

Gender difference among newly reported HIV patients attending HIV center- Alsadqa teaching hospital - Aden

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DOI: <https://doi.org/10.47372/uajnas.2022.n2.a12>

Abstract

Gender is a clear contributor to disease pathogenesis in multiple infectious diseases. There were different studies identifying that effect of biological sex are challenging, work to date has yielded important insights. HIV disease progression and clinical manifestations differ among women and men because of biological and socioeconomic factors. This is a descriptive prospective study, the main objectives of study is identify sex difference among newly reported HIV patients attending HIV Center at Alsadqa Teaching Hospital Aden, from 1st January 2021 to 31st Jan 2022.

Most of the patients were males with 74.6% and the mean age was 38.79 ± 10.38 in stage 4 with 28.6% and death were 7.9%, while female mean were younger age 32.44 ± 8.23 .

From this study, we conclude that male patients were the most common attendant to HIV Center but in late stage 4, with high mortality in comparison to female.

Key words: Male, Stage, mortality.

Introduction

Human immunodeficiency virus (HIV) continues as one of the serious public health challenges in developing countries,¹⁰ Globally by the end of 2020, the estimated number of people living with human immunodeficiency virus (HIV) were 37.7 million.¹⁵

Sex differences serves a dual purpose in which defining: firsts-specific responses will insure that interventions have efficacy in both men and women, and second, differences may highlight pathways that can be modulated in both sexes to optimize treatment, prevention and curative interventions, the clinical studies to isolate the effects of biological sex are challenging, but work to date has yielded important insights.¹¹

Sex is a clear contributor to disease pathogenesis in multiple infectious diseases,¹⁴ and HIV follows this paradigm.

Across most studies, women have lower HIV viral loads early during infection. But, despite this difference, disease progression is comparable between the sexes.¹

In the Middle East and North Africa (MENA) region, antiretroviral therapy (ART) coverage remains the lowest; covering only 17% of individuals.⁹ In addition, access to HIV testing and counseling is still limited.⁵

The World Health Organization (WHO) has developed case definitions for HIV surveillance and clinical staging and immunological, so classification of HIV-related disease in adults and children is intended for baseline assessment of patients and for use in provision of ongoing care.⁶

Stage 1: patients who are asymptomatic or have persistent generalized lymphadenopathy.

Stage 2: even in early HIV infection, patients may demonstrate several clinical manifestations. Clinical findings included in stage 2 (mildly symptomatic stage) are unexplained weight loss of less than 10 percent of the total body weight and the recurrent respiratory infections such as sinusitis, bronchitis, otitis media, and pharyngitis.

Stage 3: as disease progresses, additional clinical manifestations may appear weight loss of greater than 10 percent of the total body weight, prolonged (more than 1 month) unexplained diarrhea, pulmonary tuberculosis, and severe systemic bacterial infections.

Stage 4: the severely symptomatic stagdesignation includes all of the AIDS-defining illnesses. Clinical manifestations are HIV wasting syndrome, Pneumocystis pneumonia (PCP), recurrent severe or radiological bacterial pneumonia, extrapulmonary tuberculosis, HIV encephalopathy, CNS toxoplasmosis, chronic (more than 1 month) or orolabial herpes simplex infection, esophageal candidiasis, and Kaposi's sarcoma.³

The Antiretroviral Therapy Cohort Collaboration (ART-CC) previously reported that, despite improvements in virological response to ART, mortality in the first year after initiation of ART did not decrease between 1998 and 2003,¹⁶ regardless some studies have reported improvements in overall survival and changing causes of death, with proportionately fewer AIDS-related deaths in more recent years, but none has investigated trends in prognosis after starting ART by calendar period.¹²

Objectives:

1. To identify the prevalence of male and female patients visit HIV centre
2. To assess the different stage at presentation time
3. To identify the relation between sex of patients with age, stage and mortality

Patients and methods:

This is a descriptive prospective study of 63 cases of new HIV patients visiting the HIV Center in Al-Sadqa Teaching Hospital, Aden, from 1st January 2021 to 31st Jan 2022.

Information taking from patients after getting permission from the Medical Research Ethics committee.

Inclusion criteria: all patients newly diagnosed of HIV aging ≥ 15 years and fulfilling requirement information

Exclusion criteria: patients aging < 15 years and not complete requirement Patients' data were analyzed using frequency distributions for quality variable, and mean for quantitative.

