

## RETROSPECTIVE STUDY OF OBSTETRICAL OUTCOME OF HIV POSITIVE PREGNANT WOMEN IN A TERTIARY CARE CENTER

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### Abstract

**Background-** HIV is a major public health problem in the world including India. Maternal to fetal HIV transmission rate is found to vary from 20 to 25% in absence of any interventions, while mother to child transmission can be minimized to upto 2% by ART drugs, appropriate intrapartum management in the absence of breast feeding.

**Aims & Objective-** Our aim is to study the impact of HIV infection on the maternal and perinatal outcome and to analyze measures to be taken to prevent and minimize mother to child transmission.

**Material and method-** All the HIV positive pregnant women on ART coming to our hospital for safe confinement and women diagnosed for the first time on reaching labour room emergency in Dept. of Obs & Gynae. Nalanda Medical College & Hospital were studied. The duration of study was 18 month(from October 2021 to March 2023).

**Result-** Total 30 HIV positive pregnant women were admitted in LRE of NMCH Patna. Out of 30 cases 2 cases(6.66%) presented with 6 to 10 weeks pregnancy with incomplete abortion. 57.14% HIV positive were delivered vaginally and 42.85% delivered by LSCS. There was no maternal mortality. There were Low birth weight in 22%, Perinatal mortality in 3.33% cases

**Conclusion-** with the use of ART drugs and appropriate care in antenatal, intrapartum and postpartum period the maternal and perinatal outcome in better. Early enrollment of HIV positive women for ANC and appropriate management of labor and Navirapine syrup to newborn has improved the prognosis.

**Keywords-** HIV( Human immunodeficiency virus), ART(antiretroviral therapy), LRE(labor room emergency)

### Introduction

Women represent about half of all people living with HIV world wide. Young people, aged 15-24 years account for about 40% of all new HIV infections. Globally there were 3.4 million children living with HIV in the year 2011.HIV may pass from infected mother to her foetus through the Placenta, during delivery or by breast feeding.

<sup>10</sup> Mother to child transmission of HIV is the primary route of HIV transmission among children. The Prevention from Parent to Child Transmission of HIV (PPTCT) in India was launched in 2002.The triple drug prophylactic antiretroviral (ARV) regimen was adopted in 2012.

The lifelong multidrug ART for all pregnant and breastfeeding women was implemented in January 2014. Antenatal care of HIV sero-positive pregnant women and ART can contribute

to the decrease in the transmission of HIV to the child and thus reduce the burden of HIV among children.

Early registration of pregnant women and HIV testing, ART treatment of all HIV positive pregnant mother, appropriate antenatal, intrapartum and postpartum care is a must to minimize mother to child transmission of HIV virus.

**Material and method-** All the HIV positive pregnant women on ART coming to our hospital for safe confinement and women diagnosed for the first time on reaching labour room emergency in Dept. of Obs & Gynae. Nalanda Medical College & Hospital were studied. The duration of study was 18 month(from October 2021 March 2023).

**Result-** There were total 6818( six thousand eight hundred and eighteen) women admitted in labor room during the study period out of which 30 women(0.44%) were HIV positive. Thus we can see that 0.44% of the women admitted in labor room emergency were HIV positive. There were total 5230 (five thousand two hundred & thirty) birth during the study period. LSCS was done in two thousand four hundred & three cases(45.94%) and there were 2827 vaginal birth(54.0%). LBW was 2.88% and Preterm Birth was 3.55% among all women delivered In LRE during the study period. Stillbirth rate was 2.5 % in women admitted in LRE. Total 30 HIV positive pregnant women were admitted in LRE of NMCH Patna during the study period. Out of 30 cases 2 cases(6.66%) presented with 6 to 10 weeks pregnancy with incomplete abortion. Out of remaining 28 cases, sixteen cases (57.14%) were delivered vaginally and 12 cases (42.85%) delivered by LSCS. There was no maternal mortality. One stillbirth probably due to prematurity. The birth weight was between 2 .5 kg to 3.5 kg in 21 cases(75%) and in seven cases(25%) it was between 1.8 kg to 2.5 kg. Thus incidence of LBW was highier in newborn of HIV positive as compared to all other women admitted in LRE. All the HIV positive pregnant women were also counseled for appropriate contraceptive including ligation during LSCS.

