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Status Report on the Elimination of Mother-to-Child Transmission (EMCT) of HIV at the Pikine National Hospital Center (CHNP), Dakar/Senegal

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Abstract

Introduction: For several years, the fight against the human immunodeficiency virus (HIV) has been a major public health issue in Africa. Since 2012, Senegal has adopted WHO option B+, consisting of systematic triple therapy for HIV-positive pregnant women, combined with breastfeeding and antiretroviral (ARV) prophylaxis for exposed newborns. It is in this dynamic that we set ourselves the objectives of evaluating the rate of transmission of HIV from mother to child and taking stock of the monitoring of children born to HIV-positive mothers at the Pediatric Department of the CHN of Pikine located in the Dakar suburbs. **Methodology:** Thus, we conducted a descriptive and analytical cross-sectional cohort follow-up study from 11/25/2014 to 03/09/2022 including all children born to HIV-positive mothers followed at the Pikine CHN since the start of care. **Results:** We had collected 51 children exposed to HIV and followed in our structure. They were exposed to HIV1 in 92% of cases. The HIV status of the mothers was known before pregnancy in more than half of the cases. The couples were serodiscordant in 56% of cases. The mothers were in clinical stage 1 of the disease in 69.6% of cases and were already under treatment in 47% of cases. The most used treatment regimen was ATRIPLA with Tenofovir (TDF) + Emtracitabine (FTC) + Efavirenz (EFV) in 59% of cases. Compliance was good in the majority of cases. The CD4 count during pregnancy was low in 10.6% of cases. The pregnancy was well followed in only 36.2% of cases. The mothers had given birth in our structure in 91.4% of cases. The vaginal route was found in 72.5% of cases and delivery was carried out by a midwife in 69.4% of cases. The average birth weight was 2733 ± 564. The majority of newborns had received antiretroviral

(ARV) prophylaxis after birth, half of them between 12 and 24 hours. The most used therapeutic protocol was Zidovudine (AZT) + Lamivudine (3TC) + Lopinavir/Ritonavir (LPV/r). Protected breastfeeding was the option chosen in 76.8% of cases. The PCR performed at 6 weeks was negative in more than half of the cases. Retroviral serology was carried out after 14 months in 43% of cases. We noted a single positive case with a negative initial PCR, representing an overall transmission rate of 1.96%. **Conclusion:** Senegal's current policy targeting EMTCT of HIV is on good momentum with a fairly low transmission rate thanks to screening of pregnant women and prophylaxis with antiretrovirals (ARV) for HIV-positive mothers during pregnancy and for life. And children exposed from birth and during breastfeeding up to 6 weeks with regular monitoring.

Keywords

Elimination of Mother-to-Child Transmission, HIV, Pikine

1. Introduction

For several years, the fight against the human immunodeficiency virus (HIV) has been a public health issue in Africa. Eliminating mother-to-child transmission of HIV (PMTCT) is a priority intervention for health programs in Africa. According to the 2020 pandemic report from the World Health Organization (WHO), 37.6 million people are infected with the virus worldwide, including 1.7 million children under the age of 15 and a mortality rate of no negligible especially in Africa [1] [2]. Indeed, 90% of cases of infection in children are due to mother-to-child transmission, which thus constitutes the main route of transmission [3]. In the absence of any intervention, the risk of mother-to-child transmission (MTCT) of HIV in utero and during childbirth is 15% - 30% and this risk is increased in the event of unprotected breastfeeding at 20% - 45% [4]. To combat this scourge, as part of its HIV EMTCT plan, since 2012 Senegal has adopted WHO option B + consisting of systematic triple therapy for HIV-positive pregnant women, combined with breastfeeding and placing their infants on antiretroviral (ARV) prophylaxis. Despite the considerable progress noted in the implementation of the HIV program with the scaling up in 2005, the Provider Initiated Screening Council (CDIP), the delegation of tasks in 2007, the adoption of the Option B+ since 2013, the key indicators that can contribute to certifying ETME, which consists of triple elimination of HIV, Syphilis and Hepatitis B, are still far from being achieved [5]. Senegal was committed to eliminating MTCT of HIV in 2020. Thus, a catch-up plan for MTCT over the period 2018-2020 was developed to contribute to the achievement of the objectives of the National Strategic Plan (PSN) for the Fight. Against AIDS and the National Health and Social Development Program (PNDSS) [6]. The CHNP has been part of this elimination perspective since 2014 by planning monitoring of HIV-positive moth-

ers and children exposed to HIV. It is in this dynamic that we took stock of the MTCT of HIV in order to evaluate the transmission rate, to study the clinico-virological characteristics of children born to HIV-positive mothers, to determine the therapeutic aspects and evolving monitoring.

