HIV SERO-POSITIVE STATUS AMONG CLIENTS AGED ≥ 50 YEARS THAT PRESENTED FOR CARE IN A TERTIARY HEALTH FACILITY IN NORTHEASTERN NIGERIA.

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ABSTRACT

Background: The introduction of highly active antiretroviral therapy (HAART) has transformed HIV infection from hopeless to manageable health condition comparable to non-infectious diseases such as asthma and diabetes mellitus. This modest achievement has reduced morbidity and mortality and increased longevity and quality of life among HIV infected persons.

Although reports from developing countries such as Nigeria, shows that youth within the reproductive are most affected by the scourge of HIV/AIDS. Older patients with features that may be indicative of HIV infection are often overlooked in favour of other differential diagnosis.

Objective: To document HIV positive sero-status among client aged 50 years and above that necessitated HIV test as part of their clinical evaluation after voluntary counseling and testing at a tertiary health facility.

Method: Record of 1674 adults participants that presented for care between January 2009-December 2013, were retrieved for this study.

Results: The HIV-seropositive status among the participants was 370 (22.1%). It showed a female preponderance of 136 (26.0%) than 234 (20.0%) in males. The peak annual prevalence was observed in the year 2010, steady decline was observed thereafter. Overall, older participants between 60-70 years had higher HIV-seropositivity status. This study shows one out four males and five females with index of suspicion either based on clinical presentation or risky sexual behavior are positive for HIV infection.

Conclusion: This report underscores the need to explore other risk factors that may be peculiar to older segment of the society and introduce HIV intervention strategies for the older populations. Delivery of HIV intervention measures and services to this segment of the population is expedient. Measures and interventions should take into consideration the peculiarities, specific vulnerabilities and HIV-related challenges faced by this group of clients.

Keywords: HIV sero-prevalence; ≥ 50 years; Tertiary health facility

INTRODUCTION

With the advent of highly active antiretroviral therapy (HAART) in the last three decade, significant progress has been achieved in steaming the tide against HIV scourge, with significant reduction in both morbidity and mortality.[1] Use of HAART in eligible patients and better management of opportunistic infection associated with HIV infection has lead to remarkable improvements in life expectancy for patients with HIV infection.[2,3] Consequently, patients are now faced with long term complications of HAART and non HIV related morbidities and mortalities as life expectancy increases among HIV cohorts.[4] Morbidity and mortality among HIV patients may not be related to HIV virus or its management.[5,6] Report from our environment shows that co morbidities exist among HIV patients that need to be considered.[7]

The advancement in health technology and improvement in medical care, has lead to increase life expectancy among global population including those with comorbid conditions.[8,9] With this age longevity and improvement in the quality of life, sexual activities of older people have remarkably changed. Measures and HIV intervention programs targeted at reducing incidence of HIV infections in the elderly need to be instituted, including research to evaluate their response to medications and risk factors.

As a nation in Sub-Saharan Africa affected by the scourge of HIV, Nigeria has paucity of data on the prevalence of HIV-infection among the elderly. Studies on the prevalence of HIV in sub-Saharan Africa have focused on population within reproductive and sexually active age group 15 – 49 with peak age-specific prevalence within 25-29 years age-group.[10,11] However, review of existing data from Sub Saharan Africa showed an increased HIV prevalence among older patients.[8-10,12] We therefore undertook this study to document the trend in HIV-seroprevalence among patients aged $\geq$ 50 years over half decade. With the view of validating or refuting previous report and make recommendations as appropriate.

METHOD

Study Site

This retrospective cohort study was conducted at University of Maiduguri Teaching Hospital a tertiary health facility situated in Maiduguri, a referral health centre for infectious diseases and immunology that caters for northeastern region and neighboring countries such as Cameroun, Chad and Niger Republic.

Study Population

Records of 1674 adults aged $\geq$ 50 years were considered for this study. Data were retrieved from medical records of each patient. Permission was obtained to conduct this study from the institution ethics and research committee. HIV counseling and testing (HCT) were offered to them as part of their management.

