

**Hong Kong Journal of Paediatrics**

香港兒科醫學雜誌 (New Series)

An Official Publication of

Hong Kong College of Paediatricians &

Hong Kong Paediatric Society

c/o Dept. of Paediatrics, University of Hong Kong,

Queen Mary Hospital, Pokfulam Road,

Hong Kong

## Universal Testing for HIV Infections during Pregnancy

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BLACKWELL MEDCOM LTD.

ISSN 1013-9923

WHO estimated that by end of 1999, the number of people living with HIV was 33.6 millions of which 2.6 million died during 1999. In 1999, it was estimated that some 570,000 children aged 14 years or younger became infected with HIV. Since the first cases of AIDS among children were reported in 1982 in the United States some 3.6 million children less than 15 years of age have died because of AIDS.

With the screening of blood products and use of disposable needles haematologic transmission has become much reduced, but perinatal transmission of HIV accounts for over 90% of paediatric AIDS cases and almost all new HIV infections in children.<sup>1</sup> They either acquired the virus at birth or through their mothers' breast milk.

The 1994 Pediatric AIDS Clinical Trials Group (ACTG) protocol 076 is a great step forwards in the prevention of vertical HIV transmission. It has been demonstrated that zidovudine (ZDV) therapy administered to selected HIV-infected pregnant women and their newborn infants could reduce the rate of perinatal HIV transmission from 25% to 8%. Guidelines on the use of ZDU to reduce perinatal HIV transmission, universal routine HIV counseling and voluntary HIV testing of pregnant women were rapidly published by Public Health Services of United States in 1994 and 1995. The prompt implementation of these guidelines has resulted in dramatic decrease (43%) in perinatal HIV transmission. Subsequently, short course of ZDV therapy administered late in pregnancy and orally intrapartum and other oral regimes had also been reported to be effective<sup>2</sup> Interventions such as the use of elective cesarean section, avoidance of breast-feeding and treatment of concurrent sexually transmitted diseases have also contributed to the decrease in the perinatal HIV transmission rate. With these successful interventions, the control of HIV infection in children is possible. The major challenges are a) the increasing proportion of HIV-infected females especially the drugs-abusing women;<sup>2</sup> b) how to ensure HIV-infected mothers receive timely prenatal care;<sup>3</sup> c) HIV counseling and voluntary testing;<sup>4</sup> d) obtaining ZDV therapy to reduce perinatal transmission; and<sup>5</sup> e) their children receiving the appropriate HIV medical care and treatment.

HIV infection and AIDS are not notifiable diseases in Hong Kong. Their epidemiology is monitored by the Department of Health through a) voluntary reporting b) unlinked anonymous screening and seroprevalence monitoring of selected groups. The first case of HIV infection was diagnosed in 1984 and by 30 June 2000, there were a total of 1446 HIV infections with 475 having AIDS. The main characteristics of recent HIV/AIDS of Hong Kong are a) HIV prevalence is still low (<0.1% among adult population and about 0.02% among newborns); b) 80% were sexually transmitted; c) there is rising female and

perinatal infection as a result of heterosexual transmission; d) significant rise in HIV infection among drug users to 0.4%; and e) many cases presented late.

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The editors like to acknowledge with gratitude the major contributions of the reviewers who have rendered their valuable service in reviewing the articles submitted to our Journal in 2000.

Up till March 2000, there were 11 perinatally infected babies with 4 having AIDS. Over 80% of the mothers' diagnosis were made after their babies were found to be HIV positive.<sup>3</sup> Chiu & Lau reported their experience in caring for 8 of 11 HIV infected children in Hong Kong since January 1996.<sup>4</sup> Some features of these 8 cases were a) 5 were diagnosed when either one or both parents were found to be HIV positive and 3 presented with AIDS-related illness; b) a quarter of the parents were diagnosed of HIV infections after their children manifested with AIDS-related illness; c) all were diagnosed with rather advanced HIV diseases; and d) more cases were diagnosed in recent year. The psycho-social and medical cost to the society and the families is enormous.

The increase in number of HIV infected females and infected drug users coupled with the rapid rise in various sexually transmitted diseases are worrying, as this may signify a rapid increase in perinatal infection. Selective HIV screening of "high risk" group will miss about a quarter to half of the cases. As suggested by Chiu and Lau,<sup>5</sup> universal screening should be seriously considered as a matter of urgency. There are many advantages of universal screening - a) high cost-benefit ratio if this is incorporated into standard prenatal testing; b) reduction of stigmatization of groups; c) avoidance of possible changes in risk factors. Besides reducing perinatal infection, the strategy will allow early detection and treatment of HIV infections in pregnant women and hence reducing the risk of spread. Hong Kong should consider seriously the recommendations by Institute of Medicine in 1999 - incorporating universal HIV testing with patient notification into routine component of prenatal care.<sup>5</sup>

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