2. Material and Methods

2.1. Study Site

The Pikine National Hospital Center is a level III public health establishment (EPS), located in Thiaroye in the Dakar suburbs in the Pikine department after which it bears its name.

2.2. Study Frameworks

The study took place in the gynecology-obstetrics and pediatrics departments.

The Pediatric Department is a university hospital service which has: two (2) consultation boxes, a pediatric emergency unit with a capacity of five (05) beds, two (2) rooms for older children equipped four (4) large beds and a room for infants with five (5) large cradles and 3 neonatology units with a total capacity of 24 places. These units receive all newborns aged 0 to 28 days coming from the maternity ward of the "in Born" hospital or referred "out-Born" from different health structures in Dakar and the suburbs. The medical and paramedical team of the department is made up of: two associate professors in pediatrics including a head of department, an assistant clinical head, four hospital pediatricians, doctors specializing in pediatrics, fifth- and seventh-year students of medicine. The paramedical staff is made up of state nurses, nursing assistants, care assistants, girls and a ward boy.

The pediatrics department works in close collaboration with the gynecology-obstetrics department through the direct involvement of pediatricians in the activities of the department through a systematic examination of all newborns admitted to the corner and after delivery with their mothers before the operation. Thus, the pediatrician on call or the pediatrician responsible for PMTCT is informed of any delivery to an HIV-positive mother or whose HIV-positive mother has been confirmed in the delivery room. The newborn, after admission to the newborn corner, receives essential care like all other newborns and receives ARV prophylaxis as soon as possible for 6 weeks. The choice of protected exclusive breastfeeding (AME) will be made after counseling and agreement of the mother. He benefits from follow-up after execution with PCR1 at 6 weeks then a definitive retroviral serology at 14 weeks before closing the follow-up form in the event of negativity. This monthly monitoring of newborns of HIV-positive mothers has been organized since 2014. The staff involved in PMTCT are gynecologists, pediatricians, midwives, dermatologists, pharmacists, and social workers. Quarterly meetings are organized with the entire team involved to decide on the follow-up of mothers and their children. The obstetrics and gynecology department has a capacity of thirty-two beds distributed in the

delivery room, in the emergency obstetrics reception center. The operating room operates twenty-four hours a day for gynecological and obstetrical emergencies and five days a week for scheduled procedures. The staff are made up of: two full professors with a head of department, an associate professor, obstetrician-gynecologists, interns from Dakar hospitals, specialist doctors, anesthetists, anesthetist technicians, three operating assistants, thirteen midwives distributed in different sectors.

2.3. Type and Period of Study

We carried out a cross-sectional and descriptive cohort follow-up study which focused on the files of children born to HIV-positive mothers followed from the start of care from March 9, 2014 to December 25, 2022.

2.4. Population Studied

1) Inclusion criteria

We included all newborns of HIV/AIDS-positive mothers, born at the CNHP and followed in the pediatric department of the said hospital.

2) Non-inclusion criteria

We excluded all children born to HIV-positive mothers at the CNHP who were lost to follow-up or referred to other structures.

2.5. Data Collection and Analysis

Data were collected on a pre-established survey form after consulting the obstetric records of infected mothers, the delivery register, and the follow-up records of exposed newborns. These data were analyzed with Microsoft Office Excel 2016 software and its R version 4.1.3 supplement. The quantitative variables were described in number, number, mean, median, standard deviation and extremes, and the qualitative variables were described in absolute frequency and frequency relative.

