Research on the Hidden Space of Mother-child Vertical Transmission of HIV
—the Pregnant Women with High Risk outside the Medical Network

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Abstract

Taiwan has acted on the policy of prevention of mother-child vertical transmission of HIV since 2005. Although the government has provided full-scale free HIV screening and comprehensive medical administration, few new cases were still reported. The reasons include some cases did not went to hospitals for check-ups or HIV screening during gestation automatically. Some cases' mothers committed an offence during gestation and then tried to flee away from public health workers. It results in regret of delivering babies with HIV positive. This report discussed the hidden space in the issue of prevention and control of mother-child vertical transmission. Based on the results of case investigations, the report also tried to explain how to enforce the preventive actions for females and pregnant women with high risk.

Keywords: acquired immunodeficiency syndrome (AIDS), mother-child vertical transmission, intravenous drug addicts

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Introduction

The current Taiwan HIV prevalence in females was comparatively low when compared to global AIDS survivors, in which 50% of them were females [1]. The risk of disease spreading was still there, yet. Before 2004, the number of new infected female cases per year was still under control. The female cases reported were less than 8% of all cases reported. But, after 2004, the HIV-infected cases with drug addiction increased dramatically. The male/female ratio was 7:1 in 2005. The rate of female suffering from HIV infection increased noticeably. Seventy-one percent of infected females were aged 20-39 years [2], the period of woman's child bearing age; inevitably, the mother-child vertical transmission derived. In order to protect females' health rights, to reduce losing the lives in the next generation, and to minimize the social costs, one key point in HIV/AIDS prevention is to prevent females from suffering HIV/AIDS.

The current policy and situation in prevention of mother-child vertical transmission in Taiwan

Since 2005, Taiwan has acted on the policy of preventing vertical transmission from mothers to their children. The government supports funding for about 200 thousands pregnant women to screen HIV annually. Whether insured or non-insured in the health insurance, as long as pregnant women in the country, including foreign spouses, they are able to get the free HIV screening. The policy also supplies an antiviral therapy for pregnant women suffering from HIV infection during their course and moreover, prevents perinatal mother-child vertical transmission through choosing a proper delivery method, prescribing prophylactic antiviral therapy during labor process, prescribing prophylactic antiviral drugs to

babies within 6 weeks after delivery and feeding breast-milk substitutes for babies.

To the end of 2008, there were 71 new reported cases found after the implementation of the program. The rate of pregnant women accepting the screen during their health check-ups was 95%, 98%, and 99% from 2006 to 2008, respectively and increased gradually. From 2005 to 2006, drug addictive pregnant women were 60% of all new screened HIV-infected pregnant cases. By the execution of the harm reduction strategy, the epidemic of HIV infection in the group of drug addicts has been controlled. Since 2007, the HIV positive rate of screened pregnant women has declined gradually (Table 1). Infected by sex behavior was the major risk factor instead of infected by intravenous injection.

Table 1. The screen number, number of new positive cases, positive rate, and screen rate during check-ups of health insurance for HIV-Taiwan, 2005-2008

Year	Screened number	The number of new positive cases	Positive rate (per 100,000 persons)	The screening rate during check-ups of health insurance
2005	235,791	27	11.45	-
2006	199,428	31	15.54	95%
2007	206,165	7	3.39	98%
2008	200,148	6	2.99	99%

Twenty one out of 71 infected cases chose abortion or leaving Taiwan. The newborns delivered by the infected mother were traced to 18 months old and 45 cases were successful free of HIV-infection from mother-child vertical infection. One case died before sampling. Two were confirmed as positive cases caused by mother-child vertical transmission. There are still 2 cases, who are more than 4 months old, being traced; two negative results of HIV tests from them indicate that they may do not get infection. The 2 newborns with positive results were delivered by natural labor.

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Their mothers were drug addictive. In addition, the two mothers disliked to take medicine.

The analysis of cases not screened in the health insurance system

The first case of mother-child vertical transmission was recorded in 1988. From 1988 to 2008, there were 30 cases reported, which were 0.1% of all infected. According to the annual reported cases of mother-child vertical transmission, since 2005, the full-scale HIV screening for pregnant women have been implemented, 2 cases were identified. But, there were another 8 reported cases of mother-child vertical transmission not found by the full-scale HIV screening. It showed that few HIV-infected pregnant women did not receive proper medical treatment during their gestation. The results of investigation for the 8 pairs of mothers and children were discussed as follows.

