**INTRODUCTION**

- Médecins Sans Frontieres Spain (MSF-S) is providing ARV treatment since July 2003 on Busia District Hospital (Kenya).
- Busia District, in the western region of Kenya (Western province), has a population of approximately 430,000 and HIV prevalence of 5.9% (age 15-49 years). After a period of expansion and scaling-up of patient numbers, the project is now focusing on strengthening the care and treatment of patients. As of December 2007, approximately 5,000 HIV positive patients have been registered and more than 2,100 of these have been started on ART. The Kenyan MoH aims to reach 75% of patients in need of treatment by 2009.

**METHODS**

**Design:**
Longitudinal study with immunological and virological follow-up. Genotypic resistance was performed among all patients with virological failure in Busia District (Kenya).

**Inclusion criteria:**
Patients under HAART during ≥12 months (4dT or AZT + 3TC + NVP or EFV). All patients with viral load ≥5 000 copies/ml underwent genotypic resistance test.

**Exclusion criteria:**
Non-naïve patients as well as those treated with any other antiretroviral regimen were excluded from the study.

**Laboratory:**
Total HIV-1 RNA from DBS was extracted using Nuclisens method (Easymag, BioMerieux). A fragment of 1023 bp of pol gene was amplified using in-house RT-PCR and nested PCR previously described in the literature. Genotyping was validated using the ViroScore Suits (ABL, Luxembourg, v3.9.2).

Clinical, epidemiological and adherence data were also collected.

**RESULTS**

**Eligible patients:** 926

- Mean treatment duration: 38.8 months
- Mean age: 45 yrs
- Males: 67%

- Virological failure: 274 (29.6%)

**Types of resistance**

- NRTI
- NNRTI
- PI

**Conclusions**

- Overall, genotypic results available were concordant with antiretroviral treatment received by failing patients, indicating the importance of treatment adherence in the context of lack of regular access to VL monitoring and genotype.

- Our data contribute to the debate whether genotyping are essential and feasible to do in resource poor countries.

**OBJECTIVES**

- To assess the usefulness of dried blood spots filter paper (DBS) to determine antiretroviral resistance mutations among HIV+ treated patients with virological failure in Busia District (Kenya).
- To ascertain prevalence of genotypic resistance mutations and their pattern.
- To determine clinical and epidemiological data among HIV+ patients with virological failure.

**PROCEDURES**

1. Eligible patients: 926
2. Mean treatment duration: 38.8 months
3. Mean age: 45 yrs
4. Males: 67%
5. Virological failure: 274 (29.6%)

**METHODS**

**Design:**
Longitudinal study with immunological and virological follow-up. Genotypic resistance was performed among all patients with virological failure (>400 copies/ml).

**Inclusion criteria:**
Patients under HAART during ≥12 months (4dT or AZT + 3TC + NVP or EFV). All patients with viral load ≥5 000 copies/ml underwent genotypic resistance test.

**Exclusion criteria:**
Non-naïve patients as well as those treated with any other antiretroviral regimen were excluded from the study.

**Laboratory:**
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