BACKGROUND:
- Single-tablet regimens (STRs) have been associated with better adherence and virological control, longer time to virological failure, and better overall outcomes compared to multiple-drug regimens (MDR). These regimens consist of one pill containing at least two components, such as two nucleoside reverse transcriptase inhibitors (NRTI), a non-nucleoside reverse transcriptase inhibitor (NNRTI), and protease inhibitors (PI) in monotherapy or two inhibitors in combination.
- Patients on STRs have lower virological failures and greater adherence compared to those on MDRs.
- The use of STRs is associated with better outcomes, including lower rates of virological failure, better adherence, and lower pill burden.

AIM:
The aim of this study was to evaluate and compare the effectiveness of first-line STRs versus MDRs, after stratifying according to the number of pill administrations.

STUDY DESIGN AND METHODS:
- **Study Design and Population:**Prospective, observational, multicenter study involving all patients, enrolled in ICOFA Foundation cohort, who started a first-line triple ART with currently recommended or alternative regimens, according to the Italian Guidelines and EACS Guidelines, from January 2011 to January 2013. Among the 1,279 patients enrolled, 641 (50.0%) were women, and the mean age was 47.8 ± 10.8 years.
- **Patients:**The study included 1,279 patients, all on first-line ART regimens.
- **Endpoints:**The primary endpoint was virological failure defined as having ≥1 follow-up visits with HIV-RNA > 500 copies/mL.
- **Stratification:**Patients were stratified into two groups based on the number of pills: STRs (n = 654) and MDRs (n = 625).
- **Outcomes:**The outcomes measured were virological failure, histological failure, and all-cause mortality.

RESULTS:
- **Virological Failure:**The virological failure rate was 12% in the STR group and 16.6% in the MDR group (p = 0.029).
- **Histological Failure:**Histological failure was 12% in the STR group and 16.6% in the MDR group (p = 0.036).
- **All-Cause Mortality:**All-cause mortality was 6% in the STR group and 9% in the MDR group (p = 0.001).

CONCLUSIONS:
- A study that included a large number of patients enrolled in the ICOFA Foundation cohort found that STRs were associated with lower virological failure, histological failure, and all-cause mortality compared to MDRs.
- These findings suggest that STRs may be a more effective treatment option for patients on first-line ART.

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References:
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- "In the subgroup of patients starting STR-regimen based, the probability of viro failure was higher in the Roiva group comparing to the STR group (HR=1.23, 95% CI: 0.97-1.55, p=0.07).
- "Restraining the analysis to the subgroup of patients starting STRs regimens, we found that the probability of viro failure was higher in the Roiva group comparing to the STR group (HR=1.36, 95% CI: 1.06-1.75, p=0.01)". 

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