

Lipid-lowering Efficacy of Statins in HIV-infected patients on Antiretroviral Therapy with Hypercholesterolemia: A meta-analysis of randomized controlled trials

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Abstract

Introduction: There is no established treatment strategy among human immunodeficiency virus (HIV)-positive patients on antiretroviral therapy (ART) who developed hypercholesterolemia. We intended to assess the effect of statin use on hypercholesterolemia among HIV-infected patients on ART.

Methods: A meta-analysis was done on all randomized controlled trials (RCTs) that studied the effect of statins with placebo or antiretroviral switching on hypercholesterolemia of HIV-positive patients on ART. The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guideline was used for the study selection process. Two authors independently abstracted the data. Mean difference (MD) were pooled using inverse-variance random-effect method. A number of sensitivity analyses were performed.



Results: Seven RCTs were included with a total of 272 HIV-infected patients receiving ART. Five of these studies have low risk of bias while two had high risk of bias. Statins significantly reduced fasting total cholesterol (TC) (WMD = -1.12, 95% CI = -1.27, -0.97, $P < 0.00001$; WMD = -26.20, 95% CI = -41.63, -10.77, $P = 0.0009$) and fasting low-density lipoprotein-cholesterol (LDL-C) (WMD = -1.03, 95% CI = -1.66, -0.41, $P = 0.001$; WMD = -23.34, 95% CI = -34.60, -12.08, $P < 0.0001$) compared to placebo (after subgroup analysis) and ART switching.

Conclusion: Statins are effective in the treatment of hypercholesterolemia among HIVinfected patients on ART.

Keywords: statin, hypercholesterolemia, HIV, antiretroviral therapy.

Biography:



The author is residency training in Internal Medicine at the St. Luke's Medical Center, Quezon City.

9th World Heart Congress; Zurich, Switzerland - July 29-30, 2020. (Webinar)

Abstract Citation:

Gladelyn C. Escasura, Lipid-lowering Efficacy of Statins in HIV-infected patients on Antiretroviral Therapy with Hypercholesterolemia: A meta-analysis of randomized controlled trials, World Heart Congress 2020, 9th World Heart Congress; Zurich, Switzerland - July 29-30, 2020.

(<https://heart.insightconferences.com/abstract/2020/lipid-lowering-efficacy-of-statins-in-hiv-infected-patients-on-antiretroviral-therapy-with-hypercholesterolemia-a-meta-analysis-of-randomized-controlled-trials>)