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Poster Exhibition
Track C - Monitoring and evaluation

TUPE0353 - Low level of virological failure and drug resistance among patients receiving antiretroviral treatment under programme conditions in Maputo, Mozambique

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Setting: Primeiro-de-Maio day clinic, Maputo, Mozambique.
Objectives: Within a sample of individuals placed on first-line ART, we report on
a) the feasibility of viral load monitoring using dried plasma spots (DPS) as a surveillance tool for programme performance in a setting where routine viral load is unavailable,
b) the proportion of patients with virological failure and
c) drug resistance patterns.
Design: Cross-sectional survey.
Methods: HIV-1 RNA viral load levels were determined using qualitative RNA-polymerase chain reaction and resistance mutations were sequenced using drug genotyping. The study was conducted between June and December 2006 in a sample of ART-naïve patients who had been on treatment for over one year.
Results: 149 consecutive patients (69% females, median age: 36.4 years) were included after a mean follow-up time of 23 months. 117(78.5%, 95% confidence interval CI:71-85) patients had undetectable (<400copies/ml) viral loads, while in 32 (21%, 95% CI:14-28) this was detectable (range 437-58,884 copies/ml). Among those with virological failure only 4(12.5%) patients were failing clinically and 3(9%) immunologically.
Of 15 patients with viral loads above 1,000 copies/ml, twelve viruses could be sequenced and included 8 C subtypes and 4 circulating recombinant forms CRF08. Eight (5% 95% CI:2-9) of 32 patients with detectable viral loads had one or more major resistance mutations. Nucleoside reverse transcriptase inhibitor (NRTI) and Non-NRTI mutations were observed. There were no major mutations for resistance to protease inhibitors.
Conclusions: Among individuals placed on a first-line ART under programme conditions, the level of virological failure and drug resistance is reassuringly low. In resource-limited settings embarking on ART scale-up without access to routine viral load assays, punctual viral load surveys and targeted genotyping are useful to monitor programme quality and the circulation of HIV-drug-resistance strains.
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