Laboratory Methods

Five ml of blood was collected into vacutainer EDTA bottle and the sample was allowed to clot. The samples were centrifuged at 1000 rounds/minutes for 10minutes and plasma separated into sterile cryovial containers. HIV screening was carried out by using the rapid two step serial testing algorithm as described in National HIV/ Syphylis Sero-prevalence Sentinal survey among pregnant women attending antenatal clinics, 2010 Technical Report[13].

Data Analysis

The data was analyzed using SPSS for Windows Version 16.0 statistical software (IBM Corporation, Armonk, NY, USA). Simple frequencies and tables were generated, while categorized variables were compared using chi square test. P value <0.05 was considered statistically significant.

RESULTS

We reviewed data of 1674 adults aged ≥ 50years that presented for care from January 2009 to December 2013. The participants consisted of 1146 males and 528 females with male to female ratio of 2.2: 1 respectively. The mean age ± SD of the patients was 57.0 ± 7.64 years. The mean age ± SD of males (57.24 ± 7.71) years was similar to females (56.53± 7.48) years, p>0.05. Of the total 1674 tested, 370 (22.1%) were positive for HIV with the highest percentage positivity of 138(30.3%) in year 2010 and least percentage positivity of 67(15.3%) in 2013. Step wise decline in percentage HIV sero positivity was observed from 2010 to 2013. The overall HIV seropositivity showed a female preponderance in comparison to their male counterpart; it was 136(26.0%) in females and 234 (20.4%) in males respectively (p =0.000). Although the trend in statistically significant gender difference in HIV sero-positivity was maintained, over the half decade of the study, the peak HIV sero-prevalence of 30.3% was observed in the year 2010 with 35.1% in females and 28.0% in males. Conversely the least HIV seroprevalence 14.2% was recorded in 2013, with 14.2% in males and 20.2% in females respectively as presented in Table 1. Figure 1 depicts prevalence trend of HIV-sero-positivity based on gender. The prevalence is higher among females. The HIV prevalence increases across age groups are also higher among females with peak in the seventh decade as shown in figure 2.

Table 1. Distributions of HIV seropositivity by gender from 2009 -2013

Year	No tested	No Tested		No Positive (%)	
		Male	Female	Male	Female
2009	288	198	90	48(24.2)	21(23.3)
2010	454	300	154	84(28.0)	54(35.1)
2011	287	234	53	42(20.0)	12(23.0)
2012	252	168	84	25(15.0)	17(20.2)
2013	393	246	147	35(14.2)	32(22.0)
Total	**1674**	**1146**	**528**	**234(20.4)**	**136(26.0)**