**Table 1: showing cases of HIV infection-**

HIV positive cases	Number	Percentage
Known cases from before	19	63.33%
Diagnosed in LRE	11	36.66%

The above table shows that 63.3% cases were diagnosed during antenatal period and 36.33% cases were diagnosed in the labor room. Those women who were diagnosed earlier were on ART and so chances of mother to child transmission was very less. But the women who were diagnosed in LRE were very challenging.

**Table 2: Mode of Delivery**

Mode of Delivery	Number of women	Percentage
LSCS	12	42.85%
Vaginal delivery	16	57.14%

As shown in the above table 42.85% cases were delivered by LSCS and most common indication was previous LSCS.

**Table 3: Indications of LSCS-**

Indications	Number	Percentage
Previous LSCS	04	33.33%
CPD	01	11.11%

Fetal distress	01	11.11%
Nonprogress of labor	02	22.22%
Miscellaneous	04	33.33%

**Table 4: Maternal and perinatal mortality-**

	Number	Percentage
Maternal mortality	00	00
Perinatal mortality	01	3.33%

There was no maternal mortality and one stillbirth. Babies of these mothers were followed up by PPTCT team and tested at 6weeks, 6month, one year and 18 month for HIV status

**Discussion;** <sup>1</sup>The rate of transmission of HIV virus from infected mother to her foetus can vary from 20-25 percent in absence of any intervention. Transmission during peripartum period accounts for one third to two third of overall number infected depending on whether breast feeding transmission occurs or not. The chances that an HIV infected woman will transmit HIV infection to her infant are greatly reduced by using antiretroviral (ARV) drug therapy during pregnancy and during breast feeding. In our study 0.44% of the women admitted in labor room emergency were HIV positive, which matches with the paper published by Purushottam A Giri et.al. in the department of community medicine, Rural Medical College and Parvara Rural Hospital, Loni Maharastra<sup>11</sup>.

As we can see in our study that 42.85% HIV positive women were delivered by LSCS for different indications, most common indication was previous LSCS. There was no maternal death and perinatal mortality was 3.5% which is comparable with HIV negative women. About 25% of newborn of HIV positive mother was less than 2.5 kg. thus the incidence of LBW was higher in the newborn of HIV positive mother.

As we know HIV virus is also excreted in the breast milk but in developing countries like our formula feeding is not affordable due to poverty, illiteracy, poor hygiene etc for most of the newborn so breast feeding is continued and the mother must be on ART drug during breast feeding.

<sup>5</sup>The prevention of parent to child transmission of HIV/AIDS (PPTCT) programme was launched in India in the year 2002. The NACO technical estimate report (2015) estimated that out of 29 million estimated pregnancies in India 35255 occur in HIV positive pregnant women. The PPTCT programme aims to prevent the perinatal transmission of HIV from an infected mother to her offspring.

<sup>2</sup>With effect from 1<sup>st</sup> January 2014 pregnant women who are found to be HIV positive are initiated on lifelong ART irrespective of CD4 count and WHO clinical staging and the newborn babies are put on Nevirapine syrup immediatly after birth.

<sup>3</sup>There are several preventive strategies that reduce, or may reduce, the risk of a mother passing her HIV infection to her unborn infant. These include antiretroviral medication, proper nutrition, replacement feeding for infants, intra-partum management, elective caesarean section etc. Counseling about the possible benefits and risks of breastfeeding and be offered feeding alternatives (commercial infant formula, dried milk powder and evaporated milk, modified animal milks, heat treated-breast-milk).

<sup>11</sup>A multifaceted approach pregnant women who are HIV positive to better access to voluntary counseling and testing and health care services, and further formula food to their infants is an integral part in assisting the pregnant women in preventing perinatal transmission of HIV.

**Conclusion-** with the use of ART drugs throughout pregnancy and during breast feeding and appropriate care in antenatal, intrapartum and postpartum period the maternal and perinatal outcome in better. Early enrollment of HIV positive women for ANC and appropriate management of labor and Nevirapine syrup to newborn has improved the prognosis. Counseling and advice about contraceptive method is also essential.

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