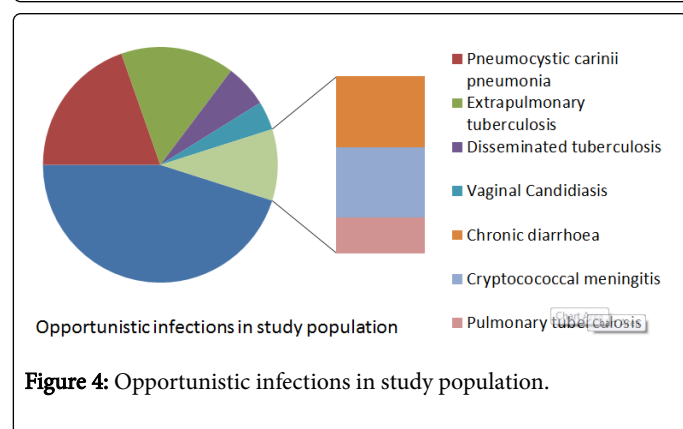
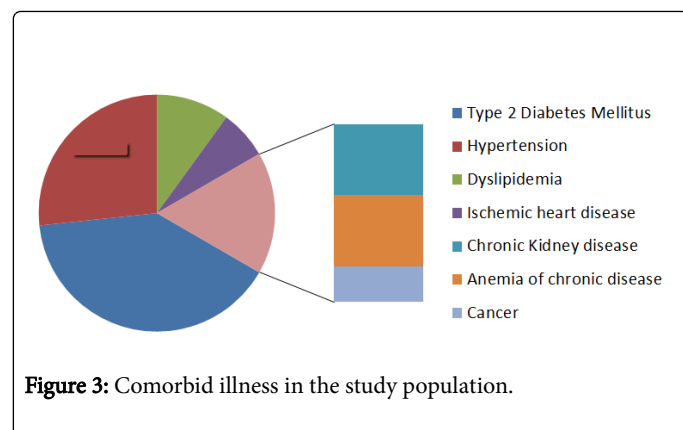
### Opportunistic infections

In our study population, thirty two subjects presented with two or more concurrent opportunistic infections Common infections that were seen were oral candidiasis, tuberculosis, pneumocystis carinii pneumonia (Figures 4 and 5).



Clinical symptoms at presentation

**Figure 2:** Symptomatology at admission.



## Discussion and Conclusion

Advances in medical science and better access to health care have increased longevity of people worldwide. By 2050, the global population of older persons is projected to reach nearly 2.1 billion [11,12]. HIV/AIDS in elderly is likely to be a major public health issue in the future due to on-going efforts to improve early detection of the disease in young adults. HIV awareness programs must be directed to include elderly individuals and women, especially those of poor socioeconomic status. Health care providers should consider HIV/AIDS in elderly patients with frailty, cognitive impairment, constitutional symptoms and opportunistic infections. Policy makers should bring forth liberal HIV testing and kits made available for elderly individuals including asymptomatic spouse of sero-positive patients. Continued medical educations programs are required to address the pathophysiology of aging and care of older adults.

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