



ORIGINAL RESEARCH PAPER

Obstetrics and Gynecology

PREVALENCE OF HIV INFECTION AND EFFICACY OF PPTCT PROGRAMME A COHORT STUDY IN A TERTIARY CENTRE

KEY WORDS: HIV INFECTION
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ABSTRACT

Objective: The aim of this study was to evaluate the outcome of babies of HIV positive mother in the year 2009 who attended the PPTCT centre.

METHOD: All the pregnant women attending the ANC were counselled regarding HIV/AIDS and tested to know their HIV status. As per the NACO guidelines the women detected positive for HIV were given single dose oral Nevirapine during labour and the new borns were also given the same drug. According to NACO guidelines, the babies were followed by and tested for HIV at 18 months age. The results were analysed from record books data without taking the identity of the women.

RESULTS: The prevalence of HIV among the antenatal women was 1.4%. We had the information of the pregnancy outcomes of 106 out of 153 seropositive women of them 87.61% had vaginal delivery and only 23 babies (32.39%) came for final visit at 18 months and 6 (26.08%) were detected HIV positive.

CONCLUSION: The protection rate of Nevirapine is encouraging. The adherence rate to PPTCT programme must be improved by proving the counseling and testing services and integrating in to existing public health systems with services provided by all antenatal and delivering clinics.

INTRODUCTION:

Over three decades have passed since the diagnosis of first case of AIDS. At first it was thought to be a disease affecting the homosexual men. As the years passed women began to emerge as the changing face of HIV infection. The proportion of HIV/AIDS among woman has enormously increased from 7% in 1985 to 38% in 2007.¹

The latest statistics on the epidemiology of HIV/AIDS published by WHO/UNAIDS in November 2007 (updated in July 2008) indicates that globally the total adult population living with HIV/AIDS is 34 million, half of them are women²

Indian statistics published by NACO-2008 indicates 2.3 million adults are living with HIV/AIDS, women constitutes 39% and children 3.8%. Estimated adult HIV prevalence is 0.34% (0.25-0.43) MALES 0.44%, FEMALES 0.23%. Mother to child transmission will constitute 5% of the infection in the society. Because of the large population, India is contributing a major share to the global HIV pandemic in spite of a low prevalence rate of HIV infection. A study showed that the awareness about the HIV/AIDS is very low³ among the people of India, 60% of the women of India have not heard about HIV.

The social stigma and discrimination of the HIV affected people always play a vital role provoking the positive people to hide themselves away from regular follow up and treatment.

A study from South India consisting of 134 HIV infected women showed that

89% women identified heterosexual route as the mode of transmission and 88% had monogamous relationship. A major implication of this HIV infection among the women is increasing the chance of transmission to the next generation by vertical transmission (MTCT). The vertical transmission rate in India varies between 13-60%.

In 2010, around 390,000 children aged under 15 yrs became infected with HIV more than 790% are the result of MTCT during labor, breastfeeding.

In an attempt to reduce the vertical transmission rate in antenatal, intranatal and postnatal period PPTCT programme was introduced. Prevention of parent to child transmission was initiated by National AIDS control organization NACO in 2002.

There are four prongs of the PPTCT programme.

They are

- 1) Primary prevention of HIV infection
- 2) Prevention of unintended pregnancies among women with HIV infection
- 3) Prevention of HIV transmission from HIV infected mothers to the next generation through vertical transmission.
- 4) Provision of care, treatment and support to the HIV infected women, their 8 infants and their families. With all the measures taken the rate of mother to child transmission can be brought down from 15-30% to 2%. The aim of this study was to see the fetomaternal outcome of pregnancy in HIV positive mothers.

MATERIALS AND METHOD:

The study was conducted in the PPTCT centre department of OBG teaching institute, Kurnool.

All the pregnant mothers attending the antenatal clinic in 2009 were counselled regarding the HIV infection with special reference to the risk of transmission

from the parent to the child i.e. (PRE TEST COUNSELLING).

After taking an informed consent they were tested for their HIV status, the blood samples were processed as per the NACO guidelines. The first test done was SD-Bioline. If the sample tested was positive then it was tested with coombs aids-RS-

1st test (R-recombinant proteins, S-synthetic peptides). If it was also positive then the third test was done by Pareekshak.

The samples which tested positive with all the above tests were considered positive for HIV infection (WHO strategy

III). Seropositive women were questioned regarding their awareness of HIV/AIDS, personal habits, blood transfusion, drug abuse, injections and method of contraception. Spouse of the seropositive pregnant women were also counselled/tested for HIV status after obtaining the informed written consent. Post test counseling was done by the same counsellor who did the pre test counseling and after maintaining confidentiality the reports were disclosed.

All the women were counselled regarding the options of MTP/continuation of pregnancy. If wants to continue the pregnancy the place mode of delivery and breastfeeding were explained so as to reduce the risk of infection in their infants.

Tab. Nevirapine 200mg oral, single dose was given to all the HIV "+ve" mothers at the onset of labor. According to NACO guideline, the labor was conducted with universal precautions. Nevirapine syrup 2mg/kg bodyweight (single dose) was given to all the new born babies as per the NACO guideline. If the mother had come in very advanced stage of labor (i.e. delivery would occur within 2 hours of admission), nevirapine dose given to her would not give protection against the vertical transmission of HIV. In these cases the new born would be given two doses of Nevirapine according to NACO guideline, all the mothers were counselled regarding the merits and demerits of breastfeeding and taking into consideration of their socio-economic status the feeding option was decided.