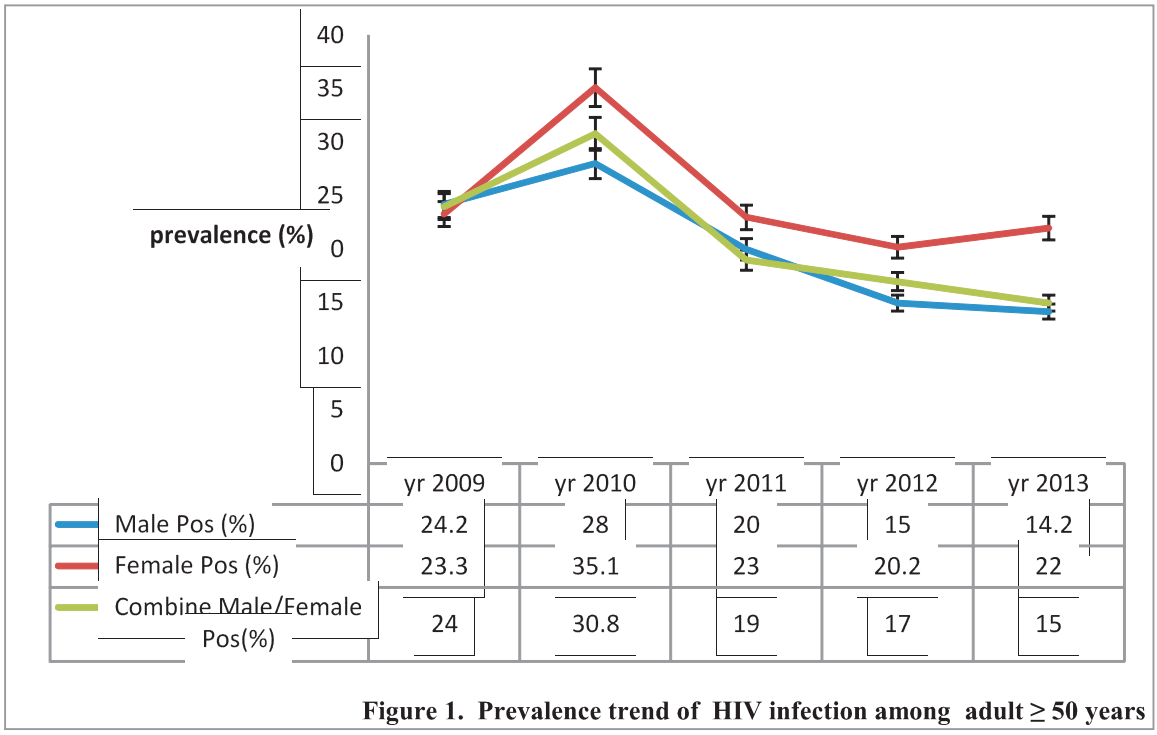

Figure 1. Prevalence trend of HIV infection among adult ≥ 50 years

*yr = year

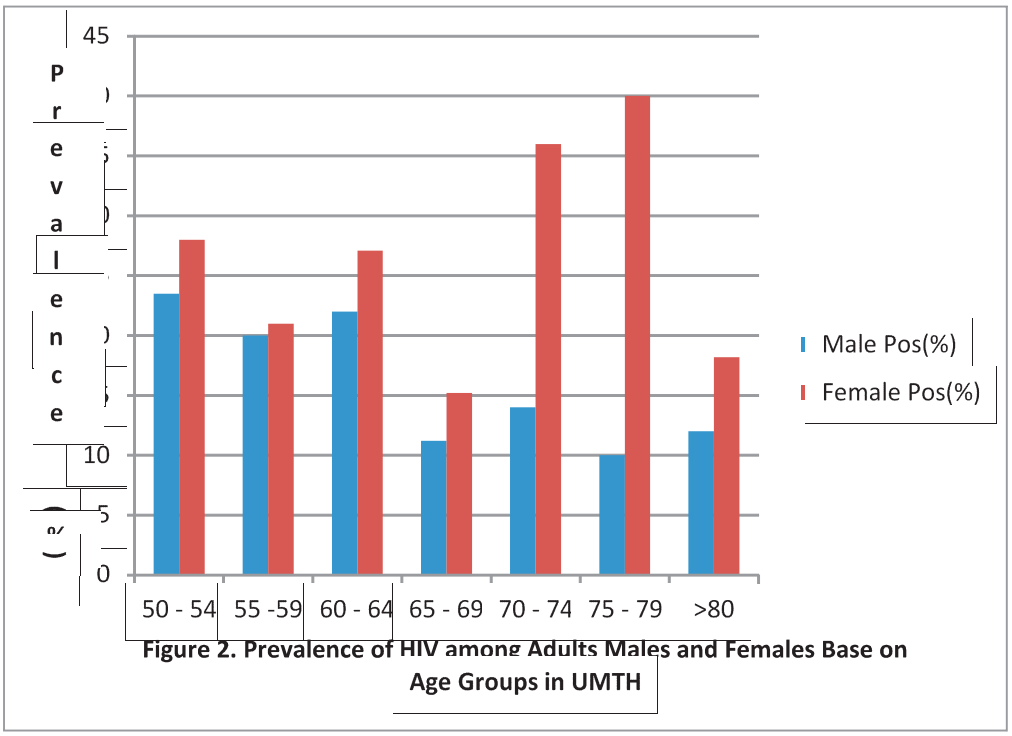

Figure 2. Prevalence of HIV among Adults Males and Females Base on Age Groups in UMTH

