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Opinion



# Is the Toxic Effect of HIV Infection on the Hematopoietic Function of Pregnant Women Possible?

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## Opinion

Anemia in HIV-infected women can have serious consequences, ranging from a decline in quality of life to the progression of the underlying disease, worsening prognosis and survival to date, the causal relationship between HIV infection and anemia remains unclear. The question of resistance of stem hematopoietic cells to HIV infection is debatable.

The aim of our study was to determine the frequency and severity of anemia in HIV-infected pregnant women depending on the usefulness of prevention (art) of vertical transmission of HIV infection from mother to fetus.

A retrospective analysis of 215 birth histories of HIV-infected women over the past 2 years was carried out. The first group included women who received full prevention of vertical transmission of HIV infection from mother to fetus (86 people). In the second group, women who received prophylaxis only during childbirth (72 people) and in the third group (57 people), women who did not receive preventive treatment for art. In the first group of women, prevention during pregnancy was carried out with three-component art with the use of Kaletra, Epivir and zerit, in Retrovir childbirth. In the second group of women, 20(27.8%) people received Retrovir, viramun and lamivudine, the remaining 52 (72.2%) only Retrovir.

Among women who received full prevention of vertical transmission of HIV, anemia was diagnosed in 47 (54.6%) people. Of which, 38 (80.8%) women had grade 1 anemia, 6(12.8%) had grade 2 anemia, and 3 (6.4%) had grade 3 anemia. In the second group of women who received prevention of vertical transmission of HIV infection from mother to fetus anemia before childbirth was diagnosed in 62 (86.1%) people of whom the first degree had 50 (80.6%) women, the second 9 (14.6%) and the third 3 (4.8%) pregnant women. And in the third group of women who did not receive preventive treatment, anemia was diagnosed in 40(78.4%) pregnant women. The first degree of anemia in this group of women was observed in 32(80%) cases and the second in 8(20%). To confirm this conclusion, the average indicators in the considered groups of women were subjected to comparative analysis. It was noted that the average level of hemoglobin in the first group of women who received full prevention was 105.9±1.4 g/l, in the second group 98.4±1.6 g/l and in the third – 94.4±1.8 g/l. The results obtained were significantly different (P≤0.01) in the compared groups. At the same time, attention was drawn to such a pattern as a significant decrease in hemoglobin with a decrease or absence of art.

## Summary

- The results indicate the likelihood of toxic effects of HIV infection on the hematopoietic function of the bone marrow, which requires further research and scientific confirmation.
- Art does not lead to a decrease in hemoglobin levels in HIV-infected pregnant women and does not affect the severity of anemia. Is the toxic effect of HIV infection on the hematopoietic function of pregnant women possible?

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## Conflict of Interest

No conflict of interest.





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