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Efficacy and safety of dolutegravir (DTG)-based antiretroviral treatment (ART) in people with HIV and solid organ transplantation (SOT): A single-arm clinical trial (DTG-SOT)

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Introduction

We demonstrated that DTG-based ART did not change tacrolimus and mycophenolic acid pharmacokinetic profiles in patients with HIV (PWH) and SOT [1]. However, there is limited clinical information on DTG use in the transplantation setting since raltegravir (RAL)-based ART is commonly used. The hypothesis for switching from RAL to DTG was to move to a more convenient ART-regimen while maintaining/improving efficacy and tolerance. However, in the only published study, five (50%) of the 10 PWH liver transplant (LT) recipients in whom ART was switched to DTG for simplification returned one year later to the previous ART regimens due to adverse events (AEs)[2].

Objective

The aim of this trial was to know the efficacy and safety of DTG (plus two NRTIs) in PWH and SOT.

Material

Single-arm trial including consecutive PWH SOT adult recipients on stable and effective RAL-based ART who were switched to DTG-based ART and were followed-up for 48 weeks. Participants had plasma HIV viral load (VL) <50 copies/mL during ≥12 months. DTG was combined with tenofovir disoproxil fumarate (TDF)/Emtricitabine (FTC) or Lamivudine (3TC)/Abacavir (ABC). Primary endpoint: plasma HIV VL <50 copies/mL at 48 weeks. Secondary endpoints: CD4 counts evolution and treatment discontinuation rates. ClinicalTrials.gov Identifier: NCT03360682.

Results

19 PWH were included (median [IQR] 57 years [51;60]), 58% were males, SOT type: liver (n=12); kidney (n=6); heart (n=1). ART was 3TC/ABC/DTG in 63% and FTC/TDF+DTG in 37%. All patients (100%) remained suppressed (VL <50 copies/mL) at 48 weeks. There were no changes in CD4 counts (p=0.4193)(**Figure-top**) or percentages (p=0.5155), total cholesterol (p=0.0686), LDL-cholesterol (p=0.7384), HDL-cholesterol (p=0.1373), or triglycerides (p=0.7476) during follow-up. Although the estimated glomerular filtration (eGF) rate slightly decreased (p=0.0015)(**Figure-bottom**) and creatinine slightly increased (p=0.0001), these changes were not clinically relevant. Protein/creatinine ratios remained unchanged (p=0.6379), with no significant changes in liver enzymes or glucose. Three (16%) participants discontinued DTG-treatment due to AEs (neuropsychological alterations (n=2), worsening diabetes (n=1)). No patients experienced organ rejection during the study.

