

Title: Mother-to-child HIV transmission and its associations among exposed infants after Option B+ guidelines implementation in the Amhara regional state referral hospitals, Ethiopia

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Abstract

Background: Elimination of mother-to-child transmission of human immunodeficiency virus (HIV) has been a global public health priority. In 2013, the World Health Organization recommended antiretroviral therapy administration to all HIV-positive pregnant and breastfeeding women regardless of the CD4 cell count or clinical stage, referred to ‘Option B+’. Ethiopia has had a high prevalence of mother-to-child transmission of HIV. The prevalence of transmission in breastfeeding mothers was 24% in 2012 and increased to more than 30% in 2015. Thus, the aim of this study was to determine the prevalence of HIV transmission and its associations among infants born to HIV-positive mothers who had enrolled with the five Amhara regional state referral hospitals’ prevention of mother-to-child HIV transmission departments, Ethiopia.

Methods: The study used a retrospective single cohort design, and simple random sampling with proportional allocation to select the medical records of 217 exposed infants. The data collected from each hospital were documented from January 1, 2014 to May 30, 2017. The cumulative incidence and prevalence of HIV transmission among exposed infants in the region were presented using figures and tables.

Results: The prevalence of HIV transmission among exposed infants at enrollment to the program was 2.3% (five cases) (95% CI, 0.5–4.6%), whereas the prevalence of HIV transmission among exposed infants on completion of the program was 3.7% (8) (95% CI, 1.4–6.5%). The cumulative incidence of transmission on completing the program was 1.6% (3) (95% CI, 0.0–3.2%).

Conclusions: In contrast to the expected outcome of the World Health Organization’s ‘Option B+’ guidelines regarding HIV transmission, this study found the cumulative incidence of HIV transmission on completing the program and the overall prevalence of HIV infection to be high. Although some studies have reported significant reductions in mother-to-child transmission of HIV, there are still considerable challenges in preventing this transmission in the Amhara region.

Keywords: Exposed infants, Referral hospitals, Amhara region, Option B⁺, Ethiopia

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