BRAZ J INFECT DIS 2016;20(5):429–436

The Brazilian Journal of
INFECTIOUS DISEASES

www.elsevier.com/locate/bjid

Original article

# Adherence to antiretroviral therapy of Brazilian HIV-infected children and their caregivers

*Gabriela Ricci*[a], *Eduardo Martins Netto*[b], *Estela Luz*[b], *Cynthia Rodamilans*[c], *Carlos Brites*[a,b,*]

[a] *Universidade Federal da Bahia (UFBA), Programa de Pós-Graduação em Medicina e Saúde, Salvador, BA, Brazil*
[b] *Universidade Federal da Bahia (UFBA), Faculdade de Medicina, Departamento de Medicina, Salvador, BA, Brazil*
[c] *Centro Especializado em Diagnóstico, Assistência e Pesquisa (CEDAP), Salvador, BA, Brazil*

ARTICLE INFO

*Article history:*
Received 25 November 2015
Accepted 25 May 2016
Available online 26 July 2016

*Keywords:*
Adherence
Antiretroviral therapy
Children
Caregivers

ABSTRACT

*Background:* Successful treatment of HIV-positive children requires a high level of adherence (at least 95%) to highly active antiretroviral therapy. Adherence is influenced by factors related to the child and caregivers.

*Objectives:* To evaluate children and caregivers characteristics associated to children's adherence.

*Methods:* Cross-sectional study, from September 2013 to June 2015, comprising a sample of caregivers of perinatally HIV-infected children, in the age group of 1–12 years, under antiretroviral therapy for at least 6 months and on follow-up in two AIDS reference centers in Salvador, Bahia. Caregiver self-reports were the sole source of 4 days adherence and sociodemographic information. Study participants who reported an intake >95% of prescribed medication were considered adherents. A variable, ("Composed Adherence"), was created to better evaluate adherence.

*Results:* We included 77 children and their caregivers. 88.3% of the caregivers were female, the median age was 38.0 years (IQR 33.5–47.5), 48.1% were white or mixed, 72.7% lived in Salvador and 53.2% had no fixed income. The 4 days child's adherence was associated only to caregivers that received less than a minimum salary ($p < 0.05$), 70.1% of the caregivers had less than four years of formal education, 81.8% were children's relative and 53.2% of the caregivers were HIV positive. The caregiver's pharmacy refill, long-term adherence and 4 days adherence, were significantly associated with composed adherence ($p < 0.05$). Child's long-term adherence was strongly associated to the 4 days child's adherence referred by caregiver ($p < 0.001$).

*Conclusions:* Our results suggest the need of improvement in HIV-infected children adherence, through reinforcement of the caregivers own adherence.

© 2016 Sociedade Brasileira de Infectologia. Published by Elsevier Editora Ltda. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/).

* *Corresponding author.*
E-mail address: crbrites@ufba.br (C. Brites).

http://dx.doi.org/10.1016/j.bjid.2016.05.009

1413-8670/© 2016 Sociedade Brasileira de Infectologia. Published by Elsevier Editora Ltda. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/).

## Introduction

The introduction of effective new antiretroviral therapies in the early 90s provided improved health and increased life expectancy for HIV-infected children.[1,2] However, to achieve viral suppression, prevent disease progression and resistance to antiretroviral drugs, at least 95% adherence to therapy is required.[3] Optimal adherence to therapy can be affected by several child-related factors, including biomedical, psychosocial, antiretroviral therapy and caregiver characteristics.[4,5]

Previous studies that assessed adherence to antiretroviral therapy in children showed that it varies from 57 to 81%, depending on the definition and the method by which adherence was verified. In two clinical protocols, which used the self-report method to evaluate adherence to therapy, full adherence was detected in 70–74% of the participants.[6,7]

Some caregiver's characteristics can affect children's adherence to treatment. In the case of mother-to-child transmission, death or severe disease of biological parents may unable them to take care of the child. This is especially true for mothers, who usually have to deal with the guilt associated with HIV transmission, and may have other comorbidities such as depression, which results in delayed child's care. In consequence, children care can be transferred to another family member, or even to institutions.[8]

