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The Need for Routine Antenatal HIV Screening for Pregnant Women in Kuwait

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Acquired immune deficiency syndrome (AIDS) is the fastest growing pandemic with enormous health, social and financial impact on countries. The global human immunodeficiency virus (HIV)/AIDS epidemic killed more than 3 million people in 2003, and an estimated 5 million acquired HIV, bringing to 40 million the number of people living with the virus around the world [1]. Moreover, 700,000 children were newly infected in the same year, most of them through mother-to-child transmission (MTCT) [1].

We summarize the available data on MTCT of HIV in Kuwaiti children and discuss the impact of routine HIV antenatal screening for Kuwaiti pregnant women. From January 1990 to June 2003, 20 children were born to 11 HIV-positive mothers. In 5 pregnancies, mothers were aware of their positive HIV status and had interventions to prevent MTCT according to the internationally adopted guidelines. None of the 5 children tested positive at 1-year follow-up, giving a transmission rate of 0%. Mothers who were unaware of their HIV-positive status (15 pregnancies) had no active interventions to prevent transmission with subsequent infection of 3 children, a 20% transmission rate similar to that reported in North America and Europe [2].

MTCT of HIV can occur during pregnancy (antenatal), delivery (intrapartum) or subsequently through breastfeeding. Various strategies have been used to attempt to reduce the risk of MTCT [2]. It is prudent to mention that none of these interventions can be implemented without the knowledge of the mother's HIV status.

There is currently no routine HIV screening for pregnant women in Kuwait. The stigma and shame associated with the diagnosis of HIV makes this step very difficult to establish. Some information about HIV prevalence in Kuwaiti citizens can be estimated from routine screening of Kuwaiti blood donors and pre-employment screening and it is approximately as 0.3 per 100,000 [Dr. Rashid Al-Owaish, Department of Public Health]. This figure is comparable to countries with low HIV prevalence [3]. Based on this approximation and with the Kuwaiti birth cohort of 41,342 in 2001, we can estimate that without screening and proper interventions, 2–3 new Kuwaiti children will be infected with HIV yearly. Although this figure seems small, extrapolated over the next 10 years

(without taking into consideration the increase in the population or HIV prevalence) there will be 20–30 additional (potentially preventable) cases of HIV among Kuwaiti children.

We suggest the implementation of routine antenatal HIV screening test at the first antenatal visit along with rubella, hepatitis B, and syphilis for Kuwaiti women. This screening represents the standards of care of pregnant women and is recommended by the World Health Organization [4] and the Centers for Disease Control and Prevention [5]. More importantly, various reports had shown that antenatal HIV screening is cost-effective even in low prevalence countries [3]. The cost of routine antenatal screening of a pregnant cohort of 41,342 women is USD 132,294 (KD 39159) (USD 3.2 per HIV ELISA test, KD 0.95). The cost of the medications to decrease MTCT is USD 3,602 (KD 1066) per woman-child pair. In a simple analysis, routine HIV screening of the pregnant cohort and medical interventions to prevent MTCT of 15 HIV-infected women in that cohort would cost USD 186,324 (KD 55152). In the absence of screening, the cost of antiretroviral treatment for an HIV-infected individual is USD 13,639 (KD 4037) per year. However, the lifetime cost would be at least USD 272,680 (KD 80713) for 20 years. This calculation does not take into consideration the high costs of routine blood tests including CD4 count, viral load and viral genotype and the cost of the prophylactic medications. Thus, the net savings would be USD 86,456 (KD 25591) per individual for antiretroviral medications alone if routine HIV screening is applied in Kuwaiti pregnant women. The real cost that is hard to estimate is the burden of the disease on the individual, family, and the society.

Finally, prevention remains the critical key to bringing to an end the spread of HIV infection. Routine antenatal HIV screening of pregnant women would further add to the prevention of HIV in Kuwait and break the chain of transmission.

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