

## Study of impact of WHO option B+ on maternal and perinatal outcome in HIV-positive women delivering at a tertiary care hospital, Delhi

Sir,

Mother to child transmission (MTCT) is responsible for the majority of pediatric population infection accounting to more than 90%.<sup>[1]</sup> WHO Option B+ was adapted in 2014 with the aim of not only reducing the rate of PMTCT but also for the patient's health.<sup>[2]</sup> Triple antiretroviral therapy, i.e., tenofovir (300 mg), lamivudine (300 mg), and efavirenz (600 mg) is started at the point of diagnosis without the need for CD4 counts. Infant receives daily dose of nevirapine till 6 weeks of age irrespective of type of feeding. Pediatric antiretroviral therapy (ART) is started if infant is diagnosed positive.

There is the absence of lack of consensus on the effects of ART and also the effect of WHO option B+ On maternal and perinatal outcomes. This study was planned with the aim of evaluating maternal and perinatal outcome in HIV-infected women delivering in a tertiary care facility after the adaptation of WHO option B+.

Table 1 depicts the sociodemographic profile of 159 women. Anemia was seen in 54%, followed by preterm delivery in 13.8% women, as shown in Table 1 along with other obstetrical and neonatal outcomes. Associated comorbidities were present in 3 women, one had pulmonary tuberculosis, and other 2 were hepatitis B reactive. There was no maternal mortality. Low birth weight was seen in 30.8% neonates and 5.6% required nursery admission. Majority were exclusively breast fed. All infants underwent

**Table 1: Sociodemographic profile**

Parameters	Total (n=159), n (%)
Age (years)	
≤19	6 (3.7)
20-25	81 (50.9)
26-30	49 (30.8)
31-35	17 (10.6)
>35	6 (3.7)
Parity (n=159)	
Primipara	73 (45.9)
Multipara	86 (54)
Time of starting of TLE	
Prior to pregnancy (weeks)	17 (10.6)
≤12	60 (37.7)
13-28	64 (40.2)
29-40	10 (6.2)
Postnatal	7 (4.4)
Postoperative (laparotomy)	1 (0.6)
Obstetrical outcomes (n=159)	
Anemia	86 (54)
Gestational diabetes mellitus	19 (11.9)
Pregnancy-induced hypertension intrahepatic hepatic cholestasis	13 (8.1)
Of pregnancy	22 (13.8)
Preterm delivery	22 (13.8)
Multiple gestation (twins)	4 (2.5)
Stillbirth	1 (0.6)
Abortion	2 (1.25)
Ectopic	1 (0.6)
Postpartum hemorrhage	3 (1.8)
Mode of delivery (n=156)	
Vaginal	122 (78)
Cesarean	34 (21.9)
Neonatal outcome (n=159)*	
Low birth weight	49 (30.8)
Nursery admission	9 (5.6)
Breast feeding	156 (98.1)
Top feeding	3 (1.8)
HIV positive	16 (10)

\*Including multiple pregnancy babies. TLE=Time limit exceeded

HIV testing at 6 weeks, 6, 12, and 18 months. Positivity rate was seen to be 10% in our study.

The increased prevalence of poor pregnancy outcome in HIV-positive women can be explained by the social stigma associated with the disease, poor socioeconomic status of affected population in majority, and lack of efficient antenatal care in terms of poor compliance by the patient and lack of patient and family counseling. High prevalence of anemia in our study should be seen as a reflection of the above factors, and all health-care professionals involved in the management of HIV-positive women should ensure treatment of anemia in preconception, antenatal, and postnatal phases.

Vaginal delivery and exclusive breastfeeding have been emphasized in WHO option B + plan, and our study shows a higher rate of both.

Low birth weight was almost half in our study as compared to in Nagar *et al.* study where it was 60%.<sup>[3]</sup> Olagbuji *et al.* found a statistically significant association between patients on ART and low birth weight.<sup>[4]</sup> Perinatal transmission was 10% in our study, but this cannot be considered as a negative impact of WHO option B+. A study conducted in Rwanda showed a 46% reduction in the rate of perinatal transmission postpolicy change.<sup>[5]</sup>

There is a scope of further improvement in antenatal registration in India and HIV screening at the first antenatal visit. It will help in early detection, starting of treatment, appropriate counseling of the patient and her family, and referral to appropriate center if required.

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#### Conflicts of interest

There are no conflicts of interest.

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