The antiretroviral treatment is complex and requires constant changes in dosage according to the weight of the child, especially those who take syrups or powders that need previous reconstitution. Caregiver's low educational level may be related to non-adherence to treatment, due to the lack of prescription understanding. A Romanian study detected an association between poor adherence and low educational level of caregivers, which was also associated with treatment abandonment, in 40 cases of families with children on highly active antiretroviral therapy (HAART).[9]

It is remarkable that in resource-limited settings many HIV-infected children come from underprivileged families without financial conditions to provide proper food supply.[10] This may be related with caregiver's decision to skip a dose of a specific ARV drug, when the child was not fed, because it was recommended to be administered with food, or after a meal.[10] Lack of enough money to pay for transportation to the pharmacy for antiretroviral drugs withdrawal, can be also a cause of non-adherence.[10–13]

The main objective of this study was to evaluate the relationship between different caregivers characteristics (foster parents, biological parents, and relatives), and children's adherence by using two different approaches: child's "composed adherence" and the 4-day child's adherence, as reported by caregivers.

## Material and methods

### *Study setting*

This study was conducted at CEDAP (Diagnostic Center, for assistance and research in HIV) and HUPES (Professor Edgard Santos University Hospital), two referral centers for care of HIV-infected children, in Salvador, Brazil. CEDAP is a public service, composed by a multidisciplinary team, which provides assistance to individuals with HIV/AIDS. The HUPES, is a large tertiary hospital that includes both, inpatient and outpatient AIDS clinics.

### *Study design and population*

This cross-sectional study was conducted from September 2013 to June 2015. The inclusion was restricted to HIV perinatally infected children, aged one to 12 years old, under antiretroviral therapy for at least six months and regular care at HUPES or CEDAP, and to their caregivers. All individuals in charge of routine administration of antiretroviral drugs to enrolled children were identified as caregivers.

A total of 141 children were under care in the two-referral centers. Thirty-four of them were excluded: 21 (14.9%) were older than 12 years, three (2.1%) died, three (2.1%) were transferred to another reference center, two (1.4%) were not on HAART, three were not infected by vertical transmission, and two (1.41%) caregivers refused to participate.

From the 107 eligible children, 30 participants were excluded: 16 were not adherent to the treatment (irregular ART pharmacy refill and persistently high viral load), nine were not available to meet the investigators, two had abandoned treatment, one was transferred to another reference center at the beginning of the study, and the remaining two could not be contacted. Thus, 77 (72.0%) children were evaluated (Fig. 1).

### *Questionnaire design and adherence assessment*

#### *Caregiver demographic characteristics*

Caregivers were asked to answer a structured questionnaire with sociodemographic information: relationship with the child (parent, relative, or adoptive caregiver), caregiver HIV status, age, gender, residence (state capital city or countryside), race/ethnicity (white/mixed or black), functional status (employed, self-employed, unemployed, housewife, retired, or pensioner), family's monthly income (no household income/less than one Minimum Salary or one to five minimum salaries), formal education (no school/primary school or secondary school/Higher education), use of alcohol or illicit drugs, and disclosure of HIV status to at least one member of the family.

#### *Electronic medical chart review*

Medical charts were reviewed to obtain the most recent HIV viral load, CD4+ lymphocyte count, and ARV regimen. Pharmacy refill records were collected for all antiretroviral medications prescribed in the last six months.

#### *Adherence to ARV medication*

Caregiver's self-reports were the sole source of the 4-day adherence data. For the analysis of adherence, the "Adherence Follow-up Questionnaire", previously developed by the Aids Clinical Trial Group (ACTG) and drawn up originally in English,[14] was carefully translated and adapted to the local language, into two questionnaires, one for evaluation of children's adherence and the other for adherence of HIV infected caregivers.

Download English Version:

https://daneshyari.com/en/article/3343662

Download Persian Version:

https://daneshyari.com/article/3343662

Daneshyari.com