

## Maternal and Neonatal side effects of the Antiretroviral Therapy in HIV-infected pregnant women attended at CAISM between 2009 and 2013

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### Abstract

The antiretroviral therapy (ART) has reduced HIV mother-to-child transmission rates significantly. However, these drugs can cause side effects. The objective of this research is to evaluate these effects in neonates and pregnant women exposed to ART during the pregnancy and the postnatal period. The pregnant women included in the study gave birth at CAISM between 2009 and 2013. Data were collected from medical records of the mother-child pairs. The most prevalent side effects in pregnant women were dyslipidemia and anemia and the most prevalent adverse effect in children was anemia. The results confirm the data found in the literature, moreover, though prevalent, the side effects have low severity.

*Key words: Pregnancy, HIV, Antiretroviral Therapy*

### Introduction

The use of antiretroviral therapy (ART), particularly the highly effective antiretroviral therapy (HAART), significantly has reduced the HIV mother-to-child transmission<sup>1</sup>. However, ART can cause some side effects, but several of them have not been completely elucidated yet. Side effects already confirmed by literature are anemia<sup>2</sup> and preterm birth<sup>3</sup>. The objective of this study is to evaluate these effects in neonates and pregnant women exposed to ART during the pregnancy and the postnatal period, in pregnant women that gave birth at CAISM between 2009 and 2013.

### Results and Discussion

From the data obtained from medical records of the pregnant women and their children, 229 mother-child pairs were evaluated. The HAART regimen used by 88% of pregnant women was zidovudine (AZT), lamivudine, lopinavir and ritonavir.

The side effects evaluated in pregnant women were: anemia, low platelets count, dyslipidemia, hepatotoxicity, gestational diabetes and impaired fasting glucose. The most prevalent effects were dyslipidemia and anemia, presented by, respectively, 71% and 51% of pregnant women who underwent laboratory tests.

The side effects analysed in neonates were prematurity, low birth weight, anemia, low platelets count and hepatotoxicity. According to the laboratorial data, the most prevalent effect was anemia, presented by 40% of the children who underwent laboratory tests until 1 month old. The prematurity rate was 28% and the low birth weight rate was 23%.

Dyslipidemia is associated with HIV infection itself and also the use of protease inhibitors. These

drugs were used by 98% of the pregnant women<sup>4</sup>, which explains its high prevalence. The high prevalence of anemia in pregnant women and children was expected because it is associated with the use of AZT<sup>2</sup>. The vast majority of pregnant women used this drug during pregnancy and all the neonates used it in the postnatal treatment in this study.

### Conclusions

The results of this study confirm the literature data. Moreover, despite the high prevalence of side effects, their gravity is low.

### Acknowledgement

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<sup>3</sup> Newell ML, Bunders MJ. *Safety of antiretroviral drugs in pregnancy and breastfeeding for mother and child*. **Current Opinion in HIV & AIDS** 2013; 504:510

<sup>4</sup> Feeney, ER, Mallon, PWG. *HIV and HAART-Associated Dyslipidemia*. **Open Cardiovasc Med J**. 2011; 5: 49–63.