**Background**

Antiretroviral therapy (ART) has markedly decreased the morbidity and mortality due to HIV disease, however, in a percentage of patients a change of treatment is needed.

**Purpose**

To determine the rates of therapy switching in HIV virologically unsuppressed patients, the reasons for changing therapy, to estimate adherence levels and to know drug-resistant mutations profiles.

**Methods**

Patients Included: those patients switching ART with HIV RNA values >20 copies/ml. Patients under 18 and those who were on their first-line therapy no longer than 24 weeks, were excluded.

Type and period of study: Descriptive observational study, 2011.

Data source: Medical records and pharmacy database

Data collected:
- Age, Gender.
- ART and HIV RNA values before and after switching.
- Cause of changing.
- Adherence level (dispensing register for the last three months).
- Resistance testing.

**Results**

1103 patients receiving ART

- 177 (16%) switching therapy
- 102 (57.6%) fulfilled inclusion criteria

62% males

Average age 44±9.5 years

**Viral load**

- >500 copies/ml: 42%
- 200-500 copies/ml: 58%
- <200 copies/ml: 0%

**Drug-resistant mutations**

- Assessed in 40.2% (41/102)
- Mutations found in 41.5% (17/41)
- More frequent mutations:
  - M184V (6/17)
  - K103N (6/17)
  - Y181C (5/17)
  - K65R (3/17)

**Reasons for switching therapy**

- Toxicity: 18%
- Treatment failure: 53%
- Other: simplification, drug interactions and pregnancy: 29%

**Adherence**

- Average adherence level: 70.4%
- High levels of adherence (>95%): 38.4%

Relationship between adherence (>95%) and viral load:
- 55.9% with viral load < 500 copies/ml vs 14.1% with viral load > 500 (p<0.05).

**Conclusions**

Toxicity was the main reason for changing ART. The percentage of “good-adherent” patients was very low in virologically unsuppressed HIV-infected patients, especially in those patients with high viral loads; therefore an adequate adherence to therapy is a key factor in viral suppression.