

Effects of different types of statins on lipid profile: a perspective on Asians

ABSTRACT

Context: The present review aimed at reviewing the effects of different statins on lipid profile, particularly in Asians. **Evidence Acquisition:** PubMed searches were conducted using the keywords 'statin, effect, and lipid profile' from database inception through March 2016. In this review, 718 articles were retrieved from the primary search. After reviewing the titles, abstracts, and full texts, we found that 59 studies met our inclusion criteria. These also included subsequent reference searches of retrieved articles. **Results:** CURVES study compared the effect on lipid profile between atorvastatin and other statins. This study demonstrated that low-density lipoprotein cholesterol (LDL-C), total cholesterol (TC), and triglycerides (TG) were reduced more with atorvastatin compared to simvastatin, pravastatin, lovastatin, and fluvastatin. However, simvastatin provided a greater elevation of high-density lipoprotein cholesterol (HDL-C) compared to atorvastatin. The STELLAR trial was based on dose-to-dose comparisons between atorvastatin and rosuvastatin efficacy in reducing LDL-C. The present study also revealed that as the doses of rosuvastatin, simvastatin, and pravastatin increased, HDL-C also increased, with rosuvastatin having the greatest effect. However, HDL-C levels decreased as the dose of atorvastatin increased. The DISCOVERY study involving the Asian population revealed that the percentage of patients achieving the European goals for LDL-C and TC at 12 weeks was higher in rosuvastatin group compared to atorvastatin group. **Conclusions:** The effects of statins on lipid profile are dose dependent. Most studies showed that rosuvastatin has the best effect on lipid profile. Prescribing lower doses of statins in Asians seems necessary.

Keyword: Lipids; Biochemical markers; Dyslipidaemia; HMG CoA reductase inhibitor; Bioavailability