

Guidelines for HIV Testing in Pregnancy

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1 BACKGROUND

Human Immunodeficiency Virus (HIV) infection and Acquired Immune Deficiency Syndrome (AIDS) are not notifiable diseases in Hong Kong. Since the first case of HIV infection diagnosed locally in 1984, monitoring of HIV/AIDS epidemiology in Hong Kong mainly relies on voluntary reporting, unlinked anonymous screening and seroprevalence monitoring of selected groups.

According to the current reporting system, as at the end of March 2001, cumulative figures of 1586 cases of HIV infection and 509 cases of AIDS had been recorded¹. Although only 16% of those infected were female, women account for an increasing proportion of new cases in the past few years. The female to male ratio has increased from 1:6 in 1994 to 1:4 in 2000.

From 1998 through 2000, unlinked anonymous screening of cord blood revealed prevalence of 0.03%². Since seroprevalence reflects prevalence of HIV infection at delivery, with an annual delivery of about 60,000, it is estimated that there are at least 20 pregnancies complicated by HIV infection each year in Hong Kong.

Only a few prospective studies on HIV infection in pregnancy have taken place in Hong Kong. A recent (1999) prospective study³ in Kwong Wah Hospital showed that universal voluntary screening of HIV infection in pregnancy was accepted by 97.5% of the patients. After pretest counselling, a choice to opt-out was allowed for those who declined the test. The HIV infection rate was 1 in 1820

(0.05%). In keeping with other reports that a significant proportion of infected cases did not show any risk factor, one in the three of the HIV infected patients in the study did not have any identifiable risk factor.

Mother-to-child transmission (MTCT) of HIV infection may take place in the antepartum, intrapartum and post-natal periods. Without intervention, the vertical transmission rate of HIV infection from mother to her child is about 15% to 40%. Interventions including anti-retroviral therapy⁴, Caesarean section⁵ and replacement feeding⁶ to the baby have been shown to reduce the risk by up to two-thirds. Reduction of transmission rate to 5% or lower had been reported if plasma viral load is undetectable⁷.

The benefits of HIV testing do not confine to the prevention of MTCT of HIV infection. Early detection among infected women facilitates control of progression of disease and spread of infection to others. Even with a negative test result, HIV screening provides a chance to educate the public and arouse awareness.

HIV testing in pregnancy is beneficial, but it must be balanced against the risks of stigmatization and discrimination. To achieve the maximum benefits from HIV screening, counselling should be provided before and after testing. Confidentiality of patient's choice to undergo or decline testing and confidentiality about the test result should be observed. Optimal psycho-social care, as well as medical and obstetric care, should be provided to patients regardless of patient's choice or test result.

2 SCREENING STRATEGY

Like other clinical tests, HIV testing should be performed under the informed consent of patients. Although current treatment protocols improve control of the disease, there is currently no cure for the infection. Since HIV infection is widely misunderstood in the public, the implications of a positive test result should be communicated to the patient.

In universal screening, HIV testing is offered to all obstetric patients regardless of risk assessment. With an opt-in mechanism, only patients who request testing would undergo the test. Whereas with an opt-out mechanism, all except those decline would be tested. With either mechanism, universal screening avoids stigmatization at the time when the test is offered, making the test more acceptable to most of the patients. However, for those who do not want to subject themselves to the test for various reasons, universal screening may be inhibitory for them to receive obstetric care. Among these women, the possibility of discrimination arising from a positive result may be their real concern. This is an issue to be dealt with by public education and social efforts rather than a reason to avoid universal screening. Universal screening is potentially the most effective strategy to identify HIV infection in pregnancy, and facilitate prevention of MTCT of HIV infection. The cost-effectiveness of universal screening in Hong Kong has not been formally evaluated. In view of the additional benefits mentioned and the quest for comprehensive coverage, it should be implemented if resources, including public education, social support, funding for laboratory costs and manpower, are available.

With selective screening, only patients with identifiable risks are offered HIV testing. Again, the threats of stigmatization and discrimination may be inhibitory to patients who otherwise would approach obstetric service, unless confidentiality of information is strictly observed. Furthermore, the success of a selective screening programme depends on reliable risk assessment tools, which are still lacking.

3 PRETEST COUNSELLING

Counselling before testing is an important component of universal or selective screening. Every patient should be made aware of the implication of the test and the possible difficulty she may encounter if the result is positive. Early detection of HIV infection allows interventions to prevent transmission to her baby and to her sex partner. However she may face the dilemma and psychological burden of knowing that she has contracted a disease which currently is incurable. The setting of the counselling, such as provision of information pamphlets, individual counselling or group counselling, may be designed according to the obstetric service setting. It is important to provide relevant information in an impartial manner, and the patient is given adequate time to make decision. Table 1 lists some guidelines for pretest counselling.

