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A RETROSPECTIVE STUDY OF PREVALENCE, OBSTETRICAL AND PERINATAL OUTCOME AMONG HIV POSITIVE WOMEN IN TERTIARY CARE HOSPITAL

Obstetrics & Gynaecology

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ABSTRACT

Background : Mother-to-child transmission (MTCT) is the most common cause of paediatric HIV infection. Its prevention, appropriate antenatal interventions and antiretroviral therapy can help in ending paediatric infections and reducing morbidity and mortality associated with it. **Design:** A Retrospective study. **Aim/Objective:** To evaluate the prevalence of HIV in pregnancy and obstetrical and perinatal outcome among HIV positive women . **Method:** This retrospective study was carried out at SMGS hospital, Jammu during a study period from 1st August 2021 to 31st July 2022. All pregnant HIV positive females were studied during this period. **Results:** Among 18250 deliveries conducted in SMGS hospital over the study period, 15 were of HIV positive women (incidence of 0.8% per 1000 births). It was found more common in the age group of 20-35 years. 20% have PPROM, 13.3% have gestational hypertension and 6.6% have GDM .Normal deliveries was seen among 33.3% women, emergency LSCS was done for 53.3% and elective LSCS for 13.3% women. 13.3% of women had FGR and 33.3% babies born were low birth weight . **Conclusion:** Antenatal screening and timely initiation of antiretroviral drug therapy both in mother and baby can help in improving maternal and neonatal outcomes.

KEYWORDS

Human immunodeficiency virus, Mother-to-child-transmission, Antiretroviral therapy.

INTRODUCTION

HIV is a virus that attacks your immune system and impairs its capacity to fight off infections. The number of living HIV cases as of 2019 ranged from 38 million (31.6 million to 44.5 million). In India, the trend for HIV prevalence has generally been dropping. Adult HIV prevalence (15-49 years) in 2021 was 0.21%[1] . Sexual contact or parenteral exposure to blood or blood products are the main ways that maternal HIV is acquired. The most frequent cause of HIV infection in chidren is mother-to-child transmission (MTCT)[2]. Perinatal transmission accounts for 5% of all cases in India[3]. Mother to child transmission (MTCT) may vary from 15 to 45% in the absence of any intervention.

Studies have demonstrated that pregnancy has a little effect on the progression or the survival of HIV-infected women. On the other hand, the implications of HIV infection on the outcome of pregnancy is a topic of continuous debate. The main associations of HIV are with preterm birth and fetal growth restriction[4].

With advancements in healthcare services, appropriate antenatal interventions and availability of antiretroviral therapy (ART), there has been significant reduction in new HIV cases[5].

Aim/Objective

To evaluate the prevalence of HIV in pregnancy and obstetrical and perinatal outcome among HIV positive women .

METHODOLGY

This was a retrospective study conducted at SMGS hospital, Jammu from 1st August 2021 to 31st July 2022. All pregnant women who presented to the hospital and had been tested positive for HIV irrespective of age , parity, gestational age, treatment status were included in this study.

Information was obtained from medical records, antenatal cards, discharge cards and interviews. Follow up of mother and child was done till 12 weeks postpartum. Data was collected to determine various maternal characteristics, mode of delivery, complications, baby status, need for antiretroviral therapy.

RESULTS

Table 1: Distribution on the basis of age and parity

Age group in years	Number of women	%
20-25	7	46.6%
26-29	5	33.3%
30-35	3	20%
Parity	Number of women	%
Primigravida	7	46.6%
G2	6	40%
G3	1	6.6%
G4	1	6.6%

Table 2: Relationship between HIV positive mother with time and mode of delivery.

Time of delivery	Number of women	%
Term (≥37weeks)	12	80%
Preterm (≤37weeks)	3	20%
Mode of delivery	Number of women	%
Vaginal delivery	5	33.3%
Emergency cesarean	8	53.3%
Elective cesarean	2	13.3%

Table 3: Baseline Characteristics of newborn

Gender of baby	Frequency	%
Male	10	66.6%
Female	5	33.3%
Birth weight of baby	Frequency	%
≤2kg	2	13.3%
2.1-2.5kg	3	20%
2.6-2.9kg	1	6.6%
≥3kg	9	60%

Table 4 : HIV status of Husband and baby.

