



RECENT TRENDS IN ESTIMATED HIV-1 INCIDENCE AMONG ROYAL THAI ARMY (RTA) CONSCRIPTS FROM 2005-2009 IN THAILAND

Tabprasit S¹, Kana K¹, Sununtarod E², Seakam K², Chaitaveep N¹, Saipin K¹, Nitayaphan S¹, Sirisopana N¹ and Chuenchitra T¹

¹Armed Forces Research Institute of Medical Sciences, Bangkok, Thailand ²Army Institute of Pathology, Bangkok, Thailand

Abstract

Background: Since November 1989, the AIP and the AFRIMS have conducted HIV-1 screening among RTA conscripts in order to assess the prevalence of HIV-1 infection. However, knowledge about the most recent HIV epidemic among young generation in Thailand is crucial for improving the prevention program. Measurement of HIV-1 incidence is important to distinguish between recent and long-term HIV-1 infections among the sero-surveillance populations.

Objectives: The estimated HIV-1 incidence among RTA conscripts from 2005 to 2009 using IgG capture BED-enzyme immunoassays was assessed in this study.

Methods: Each year, over 50,000 young men age 21 or older are conscripted to serve in the RTA. The conscripts are selected by lottery yearly throughout Thailand. All enlistees are routinely screened for HIV-1 by enzyme-linked immunosorbent assay (ELISA) with Western Blot confirmation. The HIV-1 seropositive subjects from 2005 to 2009 were tested by the Calypte® HIV BED-EIA, a quantitative assay in which specimens are evaluated against a Calibrator to generate an ODn (normalized optical density) value. An ODn of ≤ 0.8 is considered a recent (≤ 155 days) seroconversion. The incidence estimates were obtained in each round of the induction using a consensus formula was agreed upon at the US Center for Disease Controls and Preventions (CDC).

Results: The prevalence of HIV-1 infection from 2005 to 2009 was consistent at 0.5. In 2005, twenty-five sera were positive by BED-EIA for recent seroconversion thus HIV-1 incidence was 0.14% per year (95% CI: 0.09-0.20). The estimation of HIV-1 incidence from 2006-2008 increased and reached 0.26% per year (95% CI: 0.19-0.36) in 2008. In 2009, the estimation of HIV-1 incidence decreased to 0.25% per year (95% CI: 0.17-0.32).

Conclusions: This study showed that HIV-1 prevalence from 2005 to 2009 remained stable. However, increasing trends of estimated HIV-1 incidence was observed. This finding implicated the HIV prevention program in young Thai men is critical.

XVIII International AIDS Conference, Vienna, Austria, 18-23 July 2010, Abstract no. TUAC0202, Oral presentation

38th Phramongkutklao Hospital Annual Scientific Meeting, Bangkok, Thailand. 24-26 November 2010, Abstract number 59, Poster presentation