

Short Communication

Seroprevalence of HIV infection among Pregnant Women in Tehran, Iran by Rapid HIV Test

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Accepted 20 December, 2010

In a cross-sectional study conducted from November 2008 to January 2009, 433 pregnant women attending three antenatal clinics in Tehran for obstetric consultation were counseled and tested anonymously for HIV using rapid diagnostic testing. Two women (0.5%) were found to be HIV infected. Upon the results emerged from this study, we don't recommend HIV screening on each pregnant woman in this area. HIV testing is recommended only for those with risk factors.

Key words: Prevalence, HIV, Pregnant, Rapid Test

INTRODUCTION

There is a growing trend in the number of new HIV infection in Asia, especially among women (Fransisco 2002; Ukey et al., 2005). In 2008, 4.7 million people in Asia were living with HIV, including 350 000 who became newly infected last year. The proportion of women living with HIV in the region rose from 19% in 2000 to 35% in 2008 (http://data.unaids.org/pub/FactSheet/2009/20091124_FS_a_sia_en.pdf). According to Iran statistical year book population of Tehran is 13422366; it is also Iran's largest urban area and city, one of the largest cities in Western Asia, and is the 21st largest city in the world. In Iran, the number of adult and children living with HIV/AIDS at the end of April 2009 was more than 19000 people and more than 70% of them were in the age group of 25-44 years (Gouya, 2009). Seroprevalence of HIV in normal population Iran is below than 1% while the prevalence of HIV infection among injection drug users is between 10 to 25% (Gouya, 2009). Mother to child transmission (MTCT) is reported in 0.6% of total cases with HIV/AIDS (Gouya, 2009). But heterosexual transmission is the most common route for contracting

HIV infection in women (Gouya, 2009; Metanat, 2006).

Approximately 80% of HIV infection in women occur primarily during their reproductive years. Thus, women in reproductive age at high risk of HIV infection, and pregnancy provide a unique opportunity for implementing prevention strategies against HIV infection (Ukey et al., 2005; Aberg et al., 2006). Seroprevalence studies of HIV infection among women of reproductive age including those who are pregnant can inform the development of effective and timely interventions for primary prevention of HIV among these women as well to reduce MTCT transmission of HIV (Metanat 2006; Aberg et al 2006). In regard to paucity of data among this population, we conducted a HIV seroprevalence study in three antenatal clinics in the late 2008 and the early 2009.

MATERIAL AND METHODS

In this cross-sectional study from November 2008 to January 2009, 433 pregnant women attending three antenatal clinics affiliated with large referral hospitals in Tehran for obstetric consultation were counseled and anonymously tested for HIV using rapid diagnostic test. Verbal informed consent was obtained from all participants and we had referred suspected and infected

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person to consulting center of behavioral disease in Imam Khomeini hospital for confirmatory testing (ELIZA and Western Blot) and follow up. This study was approved by Institutional review board of Tehran University of Medical Science (TUMS).

Forty micro liters of bloods were taken and tested by rapid HIV diagnostic kits (KHB, Inc., Shanghai, China). The Sensitivity and specificity of the HIV test kit were 100 (97.7 - 100.0) and 100 (98.8-100.0), respectively. The results of tests were determined after 3-5 minutes.

RESULTS

In our study, the mean age was 27 years (range of 15-42 years) and five (1.2%) participants were divorced. Two participants (0.5%; 95% CI 0.06-1.6) were found to be reactive and one of the test results was indeterminate. The two participants were HIV positive and the one person was negative by confirmatory tests.

DISCUSSION

We found a low prevalence of HIV infection among the sample of pregnant women attending antenatal clinics in Tehran, Iran. According to a study in Zahedan, south-east of Iran, HIV seroprevalence rate was 0.05% among pregnant women (Sharifi-Mood and Keikha 2008). HIV seroprevalence of more than 1 % in pregnancy is alarming for the health authorities, which indicates that more stress should be given on preventive measures (Aberg et al. 2006). They should be offered HIV testing especially if there is a documented history of a risk factor.

Of note a major limitation of our study is for reporting of risk behaviors. We did not ask about risk behaviors in this sample. Despite the limitation, our data provide information about prevalence HIV infection among pregnant women in Iran. According to CDC, HIV screening is recommended in the routine panel of prenatal screening tests for all pregnant women (CDC 2006). In the city like Tehran with prevalence of HIV infection less than 1 %, HIV screening is recommended only for pregnant women with past history of HIV risk factors (IDU, tattoo, and unprotected sex). However, among pregnant women, screening has proven substantially more effective than risk-based testing for detecting unsuspected maternal HIV infection and preventing perinatal transmission (CDC 2006). Regarding the results emerged from this study; we do not recommend routine prenatal screening for HIV infection in Tehran. But we suggest that HIV testing should be offered to pregnant women with HIV related risk factors.

ACKNOWLEDGMENTS

We thank all three hospital staff (Arash, Imam Khomeini and Shariati hospitals) who assisted us and center for disease control and prevention (CDC) of Iran that prepared all the kits.

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