

To Assess the Outcome of Pregnancy of the Women Detected as HIV Positive Cases in PPTCT Program Since its Initiation in 2005 in Umaid Hospital, Jodhpur (Rajasthan)

Santosh Khokher¹, Vinod Kumar Dhaka^{2*}, H.V. Singh³

¹Assistant Professor, ³Professor (Retired) & Ex-HOD,

Department of Obstetrics & Gynaecology, Dr S.N. Medical College, Jodhpur, Rajasthan, India.

²Junior Specialist, Department of Pediatrics, CHB Satellite, Dr S.N. Medical College, Jodhpur, Rajasthan, India.

ABSTRACT

Background: Our study is planned to note the outcome of pregnancy of the women detected as HIV positive in the PPTCT program as well as to have an evaluation of the PPTCT program in our institute since the initiation of this programme in 2005.

Materials & Methods: The present study was carried out in the department of Obstetrics and Gynaecology, Umaid Hospital attached to Dr. S. N. Medical College, Jodhpur. The data over this period were analyzed. As per the strategy and policy prescribed by NACO, tests (E/R/S) were performed on the serum samples. Those found HIV positive went for confidential post-test information and counselling regarding through intimation about the vertical transmission and importance of their institutional deliveries.

Results: Our study observed that out of the total delivered babies of seropositive women 95.31% were live births, 3.90% were IUD babies and one was still birth. Out of the total delivered babies 64 i.e. 52.45% had physiological jaundice, 35 i.e. 28.68% had acute diarrheal disease, 2 i.e. 1.63% had oral thrush, 20 i.e. 16.93% had URI, 2 i.e. 1.63% had Server

Septicaemia, 9 babies i.e. 7.37 % expired in neonatal period and another 9 expired after one month.

Conclusion: PPTCT programs are feasible in Government hospital where resources are limited. Rural pregnant women are receptive to voluntary counselling and testing.

Keywords: PPTCT Program, Seropositive Women, NACO Test, HIV Testing.

*Correspondence to:

Dr. Vinod Kumar Dhaka,

Junior Specialist,

Department of Pediatrics, CHB Satellite,

Dr S.N. Medical College, Jodhpur, Rajasthan, India.

Article History:

Received: 23-05-2019, Revised: 21-06-2019, Accepted: 18-07-2019

Access this article online

Website: www.ijmrp.com	Quick Response code 
DOI: 10.21276/ijmrp.2019.5.4.046	

INTRODUCTION

The virus causing AIDS first discovered by L. Montagnier of France in 1983 and named it as Lymphadenopathy Associated Virus (LAV).¹ In following years, R. Gallo of USA reported several characteristics of this virus which he called Human T Lymphotropic Virus type III. (HTLV III). The accepted universal nomenclature of the retrovirus is Human Immunodeficiency Virus (HIV).²

WHO estimate that in consideration of under diagnosis, under reporting and delay in reporting, actual number of HIV cases till 2006 were 39.5 million, 4.3 million in sub Saharan Africa. In 2006, 2.9 million people died due to AIDS related disease syndrome.³

WHO current projection is that 25 million children will be orphans by 2010 because of AIDS and 70 million men, women and children may die of AIDS in next 15 years.⁴

As the epidemic evolves further, rates will continue to rise in communities and nations where poverty, social inequalities, and

weak health infrastructures facilitate spread of the virus. The estimate of 5.7 million HIV-infected people in India (in year 2006), as compared with 5.5 million in South Africa, has captured wide attention.⁵ The AIDS virus has been silently threatening all of Asia. Its spread is rapid and deadly. One in four new infections occurs in Asia every day. 15,00 persons affected with the virus die here every day. The UN estimates that 8.2 million people are infected with the human immunodeficiency virus (HIV) in Asia, and about 5.1 million of them are from India.⁶

The surveillance data suggests HIV/AIDS epidemic is moving from urban area & high risk groups (CSWs, IDUs and population) In India HIV/AIDS epidemic continue to shift towards women and young people. It was estimated that 22% of HIV cases were house wives with a single partner. Increased HIV prevalence among women leads to the increased mother to child transmission of HIV and pediatric HIV cases.⁷

A study from south India consisting of 134 HIV infected women showed that 89% women identified heterosexual route as the route of HIV transmission and 88% had monogamous relationship.⁸ The monogamous relationship with the spouses was identified as the only route of HIV transmission in females who were not sex workers in another Indian study.⁹ The monogamous women, being infected by HIV via the heterosexual route from their spouses, transmit the infection to the next generation through vertical transmission and a report showed that the vertical transmission rate in India varies between 13-60%.¹⁰

