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# Efficacy and tollerability of INI-based 2-drug regime in viro-suppressed patients: a sistematic review and a meta-analysis

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## Introduction/Summary

The aim of this meta-analysis is to synthesize the available evidence from literature on the efficacy and safety of INI-based dual therapy compared to triple drug regimens in viro-suppressed HIV in a long-term follow-up (at least 72 96 weeks of follow up). Combination antiretroviral therapy (ART) has changed HIV infection, significantly improving the life expectancy and quality of life of individuals living with HIV (PLWHIV) worldwide. Thus, the clinical challenges of ART in this population are today the tolerability, adherence, long-term toxicity, polypharmacy and drug interactions. For example, a growing interest has developed in exploring alternative treatment strategies with the aim to reduce drugs toxicity, such as dual drug regimens (2-DR). The 2-DR provides some advantages: reducing pill burden, minimizing drug interactions, preserving future treatment options and potentially mitigating long-term toxicities associated with prolonged exposure to multiple antiretroviral drugs.

## Methods

A systematic review and meta-analysis were conducted to evaluate the efficacy, safety, and adverse drug reactions leading to discontinuation of dual drug regimens compared to triple drug regimen in viro-suppressed HIV patients after 72 or 96 weeks of follow-up. We searched MEDLINE, Google Scholar and the Cochrane Library up to January 10, 2024, and studies were selected for eligibility based on predefined criteria. Data were extracted independently by two reviewers, and risk ratios (RRs) were calculated as the measure of association between therapy and incidence of events.

## Results

Analyzing data of literature, it is clear that in case of switch in stable experienced patients with achieved viral suppression, there is no difference between a 2 or 3-DR, but the majority of the study evaluated the data at week 48 of treatment. The 2-DR can represented an excellent alternative to the classic 3-drug regimen in already viro-suppressed patients, both in terms of efficacy and tolerability. Six studies were included in the analysis both clinical trials and observational studies. The dual therapy regimens investigated included cabotegravir/rilpivirine, dolutegravir/lamivudine, and dolutegravir/rilpivirine. No significant differences were observed in treatment failure (RR 0.67, 95% CI 0.45-1.00, p=0.051), virological failure (RR 0.81, 95% CI 0.44-1.49, p=0.495), or adverse drug reactions leading to discontinuation (RR 1.21, 95% CI 0.44-3.32, p=0.715) between dual therapy and triple drug regimen groups.

## Conclusion

In conclusion, our meta-analysis about 2-DR compared with 3-DR in experienced patients with follow-up of at least 96 weeks. Overall, no differences in efficacy and tolerability were highlighted between the two examined regimens. This supports the use of 2-DR as an option for simplifying treatment and improving clinical outcomes in viro-suppressed HIV patients.

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