

Real-world Effectiveness and Safety Outcomes in People With HIV-1 Switching to Dolutegravir + Lamivudine (DTG + 3TC) With Unknown Prior Genotype: A Systematic Literature Review and Meta-analysis

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Background

Dolutegravir (DTG) and lamivudine (3TC) are medications used to manage HIV-1, a virus that can severely weaken the immune system. DTG prevents HIV from inserting its genetic material into your immune cells, while 3TC stops the virus from making copies of itself. These medications are effective and help prevent resistance, making them a good choice for people whose viral load is already undetectable. However, doctors often don't have access to detailed genetic information about the virus, which can help predict treatment success. This study looks at how well DTG + 3TC works when switching treatments without this genetic information.

What was the purpose of this study?

The study aimed to assess how effective and safe it is to switch to DTG + 3TC in people with HIV-1 without knowing the virus's genetic details. This is crucial because it tackles the real-world issue of treating people with HIV-1 without these genetic data, ensuring the treatment remains effective and safe.

Who took part in the study and how was the treatment studied?

This study had 2 parts, a systematic literature review (SLR), which is a process of analyzing all relevant studies on a specific topic to ensure a comprehensive understanding of the evidence available, and a meta-analysis (MA), which combines data from multiple studies to identify overall trends and provides stronger insights by statistically analyzing the results together. Included in the SLR were 14 studies, consisting of 3499 people with HIV. The MA consisted of 5 of those studies and included 637 people evaluated for treatment failure at Week 48.

What are the research findings?

The SLR showed that switching to DTG + 3TC kept the virus under control for 98% of the participants at Week 48 and treatment failure was rare, happening in only 0.29% of the cases. Resistance to either medication was uncommon, found in just 1 person. Also, both medications were generally well tolerated, with less than 1% stopping due to side effects. In the MA, among those without genetic information, there was no treatment failure seen at Week 48.

What does this mean for people with HIV?

For people living with HIV, these findings are encouraging. Switching to DTG + 3TC without genetic data can still lead to high rates of virus control and low risk of resistance. This means effective management of HIV can be maintained without needing detailed genetic tests, simplifying treatment decisions.

Conclusions

The study concluded that DTG + 3TC is effective and safe for people with HIV-1 switching treatment without genetic information. The treatment showed high rates of virus control and low rates of treatment failure, consistent with previous studies. These results support using DTG + 3TC as a switch option in real-world settings, even without genetic data.

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