

Comparison of atazanavir/ritonavir and darunavir/ritonavir based antiretroviral therapy in antiretroviral naïve patients

Tony Antoniou, Leah Szadkowski, Sharon Walmsley, Curtis Cooper, Ann N. Burchell, Ahmed M. Bayoumi, Julio S.G. Montaner, Mona Loutfy, Marina B. Klein, Nima Machouf, Christos Tsoukas, Alexander Wong, Robert S. Hogg, Janet Raboud and the Canadian Observational Cohort (CANOC) Collaboration

BMC Infectious Diseases. April 2017. 17(266)

Objective

The purpose of this study was to compare the effectiveness of two common treatment options for patients with HIV.

Importance of this Study

- Atazanavir/ritonavir and darunavir/ritonavir are considered especially important drug treatment options for patients for whom poor adherence to treatment is expected.
- Although randomized trials have been used to evaluate the effectiveness of these treatment options there is a gap in research that compares these drug combinations in clinical practice.
- Randomized trials have limitations because study participants may not be representative of patient characteristics.
- This observational study addresses this limitation by comparing the effectiveness of two common treatment options in patients who are being treated in clinical practice.

How this Study was Conducted

- Data was analyzed from the CANOC collaboration, an interprovincial collaborative cohort of HIV-positive individuals on antiretroviral therapy in Canada.
- Study participants were individuals beginning HIV treatment for the first time on either an atazanavir/ritonavir- or darunavir/ritonavir-based regimen.
- Participant eligibility depended on viral load (a measure of the blood level of the HIV virus) – those with >200 copies/mL before or at the beginning of treatment who had at least one follow-up viral load test were included.
- The clinical outcome of interest was regimen failure, including virologic failure and discontinuation for any reason.
- Virologic failure was defined as a viral load >1000 copies/mL between 16 and 24 weeks or a viral load >200 copies after 24 weeks of treatment.
- Discontinuation was defined as stopping treatment for more than 60 days.

Study Results

- Patients on Darunavir/ritonavir had a lower risk of virologic failure, but this finding was influenced by provincial differences in patient characteristics and prescribing patterns.
- Atazanavir/ritonavir was the recommended regimen in BC for patients at higher risk of treatment failure, reflecting a selection bias since patients in Quebec and Ontario showed no differences in risk of regimen failure.

Implications

- Atazanavir/ritonavir and darunavir/ritonavir have similar effectiveness for patients starting HIV treatment for the first time.

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