The mothers and their babies were asked to come for followup visits at 6wks, after birth and later at 6m, 12m and 18m of age and tested with DBS (Dried Blood Sample) in WBS (Whole Blood Sample). As the maternal antibody against HIV crosses the placenta and enters the baby. A positive antibody test at 18m of age indicated that the baby was infected.

We extracted the data from the record books without taking the identity of the women into account and analysed the data for study purpose.

RESULTS:

The total number of women who attended the antenatal clinic and tested for HIV status in year 2009 was 10905. Among them 153 were detected as HIV "+ve" (1.4%) all are in Pre ART status. Out of these 153 positive women we have the information about the pregnancy outcomes of only 106 women (69.28%) the majority (105 out of 106, 99.05%) had opted for continuation of pregnancy one went for MTP.

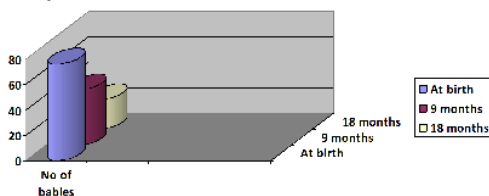
Of the 105, 13 had (12.38%) caesarean section for various obstetric indications and 92 (8.61%) had vaginal delivery in our institute.

Regarding the outcome of the babies of the HIV positive mothers one was IUD and rest were born alive.

Nevirapine drug was given to all the pregnant mothers and their new born babies according to PPTCT protocol.

Regarding the follow up the babies 76 (73%) came for the first follow up at the age of 3-6 months. There after there is a decline in the attendance. Breast feeding was opted in 27 (32.52%). Only 43 attended the 1st followup visit (5 babies expired) and only 23 (32.39%) babies attended the 3rd follow up visit at 18 months of age and tested for their HIV status. Out of these 23 babies (each of the mothers and their babies had scheduled dose of nevirapine) only 6 (26.08%) children were detected as HIV positive of these 4 were breast fed upto 6-8m of age.

Followup visits of the babies



Discussion:

The prevalence of HIV "+ve" in our PPTCT centre in 2009 is 1.4%. In the years 2006, 2007, 2008, 2010 and 2011 were 1.5%, 1%, 1.3%, 0.73% and 0.7%. This 10 Prevalence rate is on par with Tamilnadu, Karnataka. The global incidence of HIV "+ve" among the pregnant women is 3%.

In our study 106 (69.28%) out of 153 pregnant women came for institutional delivery. The high incidence of drop-out indicates that we have to be more vigilant to counsel the mothers and their partners to uphold their confidence regarding the need, safety

and efficacy of delivery in PPTCT centre, so as to get the benefits of PPTCT programme to minimize the vertical transmission.

YEAR	Prevalence Rate
2006	1.5%
2007	1%
2008	1.3%
2009	1.4%
2010	0.73%
2011	0.70%

In the present study the c/s rate was 12.38% i.e., for obstetric reasons.

Evidence shows that early caesarean section before the onset of labor can reduce the risk HIV infection in the new born because it minimize the exposure of the baby to maternal body fluids. Another study showed greater post caesarean morbidity in HIV "+ve" women in comparison to control group of women¹¹.

The main obstacle we faced was in following up the mother and the baby. Of the 104 live births only 76 (73.07%) came for following in the 1st visit and only 23

attended the final visit to be tested for HIV status. Ours is a referral centre. so we get AN mothers from all adjacent districts and Karnataka. So some of them may be delivered in other places because of illiteracy and lack of knowledge awareness regarding HIV/AIDS and PPTCT programme. More over the stigma attached to HIV/AIDS will prevent them to come for followup.

The simplest of all PPTCT drug regimens was tested in the HIV NET 012 trial which took place in UGANDA between 1997 and 1996/12. This study found that single dose of Nevirapine given to mother at the onset of labor and to the baby after delivery is a simple, cheaper, easy to administer and cost effective.

Mothers with HIV are not advised to breast feed whenever the breast milk substitutes are accessible, acceptable, affordable, sustainable and safe. Mother should be counseled regarding the pros and cons of different infant feeding options and should be helped to select a most suitable option. In our study 27 babies were breast fed among the 76 babies who came for followup.

At the end of 18 months 6 (20.08%) children were detected HIV positive in spite of receiving scheduled Nevirapine dose. Balrunna et al study done in Kolkata 18.18% babies were detected positive for HIV infection¹³.

Conclusion: The present study is the analysis of one year of our PPTCT programme.

Proper health education regarding HIV/AIDS will alleviate the social stigma and improve the adherence rate for follow up.

To achieve high success rate PPTCT programmes must have well trained, supportive staff who take great care to ensure confidentiality. They must be backed up by effective HIV testing, pre and post test counseling and good HIV/AIDS education which is essential to eliminate the myths and misunderstandings among the pregnant women and to counter stigma and discrimination in the wider community.

Positive people network may raise the confidence level of the HIV "+ve" mothers. Guidance has to be given to the women to choose the nearest centre for delivery and follow up. Under these conditions anti retro viral drugs have the potential to save thousands of babies lives. Now we must apply the knowledge and tools to create an AIDS free generation. Now after the establishment of our PPTCT centre, our staff are keen in following even the remote cases by a good positive people network and providing better services in the year 2011. Hope we reduce the vertical transmission rate further in near future.

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