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The Study of seroprevalence of HIV in pregnant women in a tertiary care hospital, South India

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ABSTRACT

To determine the seroprevalence of Human Immunodeficiency Virus in pregnant women in a tertiary care hospital, South India. This study was conducted at Shadan Institute of Medical Sciences and PostGraduate Research Centre, Hyderabad, during August – 2007 to May 2012 . The study included 4384 antenatal women, all of whom were screened for HIV. of the 4384 antenatal women, 12 were found to be positive for HIV (0.27%)

***Key words**: HIV, Antenatal woman, Mother to child transmission(MTCT)*

INTRODUCTION

The first case of HIV was reported in India in 1986. Later in 1986, the Government of India established a national AIDS control committee under the ministry of Health and Family welfare to formulate a strategy for responding to HIV- Aids prevalence [1]. HIV prevalence has been increasing among pregnant women in many regions with in the country, hence India launched a National AIDS Control Programme in 1987 [2].

In India women account for around one million out of 2.5 million estimated number of people living with HIV/ AIDS .Their heightened vulnerability has both biological and socioeconomic reasons. Early marriage, violence and sexual abuse against women, illiteracy are the major socioeconomic reasons of their vulnerability to HIV infection. Their biological construct makes them more susceptible to HIV infection in any given heterosexual encounter . In 1992 India's National Aids Control Organisation was established by the ministry of Health and Family welfare with major support from world bank.

Six Indian states are considered to have high HIV- AIDS prevalence (>1%) Manipur, Nagaland, Andhra Pradesh, Tamil nadu, Karnataka and Maharashtra- as are 49 districts with in states.

HIV prevalence has been increasing among pregnant women in many regions with in the country.

HIV screening in antenatal women is important, because HIV can be transmitted from an infected mother to her child during pregnancy, labour and delivery, and through breast feeding. In the absence of breastfeeding most infections occur during labour and delivery. Reported transmission rates ranged from 13-32% in industrialised countries and from 25 to 48% in developing countries[3].

In breastfed infants upto 20% of infants may acquire HIV through breastfeeding, depending on the duration of breastfeeding and other risk factors such as the presence of mastitis, breast abscess and other local factors. [4]
When an antenatal woman is known to be infected with HIV, the strategies which reduce or prevent Mother to child transmission(MTCT) are:-
1. Antiretro viral therapy

2. Avoiding invasive obstetric procedures
3. Replacement feeding of the infant

A single dose of 200mg of nevirapine will be administered to the mother during the first stage of labour and single dose of 2mg/kg bodyweight to the newborn with in 72hours of birth is given, to prevent MTCT in developing countries[5].

MATERIALS AND METHODS

The study was conducted at Shadan Institite of Medical Sciences and Post Graduate Research Centre, Hyderabad, India. This study was hospital based study which included 4384 pregnant women who attended the Ante Natal Clinic of Shadan Institite of Medical Sciences and Post Graduate Research Centre, Hyderabad, India, from August 2007 to May 2012. For the antenatal women first pretest counselling was done and then informed consent was taken, and then blood sample was collected. The sample was tested for HIV antibodies as per NACO guildelines. Usually the first antibody test was ELISA (Enzyme linked Immuno sorbent assay). If the initial result is positive it is confirmed using two other supplemental tests- usually simple or rapid assay.

After the HIV test result is known, post test counselling is done. It should be private, and kept confidential. When the result is negative the counsellor discusses the prevention of HIV infection. If the result is positive the counsellor should tell the result to the individual in a clear and as gently and humanely as possible to deal with the feeling arising from a positive result. She is told about the risks to the sexual partner and partner notification, importance of good antenatal care, delivery practices, and discuss infant feeding practices. The HIV positive pregnant women get their CD4 count done, and examined for any other infection. Proper antenatal care is given, hospital delivery is advised for them following universal precautions.

RESULTS AND DISCUSSION

4384 pregnant women were included in this study which lasted for a duration of 58 months from August 2007 to May 2012.

Out of this 12 women were detected to be positive for HIV, accounting for 0.27%. The positive antenatal women ranged from the age group of 18 to 30 years. Of these 9 cases (75%) were of 20-24 years group. One pregnant woman had pulmonary tuberculosis in this study.

In our study of 4384 pregnant women the seroprevalence of 0.27% was noted. The average HIV prevalence among women attending antenatal clinic in India is 0.48% as per NACO annual report 2010-2011. The figures vary widely between the various states of India-Andaman and Nicobar Islands 0.25% , Andhra Pradesh 1%. In Pune, India the HIV infection rate in antenatal women was 2.2% in 2002-2003 and has declined to 0.73% in 2006[6].

Tuberculosis and HIV are intersecting epidemics. Those infected with HIV are more susceptible to tuberculosis infection and tuberculosis may progress more quickly in those infected with HIV. Tuberculosis is the most common opportunistic infection among people living with HIV in India [2].

CONCLUSION

Mother to child transmission of HIV infection during pregnancy, delivery or breast feeding is responsible for more than 90% of the HIV infection in children. Hence appropriate antenatal screening, interventions and preventive strategies during pregnancy, delivery and breastfeeding will bring down the mother to child transmission of HIV[4].

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