First case in Rajasthan, a Swiss tourist, was reported in 1987 at Pushkar, Ajmer. AIDS cell to implement National AIDS Control Programme in Rajasthan was established in Directorate of Medical and Health services, Jaipur in 1992. In Rajasthan up to Aug. 06 1153 AIDS cases were reported.¹¹

In Rajasthan the results of the HIV testing of blood samples collected from Rajasthan contributed to the national HIV prevalence estimate. Nationally, 0.28% of adults age 15-49 are infected with HIV, including 0.35% in urban areas and 0.25% in rural areas. If the six states considered by the National AIDS Control Organization as having high HIV prevalence are excluded, the HIV prevalence for the remaining 23 states combined, including Rajasthan is 0.08% among women age 15-49 and 0.16% among men age 15-49.¹²

The main mode of transmission of infection is through sexual intercourse. It can also spread through I.V. drugs use, transfusion of blood and blood products, sharing of razors and needles with infected person. It is estimated that worldwide 70-80% through I.V. drug use.¹³ Among sero positive group on India sexual promiscuity constitute the largest group and next in the order of magnitude is intravenous drug users, blood donors or recipient of blood and blood products.¹⁴

The Govt. of India launched a national programme for the control of HIV/AIDS in 1992. Rajasthan state AIDS control society was established in 1998.¹⁵ National programme for control of HIV/AIDS include the prevention and control of sexually transmitted disease, blood safety, hospital infection control, clinical management of HIV/AIDS, condom programme, surveillance and research, IEC, reduction of impact of HIV/AIDS and programme management. A substantial proportion of input has been IEC, as information is seen as major defence to protect one-self from HIV/AIDS. The approaches used have included mass media, interpersonal communication, and other means of communication. Similarly the non-government agencies are also instrumental in creating the awareness on AIDS.¹⁵

Possible sources of HIV infection in case of positive mothers: The mother's positive status is responsible for the transmission of HIV into the child. It has been observed that mothers may have various sources for HIV acquisition like:

1. Infected Father/Partner: In 90% of the cases in India women get the viruses in the monogamous relationship only from the promiscuous husbands or partners or the husbands/partners being an IDU (Intravenous Drug User).
2. Infected Needle: If the IDU woman is infected herself.
3. Infected Blood: If the woman is transfused with infected blood.
4. Multiple Partner Relationship: If the woman has multiple partner (like Female Sex Worker).

In case of PMTCT (Prevention of Mother to Child Transmission), emphasis is given to prevent Intra household transmission of HIV.

So, the term PMTCT is replaced by PPTCT (Prevention of Parents to Child Transmission) to make it more appropriate and focused at the contest of households. More than 27 million women including 92,000 HIV infected women give birth in India every year. According to NACO number of HIV positive women are increasing and with it the number of babies with HIV infection.

Though HIV prevalence is apparently low in India, the vast PPTCT program appears to be less cost effective but it is a vital platform to deliver the message of HIV prevention among the common monogamous women.

As a part of the PPTCT program by NACO, the PPTCT program was started in our institute in April 2005. So this study is planned to note the outcome of pregnancy of the women detected as HIV positive in the PPTCT program as well as to have an evaluation of the PPTCT program in our institute since the initiation of this programme in 2005.

MATERIALS & METHODS

The present study was carried out in the department of Obstetrics and Gynaecology, Umaid Hospital attached to Dr. S. N. Medical College, Jodhpur. The data over this period were analyzed. The variables studied included age, sex, marital status, occupation, place of residence, pattern of risk behavior and HIV serostatus.

The guidelines of NACO are followed in our PPTCT center. The counsellor interviewed the attendees under strict confidentiality. After pretest counselling and obtaining consent of the attendees was done laboratory technician, collected their blood samples. As per the strategy and policy prescribed by NACO, tests (E/R/S) were performed on the serum samples. Those found HIV positive went for confidential post-test information and counselling regarding through intimation about the vertical transmission and importance of their institutional deliveries. For those who wanted to have termination of pregnancy (MTP) after post-test counselling the procedure was carried out. At the onset of labour the positive women was given oral nevirapine according to NACO guideline. The labour was conducted with universal precaution. After the birth of the baby, nevirapine syrup was given to the newborn as per the NACO guidelines. If the mother came in the very advanced stage of labour (delivery occurred within two hours of admission) or she had confinement in the labour emergency only, then the new born babies were given two doses of nevirapine according to NACO guidelines because nevirapine does given to mother does not give protection against the vertical transmission of HIV in such cases. All the mothers were counselled in detail about the merits and demerits of breastfeeding. The mother and babies were ask to come for the follow up visits every six months after birth till the 18 months of the age of baby. Each case was studied in detail and recorded in the proforma.

