



CASE REPORT

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Follow-up and treatment of primary HIV infection in Pregnancy

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Abstract

The pregnant population infected with "human immunodeficiency virus" (HIV), an important member of the retrovirus family, are encountered with increasing frequency in our clinical experience today. Early and effective suppression of HIV viremia will reduce the risk of mother-to-child transmission of HIV. In the light of the case we aimed to review the antiretroviral treatment (ART) options that can be used in HIV-positive pregnant women and to share our clinical experience.

Keywords: HIV, pregnancy, therapy

Introduction

According to the data of the World Health Organization in 2020, 37.7 million people in the world are infected with the Human Immunodeficiency Virus / Human Immunodeficiency Virus (HIV), and there are approximately 680,000 HIV-related deaths [1]. Again, according to these data, the number of HIV-infected children worldwide is 1.8 million, and it has been reported that 1.300.000 people are pregnant with HIV [2]. Treatment of pregnant women living with HIV is one of the overall global health goals. Again, according to these data, the number of HIV-infected children worldwide is 1.8 million, and it has been reported that 1.300.000 people are pregnant with HIV [3]. For this reason, the American College of Obstetricians and Gynecologists (ACOG) and the Center for Disease Control (CDC) recommend screening for HIV infection, preferably at the first pregnancy control, with patient information and consent [4]. At the same time, even if the previous tests are negative, high-risk pregnant women who are addicted to drugs or have sex for money or drugs, whose spouse is HIV-infected, or who have a relationship with more than one person during pregnancy should be recommended to repeat the test in the last trimester [5].

In recent years, it is estimated that AIDS cases inherited from the perinatal route have decreased dramatically. The main reason for this is the implementation of prenatal HIV screening, as well as the administration of antiretroviral (ART) treatment to pregnant women and newborns [6]. However, highly active antiretroviral therapy (HAART) caused a prolongation of the life expectancy of HIV-infected patients, and this increased the number of HIV-infected pregnant women [7]. HIV can be transmitted to the baby during pregnancy, delivery, and breastfeeding. If no precautions are taken, this probability is 25-35% [8]. Perinatal transmission rates in developed countries have been reduced to 1-2% with antiretroviral therapy (ART), planning of cesarean delivery, and the baby not receiving breast milk [9]. Although there are not many problems in the access and use of ART by HIV-infected pregnant women in developed countries, it is recommended that viral load be suppressed during pregnancy in the guidelines [10,11]. Initiation of ART in HIV-infected pregnant women is recommended by the guidelines [11].

Case

A 39-year-old female patient was referred to our outpatient clinic with anti-HIV positivity from an external center. It was learned that the gestational week was 17 and positivity was detected in the tests requested. In our center, HIV RNA result was 175 thousand copies/ml, CD4 count was 556 cells/mm³, WBC: 9 thousand/L, platelets 98 thousand/L. It was determined that the patient's husband had

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HIV+ for 2 years, but the treatment and follow-up processes were irregular and he did not inform his wife about this issue. The patient was explained about the disease process, its treatment, and the risks of the birth process. The patient, who was initially hesitant to start the treatment, was persuaded and treatment was started as a combination of dolutegravir (DTG) + tenofovir disoproxil (TDF) + emtricitabine (FTC) at the 19th week of pregnancy. In the monthly controls, it was determined that the HIV RNA regressed to 98 copy/ml in the 2nd month of the treatment, but the CD4 count was 494. In the 3rd month of treatment, HIV RNA became negative and CD4 count increased to 575 cells/mm³. The pregnant patient also tested positive for HIV confirmation. The patient, who had no clinical complaints, was followed up by the Obstetrics and Gynecology Clinic. The baby was delivered by elective cesarean section upon the completion of the 39-week gestation period of the patient. Before the cesarean section, the mother's HIV RNA in the blood was negative, and her platelets were 300 thousand/L. Oral zidovudine (ZDV) suspension was started from the first day in terms of prophylaxis for the baby whose newborn examination was normal after delivery and continued at 2x10 mg/ml for 4-6 weeks. While the HIV RNA test was negative when the baby was on the 23rd day, the Anti-HIV result was 429 S/Co.

As a result, the infection of the mother and the risk of transmission to the baby as a result of transmission during pregnancy from the spouse who hides the HIV infection caused the processes. The combination containing dolutegravir, which is considered safe to start after the 14th week of pregnancy, was found to be effective in preventing transmission to the baby.

Discussion

In the last 10 years, the use of antiretroviral drugs such as non-nucleoside reverse transcriptase inhibitor rilpivirine, cobicistat as a booster, integrase inhibitor DTG, and tenofovir alafenamide (TAF) as an NRTI have come to the fore. Data on these drugs are based on preclinical studies, and DTG-based ARTs are among the treatment options recommended after 14 weeks in HIV-positive pregnant women. The benefits and risks of using DTG in pregnancy were evaluated based on post-Botswana data. In May 2018, neural tube defects were reported in four of 426 births using DTG-based ART before conception in Botswana [12]. In the Tsepamo study, the prevalence of neural tube defects associated with the use of DTG in pregnancy decreased from 0.94% (four of 426 exposures) to 0.30% (5 of 1683 exposures). These results were obtained with a small number of studies, and it was concluded that more studies are needed, and postpartum follow-up was increased in a study conducted by the CDC [13,14]. Although it is not known whether it reduces the risk associated with DTG in the Botswana study, it was concluded that all pregnant women and women planning a pregnancy should take folic acid to reduce the risk of neural tube defects [15]. Studies on neural tube defects are still ongoing. Apart from the Botswana study, folate enrichment programs were found to significantly reduce the incidence of neural tube defects. [16]. According to the European AIDS Clinical Society (EACS) 2021 guidelines, DTG should be discussed with women who are considering becoming pregnant or if it will be used during the first 6 weeks of pregnancy. On the other hand, TAF/FTC is not recommended during the first 14 weeks of pregnancy [17].

Conclusion

HIV screening tests are recommended for pregnant women. Complete blood count, CD4, and HIV RNA copy numbers should be measured to plan the treatment of HIV-positive pregnant women. The goal of antiretroviral therapy in pregnancy is to prevent perinatal transmission and to prevent maternal HIV transmission. ART is recommended for all HIV-infected pregnant women, regardless of CD4 count and HIV RNA count, for the prevention of perinatal transmission and maternal health. Side effects should be considered when using ART drugs. Intrapartum zidovudine treatment and mode of delivery should be decided by evaluating the viral load close to delivery. Follow-up of the patients should continue with the current guidelines.

Conflict of interests

The authors declare that there is no conflict of interest in the study.

Financial Disclosure

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Informed Consent

Consent of patient was taken.

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