Stage classified by the WHO system for adults sorts patients into one of four hierarchical clinical stages ranging from stage 1 (asymptomatic) to stage 4 (AIDS). Patients are assigned to a particular stage when they demonstrate at least one clinical condition in that stage's criteria, these categories are apply to adults and adolescents (15 years and older).⁶

To assess the association among variables, mean standard deviations (\pm SD) were computed and Chi-square test (χ^2) was used to analyze differences between qualitative variables and compare mean for quantities variable and applied to find out the statistical significance by computerized system. A P value of < 0.05 was used as a cutoff for statistical significance. All the statistical analyses (Data processing) were performed, using the computer facilities Statistical Package for the Social Sciences (SPSS version 26) .

Result and discussion:

In this study patients mean age was 37.17 ± 10.20 (rang 19 – 65 years) which is near to that of study by Khamis et al ,who reported that the overall mean age of the cohort study was 36.0 ± 15.0 years with male to female mean age 38.79 ± 10.38 , 32.44 ± 8.23 years old also near to Khamis et al who reported female mean age 33.0 ± 15.0 years and male 38.0 ± 15.0 years,⁷ with significant retaliation between the age and sex of HIV patient represented in Table 1.

Sex	Mean age by years	P.value
Male	38.79 ± 10.38	0.030
Female	32.44 ± 8.23	
Total	37.17 ± 10.20 (19 - 65)	

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Out of 63 patients newly attending the center were 22 patients (34.9%) from Aden governorate with 74.6% male and 25.4% female, which is near to that of Zaho et al reported 77.5% male and 22.5% female.¹⁷

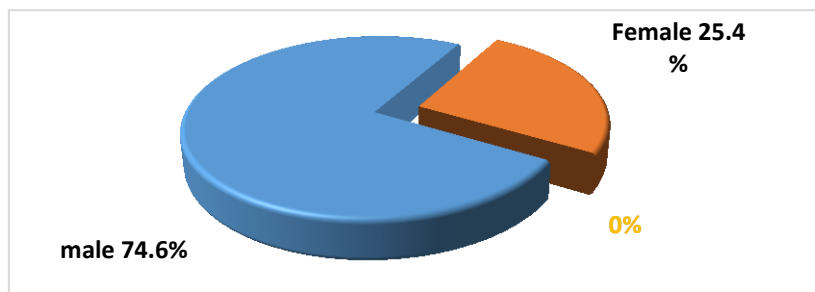


Figure 1 :Distribution of patient by sex

Stage	Male		Female		Total	
	No	%	No	%	No	%*
1	17	27	6	9.5	23	36.5
2	0	0	1	1.6	1	1.6
3	12	19	5	7.9	17	27
4	18	28.6	4	6.3	22	34.9

Percentage calculated by total * Percentage calculated by column P = 0.556

Most of male patients came to the center in 4th stage with 28.6% ,which is near to that of Mosha et al with 21.4,⁸ while female in 1st stagewith 9.5% as reported in Mosha et al that female in this stage were 9.8% .⁸

Despite the strong mortality reductions among HIV patients in all study sites, the mortality rates of HIV-positive adults are still between 2.4 and 6.6 times higher than those of HIV negatives (both sexes combined), which underlines that there is still much room for improving ART coverage and impact.⁴

In this study five patients (7.9 %) death after start treatment in which all were male with mean age 36 + 7.17 and 4th stage, near to Gkengin et al 6.7% died of HIV infected patients.⁵

One of the explanations suggested for the gender difference in survival is the observation that female HIV-infected patients enter ART programs at an earlier stage of their HIV infection than men.²

Conclusion

Male patients attending the HIV Centre were more than female ones. They were old and in late 4th stage with heigh mortality.

Females were younger in the early 1ststage and there were no mortality among them during study period .

Reference:

1. Anastos K, Gange SJ, Lau B, Weiser B, Detels R, Giorgi JV. (2000) Association of race and gender with HIV-1 RNA levels and immunologic progression. *J Acquir Immune Defic Syndr*. 24(3):218–26.
2. Chen SCC, Yu JKL, Harries AD. (2008) Increased mortality of male adults with AIDS related to poor compliance to antiretroviral therapy in Malawi. *Trop Med Int Health*. 13(4):513–519.
3. Cornell M, Schomaker M, Garone DB, Giddy J, Hoffmann CJ, Lessells R. (2012) Gender differences in survival among adult patients starting antiretroviral therapy in South Africa: A multicentre cohort study. *PLoS Medicine*. 9 (9): 1001304
4. Georges R, Emma S, JessicabN, Constancec N, Catharine C, Kobuse H. (2014) ALPHA Network Mortality trends in the era of antiretroviral therapy. *AIDS*. 28: 533-542.
5. Gkengin D, Doroudi F, Tohme J, Collins B, Madani N. (2016) HIV/AIDS: trends in the Middle East and North Africa region. *Int J Infect Dis* . 44:66-73.
6. <https://journalofethics.ama-assn.org/article/who-clinical-staging-system-hiv-aids/2010-03>
7. Khamis F, Al Noamani J, Al Naamani H, Al-Zakwani I. (2018) Epidemiological and Clinical Characteristics of HIV Infected Patients at a Tertiary Care Hospital in Oman. *Oman Medical Journal*. 33(4): 291-298
8. Mosha F, Muchunguzi V, Matee M, Sangedar R, Vercauteren J, Nsubuga P. (2016) Gender differences in HIV disease progression and treatment outcomes among HIV patients one year after starting antiretroviral treatment (ART) in Dar es Salaam, Tanzania. *BMC Public Health*. 13:38- 41
9. Mumtaz GR, Riedner G, Abu-Raddad LJ. (2014) The emerging face of the HIV epidemic in the Middle East and North Africa. *Curr Opin HIV AIDS*. 9(2):183-191.
10. Sajadipour M, Rezaei S, Irandoost SF, Ghazmzadeh M, Nadushan S, Gholami M. (2022) What explains gender inequality in HIV infection among high-risk people? A Blinder-Oaxaca decomposition. *Archives of Public Health* . 80:2-9
11. Scully PE. Sex Differences in HIV Infection. (2008) *curr HIV/AIDS Rep*. 15 :136 -146
12. Trickey A, May M, Vehreschild J, Obel N, Gill M, Crane H. (2017) Survival of HIV-positive patients starting antiretroviral therapy between 1996 and 2013: a collaborative analysis of cohort studies. *Lancet HIV* . 4: 349–356
13. UNAIDS. (2017) Joint United Nations Programme on HIV/AIDS (UNAIDS). Geneva: UNAIDS Data.
14. VomSteeg LG, Klein SL. (2016) Sex matters in infectious disease pathogenesis. *PLoS Pathog*. 12(2):e1005374. <https://doi.org/10.1371/journal.ppat.1005374>.
15. WHO. HIV/AIDS. <https://www.who.int/news-room/fact-sheets/detail/hiv-aids>
16. World Health Organization. (2005). Interim WHO clinical staging of HIV/AIDS and HIV/AIDS case definitions for surveillance: African Region (No. WHO/HIV/2005.02). World Health Organization.
17. Zhao H, Liu H, Wang L, Yang X, Wang S, Han M. (2020) Epidemiological Characteristics of Newly-Reported HIV Cases Among Youth Aged 15–24 Years — China, 2010–2019. *CCDC*. 2:48.913 – 16.

الفرق بين الجنسين بين مرضى فيروس نقص المناعة المكتسبة المبلغ عنه حديثاً في مركز فيروس نقص المناعة

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DOI: <https://doi.org/10.47372/uajnas.2022.n2.a12>

المخلص

الجنس مساهم واضح في أمراض العديد من الأمراض المعدية، ووجود دراسات إكلينيكية مختلفة لتحديد آثار الجنس البيولوجي تمثل تحدياً، وقد أسفر العمل حتى الآن عن رؤى مهمة بحيث يختلف تطور مرض فيروس نقص المناعة المكتسبة والمظاهر السريرية بين النساء والرجال بسبب عوامل بيولوجية واجتماعية اقتصادية، وهذه دراسة وصفية مستقبلية.

الأهداف الرئيسية للدراسة لتحديد الفرق بين الجنسين من مرضى فيروس نقص المناعة المكتسبة المبلغ عنه حديثاً في مركز فيروس نقص المناعة المكتسبة في مستشفى الصداقة التعليمي عدن، من الأول من يناير 2021 إلى 31 يناير 2022.

كانت نسبة معظم المرضى المعالجين من الذكور 74.6% ومتوسط العمر بالسنوات 10.38 ± 38.79 في المرحلة الرابعة للمرض بنسبة 28.6% ونسبة الوفاة 7.9%، بينما كانت الإناث أصغر سناً 8.23 ± 32.44 سنة.

ومن نتائج هذه الدراسة أن المرضى الذكور كانوا الأكثر حضوراً لمركز فيروس نقص المناعة المكتسبة ولكن في المرحلة الرابعة وكان معدل الوفيات مرتفعاً بالنسبة لهم مقارنة بالنساء.

الكلمات المفتاحية: ذكر، مرحلة، وفيات.