DISCUSSION

Despite gains achieved in the last three decades in combating the scourge of HIV/AIDS epidemic, the disease burden among those aged ≥50 years persist; it represent a blind spot or missing link in the global response.[14] Most available data report prevalence rates among those presumed to be within reproductive age or sexually active (15-49 years), as a result prevalence rate among younger population are used as indicators for the global response. However, despite the stereotypes, individuals remain sexually active even at older age. Common misconceptions about sexual activity among older people remain. A study in Nigeria dismissed older people as no longer being sexually active,[15]confirming what Ory et al. called "ageist assumptions about sexual behaviour"[16] These attitudes limit the development of appropriate responses tailored specifically to older adults.

The prevalence rate of 22% among our studied population is rather alarming and worrisome, worse still we observed a higher rate among senior citizens aged 60-70 years, a group that is expected to be at lesser risk given the expected biological changes and decrease in libido that is expected with aging process. A few studies have documented HIV infection among older adults: a study in rural Cameroon showed a prevalence of 2.6% among men and women aged 55–70 years,[17] and a study among people admitted to hospital in Dar es Salaam, United Republic of Tanzania, reported a prevalence of 15% among those aged ≥ 55.[18] A study in the Congo described 175 cases of HIV infection among people aged ≥ 55 years from 1990 to 1996.[19]

In general, however, data on HIV infection in older adults in Africa are limited. However, our study was a hospital based among patients that presented for medical attention, although our report may overestimate the seroprevalence in comparison to apparently healthy population, it is however likely that the rate of HIV infection among those aged ≥ 50 years is underestimated especially in Sub Saharan Africa with dearth of quantitative research in sexual behaviors and incidence of HIV infection. The few existing studies on HIV infection among older adults have focused mainly on developed countries.[9,20,22,23] Studies in developing countries emphasize the social and economic impact of HIV infection – mainly its effect on older grandparents in their role as caretakers of children orphaned as a result of parental HIV infection – and have ignored the prevalence of HIV infection in older people and its impact on their lives.[5,6]

Another compounding factor for under reporting among patients aged ≥ 50 years in Sub Saharan Africa is unwillingness to take an HIV test compared with younger clients.[24] Furthermore, older clients as reported by workers in Brazil.[25] appear likely to be diagnosed late in the course of HIV infection, often with features of full blown AIDS, this may be same in Africa. Studies of sexual activity in people aged ≥ 50 years indicates 81.5% were still sexual active involving one or more partner including prostitutes.[26] yet a national survey in the United States reported only minority of people aged ≥ 70 years consistently used condoms.[27] Our female cohort had higher HIV prevalence rate, factors that drives higher risk of HIV infection among females includes high rate of divorce, sex trade, low socioeconomic status, illiteracy to negotiate safer sex practice and physiological changes due to age related vaginal thinning and dryness that result in tears of the vaginal wall.[28] Timely commencement of antiretroviral therapy is especially important as the immune system of people aged ≥ 50 years tend to recover slowly than younger people to avoid morbidity and mortality.[29] Increased access to antiretroviral therapy especially in low and medium income countries has lead to initiation of therapy at a higher CD4 counts, this has lead

to increase life expectancy. Between 2009 to 2011, life expectancy at birth in South Africa had increased from 56.5 to 60 years largely due to implementation of intervention and prompt treatment by HIV programmes.[12,14]

Limitations: This study has limitations that include retrospective design, so possible missing data may introduce bias, HIV testing was voluntary, and it was only done for those that gave consent. Risk stratification was not done, the prevalence obtained includes both high risk and low risk clients.

CONCLUSION

The reported high prevalence of HIV among clients aged ≥50 years underscores the need to explore other risk factors that may be peculiar to older segment of the society and introduce HIV intervention strategies for the older populations. Delivery of HIV intervention measures and services to this segment of the population is expedient. Measures and interventions should take into consideration the peculiarities, specific vulnerabilities and HIV-related challenges faced by the elderly.

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