All these data were collected, compiled and analyzed for this study purpose without taking the identity of the women into account.

RESULTS

Our study showed that maximum number of seropositive pregnant women were in the age group 21-25 (53.40%) followed by 26-30 year (26.70%), ≤20 years (9.94%), 31-35 year (6.80%) and least 3.14% in the age group >35 years (table 1).

We showed that contraceptive practices used by the seropositive women are limited. Just 2.93% used IUCD, 20.9% used OC Pills,

condom were used in 12.04% of the subject and rest 83.24% did not use any method of contraception (Table 2).

Our study observed that out of the total delivered babies of seropositive women 95.31% were live births, 3.90% were IUD babies and one was still birth (table 3).

Out of the total delivered babies 64 i.e. 52.45% had physiological jaundice, 35 i.e. 28.68% had acute diarrheal disease, 2 i.e. 1.63% had oral thrush, 20 i.e. 16.93% had URI, 2 i.e. 1.63% had Server Septicaemia, 9 babies i.e. 7.37 % expired in neonatal period and another 9 expired after one month (table 4).

Table 1: Distribution of HIV positive patents according to age group

Age (in years)	2005	2006	2007	2008	2009	2010
≥20 years	2	2	4	2	4	5
26-30	8	16	13	28	28	9
31-35	2	5	8	14	16	6
31-35	1	1	2	5	3	1
>35	1	1	2	1	0	1

Table 2: Demographic characteristics of seropositive women

S.No.	Variable	Sero positive women	Percentage
1	Contraceptive Practice		
	Condom	23/191	12.04%
	OC Pill	4/191	2.09%
	IUCD	5/191	2.61%
	None	159/191	83.24%
2	Addiction		
	Chewing beetal leaves with tobacco	9/191	4.71%
	None	182/191	95.28%
3	Multiple sex partners		
	Husband	131/191	68.58%
	Wife	10/191	5.23%
	Both	10/191	5.23%
4	Commercial sex worker	--	--
5	Recipient of Blood & Blood products	2	1.04%
6	Intravenous Drug user	--	--
7	Active tuberculosis in husband	1	0.52%

Table 3: Outcome of delivery of sero positive women

S.No.		2005	2006	2007	2008	2009	2010	Total	%
1	Live Birth	2	15	20	30	40	15	122	95.31
2	IUD	-	-	-	-	4	1	5	3.9
3	Still birth	-	-	-	1	-	-	1	0.78

Table 4: Distribution according to neonatal morbidity and mortality

S.No.	Neonatal morbidity and mortality	N=122	Percentage
1	Physiological Jaundice	64	52.45
2	Acute diarrheal disease	35	28.68
3	Oral thrush	2	1.63
4	Meningitis	Nil	--
5	Neonatal death	9	7.37
6	Birth asphyxia	1	0.81
7	URI	20	16.39
8	Severe Septicemia	2	1.63
9	Deaths after one month	9	7.37

DISCUSSION

In present study; women are coming from poor socio-economic class with poor literacy rate having low awareness of the disease; this program is effectively creating awareness of HIV among the antenatal cases. Rouzioux et al¹⁶ observed that perinatal transmission could occur during antepartum, intrapartum and after delivery who breast feed. Therefore strategies for PPTCT involved HIV education, counselling and testing for pregnant women and providing anti-retroviral prophylaxis to them and their infants. This study demonstrate the acceptance and response to universal HIV counselling and voluntary screening in this busy antenatal tertiary care unit using an opt out strategy.

Since this program started in April '05 and may be it took time to deepen its roots in the pre-existing administration of this hospital so it took time to achieve its momentum and since then every year the rate of testing has been increasing and if we see data in 2009, it is 61.59% and it rose to 65.85% in 2010. This may be attributed to either increased awareness about the disease, lesser stigma associated with it now-a-days, expanded coverage of testing of probably due to more number of women feeling the need to get tested just because of availability of CD 4 counts and ART in our city. The total attendees of PPTCT center have increased over these years form 8.05% to 88.13% from year 2005 to June, 2010. In this study 3.14% women opted for MTP and 67.01% continued pregnancy. Out of them 93.75% had normal vagina delivery, 5.46% had LSCS and 0.78% had instrumental delivery. This is comparable to Bal Runa et al¹⁷ study which has similar results (95.34% LSCS & rest LD). The LSCS performed (5.46%) were both emergency caesarean sections. Evidence shows that performing a caesarean section prior to the onset of labour can reduce the risk of infection up to fourfold because it minimizations the exposure of the child to maternal body fluids while passing through the birth canal. Another study showed greater post-caesarean section morbidity in HIV positive women in comparison to the control group of women. The present study is the analysis of the first five and a half years records of PPTCT program, when the program is in its infant stage and the other cause of less caesarean section rate is that the patient comes in the labour and the patient and the relatives prefer normal vaginal delivery and do not give consent for LSCS. They come from low social-economic status, rural area and are ignorant about the benefits of LSCS in preventing the transmission of HIV to child and thus they become adamant for normal delivery and it becomes difficult to counsel them for LSCS in those crucial hours. Out of the total delivered seropositive women, 95.31% were live-births, 3.90% were IUD & 0.7% were SB. Bal Runa et al. study showed 88.31% born alive.¹⁷ Out of the total babies delivered, 64(52.45%) had physiological jaundice, 35(28.68%) had acute diarrheal disease, 2 i.e. 1.63% had oral thrush & 1 baby i.e. 0.81% had birth asphyxia & 20, i.e. 16.3% had URI. A study by Veronica, Andappan (2009)¹⁸ reported 2 neonatal death out of 30 babies (6.60%) followed, which is in concordance with our study, acute diarrheal disease oral thrush, URI & septicaemia have been seen as morbidity in nannies of the seropositive mothers.

