Assessing the burden of Advanced HIV Disease among newly diagnosed individuals in three high volume facilities in Kampala, Uganda - a retrospective study (2021-2023)

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Background

- Despite global strategies for early detection and treatment of HIV, a significant proportion of newly identified people living with HIV (PLHIV) present with Advanced HIV Disease (AHD).
- In Uganda, approximately 30% of newly identified PLHIV present with AHD. This study examines the burden of AHD and its correlates among newly diagnosed individuals at three health facilities in Uganda.

Methods

- We abstracted data from Electronic Medical Records and registers for patients aged 15 years and older, newly diagnosed with HIV from January 2021 to December 2023 in 3 health centers in Kampala City.
- AHD was defined as CD4 cell count of =< 200 cells/ml and /or a WHO stage 3 or 4 event. Age, gender, marital status ,WHO clinical stage ,CD4 count, TB status ,cryptococcal antigen(CRAG) status, nutritional status and weight categories were described and analyzed for crude association with AHD.
- A multivariate logistic regression model was built to identify independent predictors of AHD

Multivariate Model for Predictors of AHD

Predictor	Category	Odds Ratio	95% Confidence Interval	P value
Sex	Female	1		
	Male	1.73	1.22 - 2.45	0.002
Age in years	≤ 25	1		
	26-35	1.91	1.18 - 3.07	0.008
	36-45	2.57	1.48 - 4.46	0.001
	46-55	3.01	1.46 - 6.16	0.003
	56+	2.90	0.9014 - 9.33	0.074
Marital Status	Single	1		
	Married	1.18	0.77 - 1.81	0.435
	Divorced/Separated	1.69	1.148 - 2.50	0.008
	Widowed	2.74	1.155 - 6.51	0.022
Nutritional Status	Normal	1		
	Mod - malnutrition	4.11	2.37 - 7.13	0.000
	Sev- Malnutrition	14.72	3.19 - 68.01	0.001
	Not assessed	1.48	0.43 - 5.18	0.534
Weight Categories	<40 kg	1		
	40-59 kg	0.23	0.04 - 1.27	0.092
	60-79 kg	0.19	0.03 - 1.07	0.060
	>80 kg	0.16	0.03 - 0.98	0.048

Results

Participant characteristics

- Among 826 clients(median age 31.5 years, IQR 26-39),majority (61.38%) were female. Most (66.22%) were in WHO clinical stage 1, 12.83% had TB and 32.83% had CD4 cell count<200cells/ml
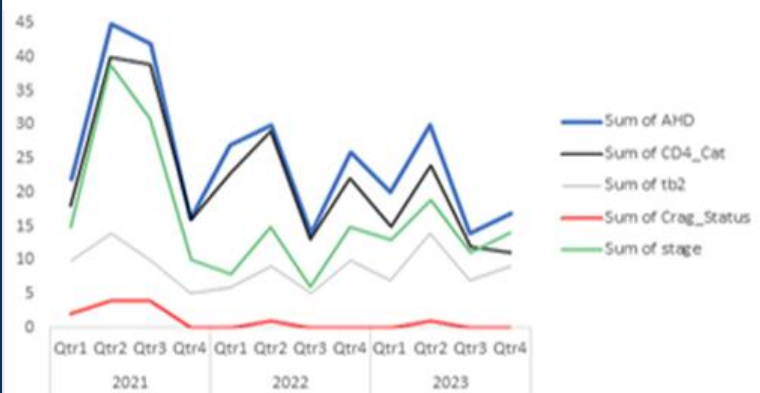- Overall prevalence of AHD was 36.68% (95% CI 33.46- 40.03).

Multivariate Analysis of Predictors for AHD

- Male gender was associated with AHD (aOR: 1.73, 95% CI: 1.22-2.45, p=0.002).
- Compared to age group 15 –25 years, the odds of AHD increased with age groups; 26-35 years (aOR: 1.91, 95% CI: 1.18-3.07, p=0.008), 36-45 years (aOR: 2.57, 95% CI: 1.48-4.46, p=0.001), and 46-55 years (aOR: 3.01, 95% CI: 1.47-6.16, p=0.003).
- In comparison to never married clients, higher odds of AHD were noted among divorced/separated (aOR: 1.69, 95% CI: 1.15-2.50, p=0.008) and widowed individuals (aOR: 2.74, 95% CI: 1.16-6.51, p=0.022) .
- Moderate malnutrition (aOR: 4.11, 95% CI: 2.37-7.13, p<0.001) and severe malnutrition (aOR: 14.73, 95% CI: 3.19-68.01, p=0.001) significantly increased the odds of AHD compared to a normal nutritional status.

Trends in Advanced HIV Disease Diagnoses in ROM Facilities (2021-2023) `

Conclusion

The prevalence of AHD among newly diagnosed HIV patients in Kampala was higher than the national average. This highlights the need for interventions targeting categories of gender, age, marital status, and nutritional status among late presenters

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