2.6. Description of the PMTCT Program in Senegal

The mother-to-child transmission of HIV program in Senegal aims to reduce the transmission of HIV from a mother to her child before, during and after delivery. This is a package of care and services integrating antiretroviral treatments, safer delivery methods, consultation services and breastfeeding support. The screening proposal is made during the first contact of the pregnant woman with the provider through the provider-initiated screening advice (CDIP) after free and informed consent. A triple test is systematically carried out in the event of a doubtful result with successively determine HIV test, the SD Bioline and the Multisure before rendering the definitive serological result. If the woman's status is not known at the 2nd prenatal consultation (ANC) or other contacts during pregnancy, childbirth or even during breastfeeding, HIV testing advice will always be offered. For women who tested HIV negative during pregnancy, "re-testing"

could be offered if they present an STI, signs suggestive of HIV infection or if they report high-risk situations. This follow-up will aim to help the woman live positively with HIV and avoid contamination of her child. It is important to involve spouses by offering them the necessary screening and comprehensive care. During pregnancy, prenatal consultations (ANC) are carried out in accordance with national recommendations. CPN includes: prenatal monitoring; iron and folic acid supplementation; the search for Syphilis; HBS antigen (HbsAg); tetanus vaccination (VAT); malaria prevention (use of LLINs) + Sulfadoxine Pyrimethamine (SPM); the delivery plan; recognition of the danger signs of pregnancy; verification of therapeutic compliance with ARVs: each consultation will be an opportunity to strengthen therapeutic education, identify and correct factors of non-compliance; the promotion of safe sexuality with the use of condoms; information on the care of the unborn child: ARV prophylaxis, nutrition, early diagnosis; virological monitoring by measuring viral load in the last trimester of pregnancy; psychosocial support and accompaniment. It is also about encouraging sharing the status with a loved one who can provide moral support. This relative can be a parent, a community health worker or a person experienced in taking ARVs such as "mentor mothers". It will also be necessary to check the woman's nutritional status and provide her with advice for a healthy and balanced diet; encourage and support the woman to inform her partner if this has not been done, because sharing status within the couple is a good factor in the success of ARV treatment; suggest screening of the partner if he or she is informed. If the result is positive, manage it according to current recommendations, encourage screening of offspring and resort to "self-testing" if necessary and use ICT to maintain contact with pregnant women living with the HIV, identify the problems they encounter and provide appropriate solutions. During childbirth, the birth attendant must adopt the usual protective precautions, including: maintaining compliance with ARV treatment; respect standard precautions during delivery, avoid milking the cord and carry out late clamping as recommended by the WHO even in this context; help the woman to breastfeed her newborn early. A partogram is carefully established and followed. In the event of premature rupture of the membranes, the indications for cesarean sections are broadened in order to limit the risk of contamination by ascending voice. You have to be sober about episiotomy. The child will be identified and entrusted to the pediatrician or competent personnel. Essential care for the newborn is administered after an initial assessment, search for danger signs requiring treatment and/or referral, then administration of vitamin K1, eye drops, care of the navel, early breastfeeding and vaccination (Hepatitis B, BCG, Polio 0). He will be handled with caution then put on antiretroviral prophylaxis: this is a triple therapy which is started as soon as possible after birth and for 6 weeks. The choice of medications will be made according to the protocols in force in Senegal. After birth, the woman is supported in maintaining compliance with ARV treatment by "mentor mothers" or community health workers (ACS). We

must identify the problems they encounter and provide appropriate solutions; I identify the difficulties related to feeding the newborn; start family planning; encourage compliance with the current vaccination schedule; support protected breastfeeding (AMP), encourage diversification at 6 months and weaning at 12 months. Antiretroviral prophylaxis for newborns is a triple therapy that is started as soon as possible after birth and for 6 weeks. The choice of medications will be made according to the protocols in force. The child will benefit from protected breastfeeding after maternal consent for 12 months, including 6 months of exclusive breastfeeding (AME), followed by diversification with local products. The practice of breastfeeding must be supervised to treat local breast conditions and digestive conditions in the child likely to promote contamination of the child. Advice will be given to the mother for breast care during breastfeeding and for good compliance with her ARV treatment. Early diagnosis of the child of an HIV-positive mother occurs at birth. In certain situations, particularly in the event of late screening of the mother or high viral load at delivery, early diagnosis must be made at birth by polymerase chain reactive (PCR) on "Dried Blood Spot" (DBS) blotting paper.