Table 1: Pretest Counselling (Modified from HIV in Pregnancy: A Review, 1999⁸)

1. Assure the client of confidentiality
2. Explain the reasons for HIV testing
3. Provide information about HIV and AIDS
4. Provide information about the HIV antibody test, including information about the "window period" of infection
5. Review the implications of a positive test result for the client
6. Discuss the person's possible responses to a positive test result
7. Discuss the implications of a negative test result
8. Provide information about test procedures
9. Elicit information about the person's current and previous risk behaviour in a sensitive manner
10. Take client to private setting to decide whether to accept or decline testing
11. Obtain informed consent

4 THE HIV ANTIBODY TEST

Diagnosis of HIV infection generally relies on the demonstration of HIV antibody in serum samples. The presence of HIV antibody does not imply immunity to the infectious agent, but represents

previous exposure to the virus. Sero-positive patients are harbouring the virus and are capable of transmitting the infection to others.

A sensitive screening test is used to detect the presence of antibody to HIV. If positive reaction is detected, another serological test on the same serum sample is required to confirm the antibody status and infection. Therefore, patient will not be unnecessarily alarmed by a false positive result.

Since three months may be needed for an infected individual to develop antibody, the test may be repeated after the “window period”, when infected patients are undergoing sero-conversion. Repeating the test in three months virtually eliminates the possibility of false negative results. Such practice is advisable in high risk patients.

“Indeterminate” results occasionally appear when neither positive nor negative reaction can be concluded. These may be due to window period, or nonspecific cross-reactions from autoimmune antibodies, particularly in patients with autoimmune diseases. Patients with indeterminate results should be tactfully counselled to minimize anxiety. Follow up actions are needed for confirmation of HIV status. These include repeating HIV antibody test at an interval, P24 antigen assay or PCR testing for HIV mRNA. Local laboratory staff should be consulted for individualized follow up actions. If HIV antibody is to be repeated, it should be performed three weeks to three months after the first test, depending on the risk categories of the patients.

5 POSTTEST COUNSELLING

The need to provide posttest counselling for patients with positive result is obvious. Since the number of patients with positive results is likely to rise in the coming years, obstetricians and trained counsellors should be equipped to handle the counselling. Obstetric and medical care plan should be carefully formulated. The obstetric care of uncomplicated HIV infection in pregnancy can be managed in most local obstetric care centres. The

possibility of preventing transmission to the baby and the option of termination of pregnancy should be discussed. Anti-retroviral therapy should be commenced and continued under expert care. The patient should be advised to discuss with her partner, who may need HIV testing. Education to prevent horizontal transmission should be provided. Table 2 illustrates the issues that should be included in the discussion. The counsellor should also take care of the psycho-social needs of the patient. Table 3 lists the essential elements of posttest counselling for HIV-positive women.

Table 2: Obstetric and Medical Issues in Counselling HIV-positive Women (Modified from HIV in Pregnancy: A Review, 1999⁸)

1. The effect of pregnancy on HIV infection
2. The effect of HIV infection on pregnancy outcome: risks of adverse pregnancy events
3. The risk of transmission to baby during pregnancy, delivery and breastfeeding
4. Termination of pregnancy options
5. Treatment options during pregnancy
6. Interventions available to attempt to prevent mother-to-child transmission
7. Infant feeding options: the advantages and disadvantages of breastfeeding
8. Disclosure of results to sex partner and testing for the partner: advantages and risks
9. The need for follow-up of both mother and child
10. Further fertility and contraceptive options

Table 3: Posttest Counselling for HIV-positive Women (Modified from HIV in Pregnancy: A Review, 1999⁸)

1. Give the result as soon as possible after the test is done
2. See the client personally to give result
3. Deal with the feelings arising from a positive result
4. Identify the person’s immediate concerns
5. Identify what support the client has
6. Discuss whom the client may want to tell about the result and risks to her sex partner

7. Identify what difficulties or problems the client foresees and how she may deal with them
8. Encourage the client to ask questions
9. Provide information on healthy lifestyle, medical follow-up and local support systems
10. Refer for follow-up care and counselling, if necessary

6 CONCLUSION

1. Effective interventions are available to prevent vertical transmission of HIV infection from the mother to the baby.
2. HIV antibody tests are able to identify HIV infection in pregnancy among low risk women.
3. Universal screening of HIV infection in pregnancy should be implemented if resources, including public education, social support, funding for laboratory costs and manpower, are available.
4. Information about HIV infection and implications of HIV antibody test should be provided to patients before testing.
5. Posttest counselling should be arranged for HIV-positive patients.
6. Counselling of HIV-positive patients should take into account of the psycho-social needs, as well as the medical care plan for the patients.

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This guideline was produced by the Hong Kong College of Obstetricians and Gynaecologists as an educational aid and reference for obstetricians and gynaecologists practicing in Hong Kong. The guideline does not define a standard of care, nor is it intended to dictate an exclusive course of management. It presents recognized clinical methods and techniques for consideration by practitioners for incorporation into their practice. It is acknowledged that clinical management may vary and must always be responsive to the need of individual patients, resources, and limitations unique to the institution or type of practice. Particular attention is drawn to areas of clinical uncertainty where further research may be indicated.