Prevalence and predictors of HIV infection among exposed under five-year children in Muheza District, north-eastern Tanzania

Veneranda M. Bwana[1,2*], Leonard E.G. Mboera[3], Sayoki G. Mfinanga[4,5], Edgar Simulundu[6], Charles Michelo[1,7]

[1]University of Zambia, School of Public Health, Lusaka, Zambia
[2]National Institute for Medical Research, Amani Research Centre, Muheza, Tanzania
[3]SACIDS Foundation for One Health, Sokoine University of Agriculture, Morogoro, Tanzania
[4]National Institute for Medical Research, Muhimbili Research Centre, Dar es Salaam, Tanzania
[5]Muhimbili University of Health and Allied Sciences, Dar es Salaam, Tanzania
[6]University of Zambia, School of Veterinary Medicine, Department of Disease Control, Lusaka, Zambia
[7]Strategic Centre for Health Systems Metrics & Evaluations, School of Public Health, University of Zambia, Lusaka, Zambia

Background: Human immunodeficiency virus (HIV) pandemic has become a significant public health concern worldwide. The prevalence of pediatric HIV infection is largely unknown in many countries in sub-Saharan Africa. We aimed to determine the prevalence and predictors of HIV infection among under-five year children in Muheza District, Tanzania.

Methods: A facility-based study among mothers/guardians and their under five-year children exposed to HIV infection was conducted from June 2015 to June 2016. Information on HIV status, socio-demographic and other family characteristics was collected using a structured questionnaire. Data analysis was done using STATA version 13.0.

Results: A total of 576 HIV-exposed under-five year children were recruited together with their respective mothers/guardians. The HIV prevalence among children was 10.6% (95% CI: 8.1-13.1%). The burden of HIV infection was observed among older children aged 25-59 months (AOR= 8.0, 95% CI 2.5-26.0) than in the younger children. There was a four-fold (AOR=3.9, 95% CI 1.7-9.1) risk of HIV infection among children born to mothers of unknown HIV status at conception than among children from mothers with known HIV status. The odds of HIV infection were higher among children who were delivered at home (AOR=2.6, 95% CI 1.0-6.5), received mixed feeding (AOR=2.4, 95% CI 1.2-4.9) and those living far from health facility (AOR=3.0, 95% CI 1.4-6.5).

Conclusion: The prevalence of HIV among under-five year children in Muheza is higher among older children. The high prevalence is associated with being born to mothers with unknown HIV status at conception, received mixed feeding, home delivery and living far from health facility. Campaigns that provide health educational massages addressing risk factors of HIV need to be emphasized in the control and prevention of HIV among children.

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