3. Results

3.1. Maternal History and Data

Forty women (49) were HIV positive, including 2 carrying twin pregnancies. The average age was 31.7 ± 6.4 with extremes ranging from 17 to 46 years. The median age was 32 years. They were mainly housewives (n = 28, 56.3%) and were not educated in more than half of the cases (55%). They were married in 93.8% of cases, single in 3.1% and divorced in 3.1%. Ten (10) women (20.4%) were in their second marriage and 6 (12.24%) in their third union. The serological status could only be obtained in 57.1% of the fathers. Eighteen (18) couples (36.7%) were serodiscordant, all with HIV1 profile. The average gestation was 3 pregnancies with extremes ranging from 1 to 7 pregnancies with an average parity of two deliveries with extremes ranging from 1 to 7 pares. Nine (9) women had already had an abortion in 17.8% of cases. Premature delivery was found in 4 cases (8.5%). Sexual libertinism was found in 13 cases (18.9%). The most likely mode of transmission in our study was sexual in 60% of cases; followed by excision and scarification in 22.9% of cases (**Table 1**).

The average number of antenatal consultations (ANC) was 3 ANC. Less than half (43.4%) of the women had performed less than 4 ANC. Only 3.1% had not received intermittent preventive treatment against malaria during pregnancy. The majority (n = 47, 93%) had received 4 doses of tetanus vaccine (VAT). The HIV1 profile was the most frequently found, 91.9% compared to 4.1% for HIV2. A double profile case and an indeterminate case were found, representing 2.7% each (**Table 2**).

We recorded more cases during the years 2016 (21.2%), 2017 and 2020 in 12.1% of cases (**Figure 1**).

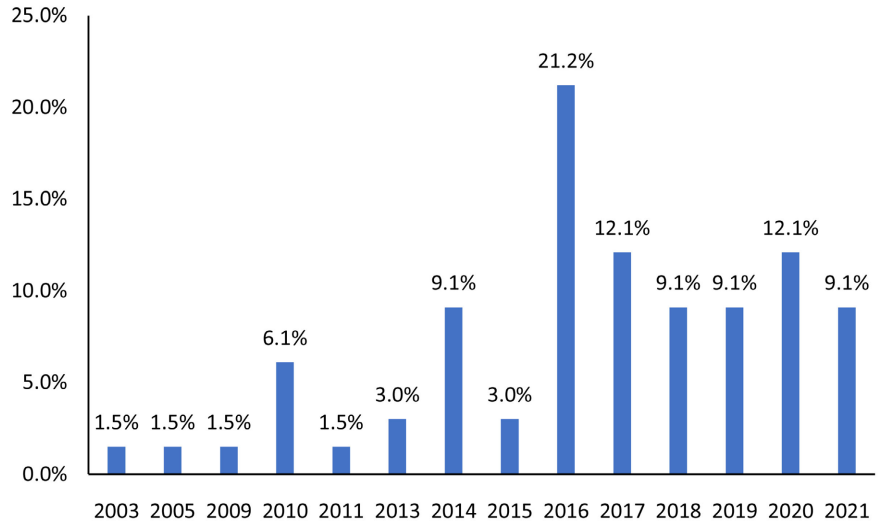

Figure 1. Distribution of mothers according to year of screening.

Table 1. Distribution according to probable mode of transmission.

Transmission mode	Effective	(%)
Sexual	29	60.0%
Excision	11	22.9%
Scarification	5	8.6%
Piercing	0	0%
Sanguine	0	0%
Tattoo	0	0%
Unknown	4	8.5%
Total	49	100%

Table 2. Distribution of mothers according to type of HIV.

Type of HIV	Effective	(%)
HIV1	45	91.9%
HIV2	2	4.1%
HIV1 + 2	1	2.7%
Undetermined	1	2.7%
Total	49	100%

26 (52.3%) women were known to be HIV positive before pregnancy and placed on triple therapy; compared to 19 (40%) women who were screened during pregnancy. Among them, 12 women were diagnosed in the first trimester and 3 in the third trimester. Only 4 mothers (7.7%) were diagnosed during delivery. Thirty-five (35) women (71%) were screened at the CHNP and 49 women

(62.9%) were followed in our structure. The majority (65.6%) were followed by gynecologists (n = 32) and by general practitioners in 32.8% (n = 16). The duration of HIV was 5.75 ± 4 years with extremes ranging from 1 to 19 years. Women were at clinical stage 1 in 69.6% (n = 34). Half of the mothers (53%) had received ART before pregnancy compared to 39% during pregnancy and 8% after delivery and 69.3% had received the "nucleotide + non-nucleotide inhibitor" combination, 58. 9% (n = 29) had received the ATRIPLA regimen, including 26 mothers before pregnancy; 32.9% had benefited from the new Tenofovir + Lamivudine + Dolutegravir (TLD) regimen and 4.1% had received the AZT + 3TC + Lpv/r protocol (old protocol for the HIV2 profile) (Table 3).