CONCLUSION

PPTCT programs are feasible in Government hospital were resources are limited. Rural pregnant women are receptive to

voluntary counselling and testing. Through this program pregnant women and their spouses are educated on HIV/AIDS & PPTCT.

REFERENCES

1. Panikar' Ananth Narayan, Text book of microbiology, 7th edition
2. AIDS in Asia, The challenge ahead, Jai P, Narain, WHO, New Delhi.
3. Ahmed M., Gaash B. – Awareness of HIV/AIDS in a remotely located conservative district of J&K (Kargil): Results in remotely located study. Indian Journal of Public Health. Jan. – March 2002, 27(1), 12 – 8.
4. WHO. HIV/AIDS in Asia and the pacific region, 2005.
5. Vyas N, Hooja S, Singha et al. Prevalence of HIV/AIDS and predication of future trends in North-West region of India: Indian J Community Med 2009;34:2012-7.
6. Steinbrook R. HIV in India – A complex epidemic. N Engle J Med 2007;356:1089-93.
7. Heffernan G. Housewives account for one fifth of India's HIV cases. India post and NCM, 16 April 2004.
8. Newmann S, Sarin P, Kumarasamy N et al. Marriage, monogamy and HIV: a profile of IV infected women in south India Int. J STD AIDS.2000; 11:250-3.
9. Gangakhedkar RB, Bently ME et al. Spread of HIV infection in married monogamous women in India. JAMA. 1997; 278:2090-2.
10. Preventing Mother-to-Child Transmission of HIV AIDS-India (2001).www.unicef.org/evaluation/files/india2001pmtchiv aids.doc (accessed on 12.10.06).
11. Rajasthan AIDS control program, 2006.
12. National Family Health Survey – III, India (Rajasthan) 2005-2006. HIV/AIDS 20-22.
13. HIV/AIDS Specialist Training and Reference Module, NACO, New Delhi, 2005.
14. Mahajan SM, Rodrigues JJ, Brook Meyer RS, Gangakhed Karr RR, et al. incidence and predictors of Human Immunodeficiency Virus type I. Seroconversion in patients attending sexually transmitted disease clinics in India. J. Infect. Dis. 172:1486-91,1995.
15. Overview of HIV prevention in Mothers, Infants and Young Children PPTCT (India). Revised training curriculum, Participant manual, NACO, December 2004; Module 2-4:44.
16. Rouzioux C, Costagliola D et al. Estimated timing of mother-to-child HIV-1 transmission by use of a Markov model. Am J Epidemiol 1995; 142:1330-7.
17. Bal, Talukdar et al. PPTCT of HIV-scenario of West Bengal J Obstet Gynecol India 2008 May/June; 58(3).
18. Veronica, Andappan et al. Efficacy of single dose NVP in PMTCT of HIV; J Obstet Gynecol India 2010 May/June; 60(3).

Source of Support: Nil.

Conflict of Interest: None Declared.

Copyright: © the author(s) and publisher. IJMRP is an official publication of Ibn Sina Academy of Medieval Medicine & Sciences, registered in 2001 under Indian Trusts Act, 1882. This is an open access article distributed under the terms of the Creative Commons Attribution Non-commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

Cite this article as: Santosh Khokher, Vinod Kumar Dhaka, H.V. Singh. To Assess the Outcome of Pregnancy of the Women Detected as HIV Positive Cases in PPTCT Program Since its Initiation in 2005 in Umaid Hospital, Jodhpur (Rajasthan). Int J Med Res Prof. 2019 July; 5(4):190-93. DOI:10.21276/ijmrp.2019.5.4.046