

# **The burden and early neonatal outcome of infants born to HIV positive women in a tertiary centre.**

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## **Abstract**

*Introduction:* Tanzania is one of the 22 countries with the highest estimated numbers of pregnant women living with HIV, and as such a focus country for MTCT elimination. HIV prevalence among pregnant women is 6.8%, compared to an overall population prevalence of 5.1%. The neonatal mortality rate was 40.4/1,000 live births in 1999, 32/1,000 live births in 2004/05 and 26/ 1,000 live birth in 2010. Currently i.e. in 2012 Tanzania neonatal mortality is reported to be 21.4/per 1,000 live births. Up to 50% of all neonatal deaths occur in the first 24 hours of life, with over 75% of them taking place in the first week of life. HIV exposure of the neonates may be associated with higher mortality, this way contributing to high mortality of neonates.

*Objectives:* To determine the early health problems and proportion/burden of HIV Exposed neonates in a tertiary institution, and to determine the knowledge and perception of breast-feeding counselling to the mothers, co-morbidity conditions of a mothers that contribute to the early neonatal health problems and to determine the early neonatal outcome of HIV exposed infants.

*Methods:* The study was a six-month cross sectional descriptive hospital-based study covering all neonates exposed to IV/AIDS mothers, conducted at the neonatal unit of Muhimbili National Hospital.

*Results:* A total of 384 neonates, males 186(90.7%) and females were 165(92.2%) were studied. Number of HIV exposed neonates were 33(8.5%), males 19(9.3%) and females 14(7.8%). Total number of deaths were 45 neonates, males 21(46.7%) and 3 females 24(53.3%). Among neonates who died HIV exposed were 6(13.3%) and non-HIV exposed were 39(86.7. %). HIV-positive women who received ARV prophylaxis during pregnancy 6(18.18%) and 27(81.81%) were on ARV therapy. In this study, the HIV positive mothers had 35.2-fold increased risk of PROM when compared to HIV negative mothers (95% CI 3-409, P=0.04). The study also showed HIV exposed neonates to have 20.1 increased risk of being unconscious when they were sick (95%CI 3.2-123, P=0.001). The study revealed HIV exposed to stay much longer in the wards,

i.e. twice as much as the unexposed neonates (OR 2.3, 95% CI 1.1-4.8, P=0.025). Six (66.7%) of the HIV unexposed neonates were found to have Anaemia with COR of 5.7(95% CI 1.3-24.1, P=0.007) which is statistically significant. However, when adjusted to potential confounders, it was found to be insignificant. All mothers received breast feeding counselling except one HIV positive mother who died immediately after delivery. Most mothers following the breastfeeding counselling opted for exclusive breast feeding.

*Discussion /Conclusion* This study shows that, the prevalence of HIV exposed neonates is higher than the community prevalence, based on the feeding counselling done as per PMTCT national guideline. HIV infected mothers were found to be at higher risk of having premature rupture of membrane compared to non-HIV infected mothers while HIV exposed neonates were found to have higher risk of becoming unconscious when sick as compared to the unexposed neonates. Appropriate infections control measures during pregnancy should be given more priority in order to minimize early neonatal morbidity and mortality in HIV exposed infants. The program should be strengthened and expanded to cover the entire country for the comprehensive management of HIV exposed neonates.