Compliance was good in the majority of cases with compliance with the VRs in 94.9% (n = 46) of cases and a therapeutic break was observed in 4 cases (8.93%). A change of protocol was noted in 2 cases (4.65%). The CD4 count achieved in 28 mothers (57.14%) before pregnancy was less than 1500/mm^3 in 32.6% (n = 16) of cases. The average CD4 count before pregnancy was 1068 + 420 with extremes ranging from 407 to 1746. The viral load was undetectable in 21 mothers (42.3%); low in 7 mothers (13.5%) and moderate in 2 mothers (5.7%). We noted 5 cases of co-infection with the hepatitis B virus and 1 case with syphilis. Concerning the maternal gyneco-obstetric history, we noted a case of premature delivery or 1.5% and a notion of urogenital infection in the third trimester in 6 cases or 13%. All mothers had benefited from advice on the different breastfeeding methods, and encouragement to share the status with the partner was achieved in 40 cases or 90.9%. Premature rupture of membranes was found in 13 cases or 25.6%.

The delivery took place in our structure in 92% (n = 45) of cases and 69.4% were assisted by a gynecologist and 30.6% by a midwife. The mothers shared their serological status in the delivery room in 93.5% of cases (n = 42). ARV prophylaxis during labor and delivery was carried out before the new recommendations in 7.7% of cases during labor. The appearance of the amniotic fluid was clear in 31 cases (63.2%). Delivery was vaginal in 31 cases (70%) and by cesarean section in 14 cases (30%).

Table 3. Distribution of mothers according to treatment regimen.

Treatment regimen	Effective	(%)
ATRIPLA (TDF + FTC + EFV)	29	58.9%
TLD (TDF + 3TC + DTG)	16	32.9%
TDF + 3TC + EFV	2	4.1%
AZT + 3TC + Lopinavire/Ritonavir (Lpv/r)	2	4.1%
Total	49	100%

3.2. Neonatal Data

The newborns had cried at birth in 48 cases or 94.12%, and 2 newborns (4%)

had benefited from resuscitation at birth. They had all received essential care at birth. The average birth weight was 2641 ± 594 with extremes ranging from 1500 g to 3700 g with an average height of 50 cm ± 48 and extremes ranging from 37 cm to 53 cm. The average head circumference at birth was 31.8 cm ± 29 with extremes ranging from 28 cm to 35 cm. Four (4) newborns presented with respiratory distress at birth, including one case of prematurity. The majority of children (72.7%, n = 37) were put on ARV within 24 hours. Almost all of the children were on triple therapy (94.2%), including 35.3% on Abacavir (ABC) + Lamivudine (3TC) + Lopinavir/Ritonavir (Lpv/r) and 31.4% on Zidovudine (AZT) + Lamivudine (3TC) + Lopinavir/Ritonavir (Lpv/r); only one newborn was unable to benefit from prophylaxis due to a lack of shared maternal serological status (Table 4).

Table 4. Distribution of newborns according to the protocol used.

Protocol used	Effective	%
AZT + 3TC + LPV/r	16	31.4%
ABC + 3TC + LPV/r	18	35.3%
AZT + 3TC + NVP	14	27.5%
Nevirapine alone	2	3.9%
Untreated	1	1.9%
Total	51	100%

Forty-two 42 (85.5%) mothers had opted for protected breastfeeding and 14.5% had opted for artificial breastfeeding.