The average age of the 8 newborns when they were reported was 1 year old. Mothers from five cases were new inmates with drug addiction or people who sell or use drugs ferreted out by police and then they were discovered as HIV positive by HIV screening. Only one case's mother got the infection by sex behavior and the others by intravenous injection. Their babies were confirmed as HIV positive case by follow-up of the public health officers. The other 2 mothers were recognized as HIV positive cases before. Although their situations of gestation were observed, they disobeyed the prescription and did not accept comprehensive antiviral therapy. They had successful escaped from the follow-up of public health officers during their pregnancy. The babies were born and brought into prisons. In there, their babies were screened as HIV positive cases. The last mother delivered her baby at home. She accepted the HIV screening

when she went to a hospital after delivery. Only one mother delivered her baby by C-section; the others delivered their baby by natural labor.

According to the investigations stated previously, most new HIV positive babies, who got infection via the mother-child vertical transmission route reported recent years, were those whose mother infected by HIV but not found on time during pregnancy. Therefore, the best time for prophylactic administration was missed, which resulted in that their babies were infected by HIV via the vertical transmission route. The problem that women with high risk were not able to be found during pregnancy in the program, should be conquered.

The plan of HIV screening for newborns was performed since 2008 to resolve the problem mentioned above and by timely prophylactic administration and avoiding breast-feeding, reduce the risk of getting HIV infection in newborns. In addition, the program also announced that HIV test is obligation for the subjects of the screening program, the legality of health workers to vigorously seek for the suspected HIV-infected cases and the penalty for refusing screening.

The analysis of the hidden space for mother-child vertical transmission of HIV

In order to analyze the possible reasons that the cases with high risk were not able to be discovered by the public health system, the new reported female cases from 2007 to June, 2008 were reviewed one by one. The cases, who just delivered their babies recently, which was defined as they have any child younger than 18 months old, were interviewed by local public health workers in charge.

Nine new female reported cases fitted the above criteria were listed.

After matching the data from Bureau of National Health Insurance, all of them did not do check-ups and were not screened. Three were discovered by fast screening at laboring; one was reported by fast screening for newborns. Eight cases were injecting drug users. From the results of interviews, one injecting drug user was not aware of pregnancy till delivery and other eight cases did not do check-ups either because of financial problems or because they were fugitives and worried about being captured.

The three cases, discovered by fast screening at laboring, were found by careful health workers (two in the Department of Health assigned hospitals, one by a ladies clinic). They prescribed prophylactic antiviral therapy for the newborns within 6 to 12 hours of delivery and for one mother, caesarean section was operated. She received the zidovudin therapy by intravenous injection during the surgery. The risk of getting infection in this newborn has declined dramatically. After follow-up of the nine cases, one of the newborns was confirmed as HIV positive via the mother-child vertical transmission route.

From the above statements, it is clear to see that few pregnant women with high risk on the margins of society are easy to neglect their health demands. Women may have higher chance to get infection because they might situate on the disadvantaged position for obtaining drugs, administration of drugs, the sequence of injection and using the clean injection equipment in injecting heroin [3]. Although the epidemic of HIV-infection in drug addicts has declined, 50% of females infected were injecting drug users, according to the statistical data in 2008; it might be a deep worry in prevention of mother-child vertical transmission. In view of this, the

Centers for Disease Control (CDC) matched the data of HIV positive patients with their records of pregnant situations from Bureau of National Health Insurance. By finding if they were in gestation as early as possible, the local health departments can trace and help the cases to get timely treatment.

Conclusion and Discussion

In order to increase rights of reproductive health, knowledge of self-defense and the utility rate of HIV screening in pregnant women with high HIV risk, CDC should co-operate with Ministry of Justice, through Taiwan After-Care Association and correctional facilities, to strengthen health education and supply information of HIV screen for female ex-prisoners or inmates in general or child-bearing age. Moreover, the male inmates with HIV infection, especially those applying intravenous injection, often cover up the truth that they are HIV infected. Then, their partners may get into pregnancy without knowing the truth. The government should educate inmates the related knowledge and provide the information of sperm washing techniques.

The new pregnant immigrants are always the subjects of HIV screening that the local health departments focus on because they are not insured in Taiwan health insurance system initially and may miss the free HIV screening and timely treatment. Local health centers, via setting up records of foreign and China spouses, could help them to use the resources, such as check-ups and free HIV screening, especially when they not insured.

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In addition, pregnant women with high HIV risk needs more careful alertness of medical staffs. One more screening should be suggested on the third stage of their gestation. Gynecologists or obstetrician should do the rapid screening test for the pregnant women suspected at high risk, after getting their permission, in order to provide timely medical care if needed. By the case-manager-plan in assigned hospitals, the females with HIV infection in childbearing age should be educated the knowledge of mother-child vertical transmission and the intervention should be done when they are pregnant to reduce the regret of having HIV-infected babies.

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