Status of husband	Frequency	%
HIV Positive	9	60%
HIV Negative	6	40%
Status of baby	Frequency	%
HIV Positive	0	0
HIV Negative	15	100%

Table 5: CD4 count in HIV Positive mother

CD4 Count (cells/mm3)	Frequency	%
<100	0	-
100-200	2	13.3%
201-499	3	20%
≥500	10	66.6%

Table 6: Obstetrical and perinatal complications of HIV pregnancy

Obstetrical complications	Frequency	%
Anemia	5	33.3%
PPROM	3	20%
GDM	1	6.6%
Gestational hypertension	2	13.3%
Perinatal complications	Frequency	%
FGR	2	13.3%

Congenital anamoly	0	-
Stillbirth	0	-
Low birth weight	3	20%
NICU admissions	3	20%

Among 18,250 deliveries conducted in SMGS hospital over the study period, 15 were of HIV positive women (incidence of 0.8% per 1000 births).

It was found more common in the age group of 20-35 years. The mean age of women was 26.4± 4.45years. Out of these 15 women 7 (46.6%) were primigravida, 6 (40%) were second gravida, one were third (6.6%) and fourth (6.6%) gravida each (Table 1) . 12 women (80%) had term delivery and only 3 women (20%) had preterm delivery before 37weeks (Table 2). Most women undergone caesarean section , 8 women (53.3%) had emergency caesarean and 2 women (13.3%) had elective caesarean, and 5 women (33.3%) delivered by vaginal delivery (Table 2). 10 babies (66.6%) born were males and 5 babies born were females (33.3%). The mean weight of babies was between 2-3.5 kg. 33.3% have weight ≤2.5kg. (Table 3). 60% of husband of HIV-positive women were also HIV positive and 40% were HIV negative. 100% of babies born were HIV negative (Table 4). 13.3% have CD4 count between 100-200, 20% have counts between 201-499 and 66.6% have counts ≥ 500/mm3. (Table 5).

Anemia was seen in 33.3% women followed by PPROM in 20% followed by gestational hypertension in 13.3% and GDM in 6.6%. About 20% babies need NICU admissions. 13.3% have FGR and 20% have low birth weight (Table 6).

DISCUSSION

HIV may be the cause of complex interaction of related medical and social conditions that affect pregnancy. The care of the HIV positive women during pregnancy should include counselling and support , overcoming the social stigma associated with it as an integral part of the management[10]. Screening of these women in first trimester is very crucial so that ART can be initiated earlier[9] .Women should be educated regarding the importance of hospital delivery and infant feeding practices[13].

In this study, HIV was found more common in the age group of 20-35 years. Among 15 women studied 100% were on ART during pregnancy. 86.66% were already on ART and 13.3% initiated ART antenatally. With regards to the mode of delivery, the vast majority had cesarean section (66.6%) whereas 33.3% had vaginal delivery. This was consistent with the study of Subramanian A et.al[12]. Also, a meta analysis of various North American and European studies showed 50% reduction in transmission rate in HIV positive in whom LSCS was conducted instead of a vaginal delivery[14].

Incidence of anemia was 33.3%, PPROM was 20%, GDM 6.6%, Gestational hypertension 13.3%. No documented opportunistic infections seen in the seropositive pregnant women. While in some studies HIV is associated with stillbirths. However in our study only 2 women (13.3 %) had IUGR and only 13.3% of the babies were less than 2kg and 33.3% were ≤2.5kg but no stillbirths. 3 women (20%) had preterm deliveries and 3 babies (20%) need NICU admission[4,6,8]. Gibango et al. in their study reported that HIV-positive mothers who were not on ART were at increase risk of delivering low birth weight infant[7].

100% babies born were HIV negative and received HIV prophylaxis for 6 weeks . A blind trial conducted among 1522 HIV negative infants also shows decreased transmission by 76% in infants who received prophylaxis. Also majority of the HIV positive women opted not to breastfeed after counseling and go for replacement feeding.

CONCLUSION

HIV positive women should be monitored for any signs of HIV related opportunistic infections and for any other intercurrent infections. A multidisciplinary team approach is essential as it can optimize maternal and fetal outcome.

Universal counselling and voluntary testing of HIV infection and initiation of antiretroviral drug therapy is recommended for all pregnant women as antenatal interventions can reduce mother-to-child transmission of HIV and improves pregnancy outcomes[11].

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