3.3. Tracking Data

The average duration of treatment was 9 weeks ± 4 with extremes ranging from 6 to 20 weeks and compliance was good in 97.6% of cases (n = 50). All children received cotrimoxazole prophylaxis from 6 weeks of age. Forty-seven (47) children had benefited from PCR1 in 93.2% of cases including 55.9% (28 cases) at the 6th week. It was negative in 93.62% of cases (n = 44) and unknown in 3 cases (6.38%) due to a delay in rendering the results. Diversification was done at 6 months in the majority of infants, *i.e.* 73.9%, and weaning was done at 12 months in the majority of cases (94%, n = 48) weaned at 12 months. Retroviral serology was carried out at 12 months in 12%, at 14 months in 31% and beyond 14 months in 43% of cases. We noted a single HIV1 positive case whose initial PCR was negative, representing an overall transmission rate of 1.96%.

4. Discussion

The mothers were relatively young in our study. Our result is superimposable to those found by most of the work carried out in Senegal [7] [8] and in Africa [9] [10]. This relatively young average age in our series could be explained by a rela-

tively early age at marriage and pregnancy in Senegal and by the exposure of women of childbearing age to heterosexual transmission which is the main mode of transmission in Africa and in Senegal [10]. The majority of mothers were married with a significant number of remarriages through endogamy. A practice strongly criticized in Africa and which largely contributes, not only to the spread of HIV in families but also within the general population. A similar situation was described in a first study carried out in Senegal [7]. More than half of the mothers, or 55%, were not educated. Which constitutes an important factor in the vulnerability of women, in fact the high rate of illiteracy among mothers has been found in Africa [11] [12]. A clear predominance of the HIV1 profile was found in our study. Indeed, HIV1 is more virulent with a higher transmission rate in Senegal [13]. A little less than half of the mothers (43.4%) had performed at least 4 ANCs. Prenatal consultations for HIV-positive pregnant women must be carried out by qualified personnel in order to ensure compliance with ART by the mother during pregnancy but also to prevent gyneco-obstetric complications and to decide on the best route of delivery in order to limit the risk of MTCT. Our rate of completion of CPN is comparable to that of a study conducted in Mali in 2010 [12], but lower compared to another study conducted in Mali in 2019 [14]. This situation is explained by a non-compliance with ANC by most pregnant women in Africa but also by the period of abandonment of hospitals due to restrictive measures linked to COVID-19. The majority of women were followed by gynecologists. This result is more important compared to that reported in Mali [15]. They were at stage 1 at the time of diagnosis in most cases, due to the systematic integration of retroviral serology in the prenatal assessment. Half of the mothers were screened before pregnancy, although 8% of women were screened after childbirth. A lower screening rate has been reported in the literature [16]. In another study also carried out in Mali, Cissé *et al.* found a significant association between the risk of HIV transmission and the time of screening of the mother. In fact, the mother screened after childbirth was 8 times more likely to have an infected child compared to that screened before [17]. Nearly half of women had an undetectable viral load during pregnancy. The rate of transmission increases proportionally to maternal viral load, whether in the absence of antiretroviral treatment or not. Our results are superimposable to data from the literature [11] [16]. Twelve pregnant women had low CD4 counts. The risk of transmission increases proportionally to immunodeficiency and a low CD4 count is an indicator of high viral load [11]. We noted a low rate of cesarean delivery. Indeed, even if the risk of HIV transmission is also reported during childbirth, there is no indication for systematic cesarean section in cases of maternal HIV during pregnancy. Our result is comparable to other studies carried out in Senegal and Mali [7] [17] [18]. ARV treatment was systematic according to the protocol in force in Senegal. Thus all mothers were on triple therapy in accordance with the guidelines for option B+ [11]. Indeed, more than half of the women had benefited from the ATRIPLA regimen and more than a quarter had benefited from the new regimen (TLD) and only 2 had received the