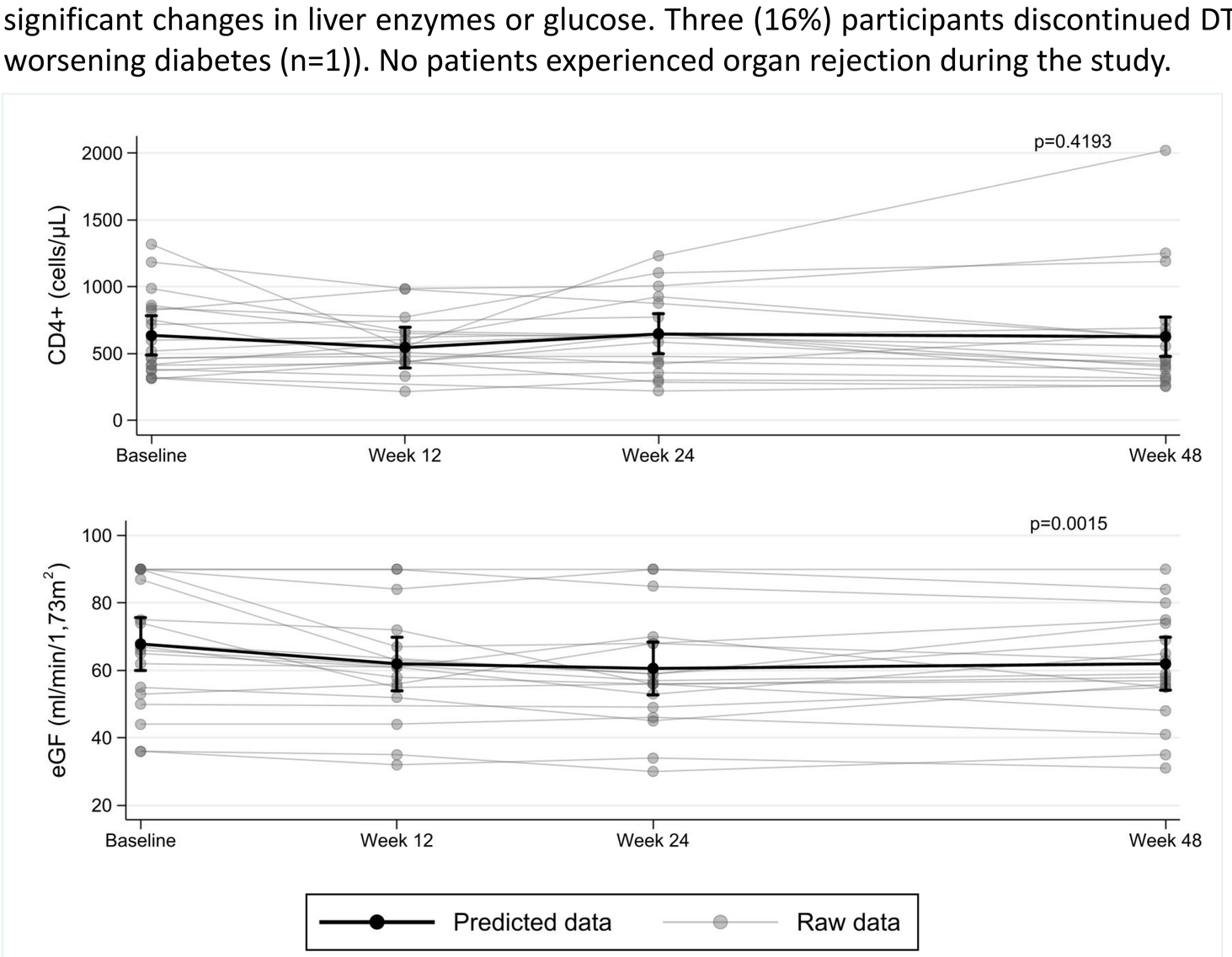

Figure legend: Evolution of CD4+ cell counts (**top**) and the estimated glomerular filtration (eGF) rate (**bottom**) in PWH and SOT receiving DTG-based ART throughout the study.
The **grey lines** represent individual values and the black lines the predicted values with the corresponding 95% confidence intervals (CI).

Conclusions

Switching to DTG-based ART was effective in PWH and SOT. More studies are needed to evaluate DTG safety in this setting.

References

1.- Manzardo C, Castelli A, Brunet M, Roman O, Ambrosioni J, Cofán F, Ruiz P, Crespo G, Forner A, Tuset M, Castel MA, Rimola A, Moreno A, Miro JM and SOT in HIV-infected patients Working Group Investigators. Drug-Drug Interactions between Dolutegravir (DTG) and Immunosuppressant drugs (IS) in HIV-infected Patients with Solid Organ Transplantation (SOT): a Single-arm Clinical Trial (DTG-SOT). 17th European AIDS Conference Basel, Switzerland. November 6-9, 2019. Poster#PE27/7.
2.- Cattaneo D, Sollima S, Meraviglia P, Milazzo L, Minisci D, Fusi M, Filice C, Gervasoni C. Dolutegravir-Based Antiretroviral Regimens for HIV Liver Transplant Patients in Real-Life Settings. Drugs R D. 2020 Jun;20(2):155-160. doi: 10.1007/s40268-020-00300-9.

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