

# FACTOR ASSOCIATED WITH ANTIRETROVIRAL MEDICINES ADHERENCE AMONG HIV-INFECTED CHILDREN

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## BACKGROUND

**Aims of highly active antiretroviral therapy (HAART) in HIV-infected children:**

- To achieve and sustain full HIV-RNA viral load (VL) suppression.
- CD4-reconstitution.

- ✓ To prevent the progression of HIV-infection.
- ✓ To allow normal growth and development.

**Adherence to HAART** → Strong predictor of therapeutic efficacy:

- Previous studies have shown that therapeutic success requires adherence >95%.
- Among HIV-paediatric patients, adherence to HAART is reportedly suboptimal.

### FACTORS CAN COMPROMISE TREATMENT COMPLIANCE

- 1- Medication
- 2- Patient and family/caregiver
- 3- Healthcare-system

## OBJETIVES

- ✓ To estimate the correlation between adherence to HAART and treatment efficacy.
- ✓ To assess factors related to non-adherence among HIV-infected children.

## METHODS

<b>Study Design</b>	Retrospective cohort study
<b>Study Period</b>	January-2008 to July-2012
<b>Included Patients</b>	HIV-infected patients on HAART followed-up by the Pediatrics Department.

### Adherence assesment

It was performed by using the pharmacy refill records and pill count, according to the following formula:

$$\text{Adherence (\%)} = \frac{\text{N}^{\circ} \text{ dispensed doses} - \text{N}^{\circ} \text{ returned doses}}{\text{N}^{\circ} \text{ prescribed doses}} \times 100$$

### Non-Adherence factors analized

- 1-Number of pills/day (p/d)
- 2-Sex
- 3-Age
- 4-Frequency of daily dosing: QD or BID
- 5-Lipoatrophy

→ Undetectable VL → VL < 20 copies/ml.

→ Data were analyzed by multiple logistic regression methods using SPSS software (version 19.0).

## RESULTS AND DISCUSSION

**Adherence to treatment (>95%):**  
Only 50%

Patient included = 24

- Male / female → 29.2% / 70.8%
- Mean age → 15.3 ± 5.5 years
- QD/BID → 54.2%/ 45.8%
- Lipoatrophy → 37.5%

**Relationship between risk factors and adherence:**

FACTORS	OR	CI 95%	p
p/d	2,323	1,276-5,529	<b>0,048</b>
Sex	0,238	0,018-3,084	0,272
Age	0,858	0,622-1,182	0,348
BID	0,347	0,014-8,716	0,52
QD	0,494	0,030-8,204	0,623
Lipoatrophy	0,591	0,58-6,072	0,658

→ Patients with poor adherence had higher risk of virological failure (OR=11.67; CI95=1.14-119.54; p=0.039).

## CONCLUSIONS

- 1- Adherence to HAART represents a significant challenge in the HIV-paediatric population.
- 2- The p/d was significantly associated with adherence → Every pill/day increased up to 2.3-fold the risk of non-adherence to HAART.
- 3- Simplifying HAART by reducing the pill burden may contribute to improve compliance in the HIV-paediatric population.