old AZT + 3TC + Lpv/r protocol for the HIV2 profile with good compliance. Studies carried out in France have proven the effectiveness of ARV treatment during pregnancy with a transmission rate which fell from 15% to 1% after 10 years [19]. Administration of ARVs during pregnancy effectively reduces the risk of transmission of the virus from mother to child by reducing virus replication in the mother [3]. The majority of women opted for protected breastfeeding. Our rate is lower than that of another study carried out in Senegal where all women opted for exclusive protected breastfeeding [19] but comparable to other Malian studies [14] [20]. Several studies have demonstrated the benefits of choosing exclusive protected breastfeeding compared to artificial breastfeeding in developing countries with a 14 times higher risk of infant death in the group of children receiving artificial breastfeeding after 12 months [21]. The transmission rate in our study was relatively low at 1.96%. This rate is very reassuring compared to the rate obtained during the pilot phase of the PMTCT program in Senegal: which was 4.7% at the King Baudoin Health Center [22]. This same trend was also observed elsewhere in Africa: 3.4% in Mali [8] and 12.9% in Cameroon [23]. This prevalence reflects the effectiveness of national HIV policies and strategies in most countries in Africa and efforts to prevent new HIV infections among infants. In Senegal, according to the national report on the fight against AIDS, the latest Spectrum 2021 estimates show "a gradual decline in prevalence among 15 - 49 year olds since 2005, going from 0.75% to 0.32%". HIV infection is concentrated with a low prevalence in the general population and high in certain localities, particularly in the south of the country and among the most vulnerable populations. The number of patients living with HIV (PLHIV) (adults and children) was estimated at 40,277 people including nearly 21,703 women and 3957 children under 15 years of age in 2021 [2].

Our low prevalence in our study can also be explained by the fact that there are other treatment sites for HIV-positive pregnant women in the Dakar suburbs. It is comparable to a previous study carried out in Senegal where 42 newborns were listed [7]. On the other hand, it is lower than that of a study carried out in Mali [14]. The average birth weight was 2641 ± 594 with extremes ranging from 1500 g to 3700 g. This eutrophic weight of children reflects the absence of an early form in our children often characterized by severe hypotrophy associated with neurological disorders such as microcephaly and oral facial dyspraxia with incoordination of sucking and swallowing observed early in infected children. This result is comparable to data in the literature [7] [13]. The majority of children were on triple ARV therapy as recommended in the policy for the prevention of mother-to-child transmission by option B+ [11]. Unlike a previous study carried out in Senegal in 2016 where all children were on monotherapy [22]. On the other hand, in our study, only two (2) children were on monotherapy (nevirapine alone) and this period corresponded to the transition phase of the transition from option B to option B + marked by the unavailability of combined forms of Pediatric ARVs. The newborns had benefited from protected breastfeeding with early weaning at 12 months in most cases, however we noted

2 cases of prolonged breastfeeding beyond 12 months. Indeed, during CPN; It is recommended that women who have opted for breastfeeding after informed consent undergo diversification at 6 months and early weaning at the age of 12 months; although there is a very negligible risk of MTCT via breast milk, it protects the infant against common infectious diseases of childhood, such as diarrhea, pneumonia, and acute otitis media. However, increasing the duration of breastfeeding beyond 12 months increases the risk of mother-to-child transmission of HIV [11]. PCR performed at 6 weeks was negative in all children. This is in accordance with the recommendations of the WHO which would like PCRs to be carried out between the 6th and 8th week after birth [11]. Longer delays have been noted in other studies in Africa in Mali and Togo of more than 2 months [9] [23]. A little more than half of the children had undergone definitive retroviral serology during their follow-up, including 41% at the age of 14 months as recommended by the WHO to avoid false positives before this age due to the presence of maternal antibodies in children up to 14 months [5]. Only one child was seropositive and this was an infant whose PCR carried out at 6 weeks was negative but the serology was positive at 14 months with prolonged and unprotected breastfeeding as a risk factor. The average duration of ART in children was 9 weeks ± 4 with extremes ranging from 6 weeks to 20 weeks; and only one case of poor therapeutic compliance was noted. This result is very encouraging and is in line with the WHO recommendations which would like the duration of treatment to be between 6 and 8 weeks [11]. A result comparable to that of other studies carried out in Ivory Coast [18] and Mali [9]; and in Togo [23]. However, this more or less long duration of ART can be explained by the delay in rendering the PCR results.

5. Conclusion

Senegal's current policy aimed at eliminating MTCT of HIV is on good momentum with a fairly low transmission rate thanks to ARV prophylaxis. This policy aimed at eliminating mother-to-child transmission (EMTCT) of HIV is based on primary prevention of HIV infection among women of childbearing age and their partners, prevention of unwanted pregnancies among HIV-positive women. HIV, preventing transmission of HIV from infected women to their babies and providing appropriate treatment, cares and supports to HIV-positive mothers, their children and their families during follow-up.

Conflicts of Interest

No conflict of interest to report with respect for confidentiality and rules of ethics and professional conduct in carrying out this study.

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