

The pattern of respiratory manifestations in persons with HIV & AIDS in Dar Es Salaam, Tanzania twenty six years after the introduction of anti-retro viral drugs.

Magoma, Robert M. (2023)

ABSTRACT

Background: Human Immunodeficiency Virus (HIV) that belongs to family retroviridae, and sub-family Lentiviridae, whose hallmark is reverse transcription of its RNA genome back to DNA via reverse transcriptase; is an important agent associated with long term immunodeficiency state in humans. However, respiratory manifestations among people living with HIV after introduction of ante-retroviral therapies in Tanzania have barely been published in peer reviewed retrievable platforms.

Objective: To assess respiratory manifestations among adults living with HIV/AIDS in Dar es Salaam.

Methods: A cross-sectional hospital-based study was conducted at Dar es Salaam public regional referral hospitals. Adults living with HIV/AIDS displaying respiratory manifestations were the target population. A pre-designed questionnaire was the main tool used for data collection. Univariate statistics was done and summarized using median and corresponding inter-quartile range. Multivariable logistic regression was the main method of data analysis. Alpha level of 5% was used as a limit of type I error in findings.

Results: We successfully recruited and analysed 302 adult participants. Male: Female =1.6:1. Median age of participant was 47 (IQR: 38 – 53) years. Participants had a median HIV-stage 2. Prevalence of respiratory manifestations among study participants was about 21.9%. Pulmonary TB was the commonest (n=23, 7.6%) respiratory diagnosis. Coughing was the commonest symptom (n=157, 51%). Actual age in years (A.O.R.: 0.85, 95% C.I.:0.7 – 0.997), age at HIV diagnosis (A.O.R.: 1.21, 95% C.I.: 1.00 – 1.44), HIV stage (A.O.R.:1.6, 95% C.I.: 1.1 – 2.1), estimated time (in years) on ARVs (A.O.R.: 0.89, 95% C.I.: 0.79 – 0.99), viral load (A.O.R.: 1.7, 95% C.I.: 1.1 – 2.37) as well as CD4+ counts (A.O.R.:0.82, 95% C.I.: 0.7 – 0.95) were significantly associated with respiratory manifestations among participants with HIV-infection. HIV stage (A.O.R.: 3.8, 95% C.I.: 3.1 – 4.4), viral load (A.O.R.: 8.1, 95% C.I.: 6.0 – 9.6) as well as estimated time (in years) on ARVs were significantly associated with respiratory manifestations among participants with defined AIDS.

Conclusion: About one-fifth of all study participants had reported respiratory manifestations. Tuberculosis was the most prevalent respiratory diagnosis. Actual age, HIV stage, estimated time on ARVs, CD4+ counts as well as viral load were factors associated with respiratory manifestations in this study population.

Recommendations: Modern and standard diagnostics need to be invested in order to be able to improve diagnostic utilities of different respiratory pathologies associated with HIV/AIDS in Tanzania. There are potential possibilities for pulmonary-based diagnostic calculators for clinical predictive analyses as well as prognostication purposes.