ABSTRACT

EFFECT OF ATORVASTATIN IN LIPID PROFILE CHANGES AND INFLAMMATION MARKER TNF-α ON DIABETES PATIENT WITH DYSLIPIDEMIA

Background – Diabetics patients have 2 to 4 times increased risk of cardiovascular disease compared with non-diabetics. TNF-α is a proinflammatory cytokine that can be used to determine the risk of atherosclerosis complications triggered by inflammation in diabetes. Statins are a class of HMG CoA reductase inhibitors that inhibit cholesterol biosynthesis and have pleiotropic effects that inhibit the release of inflammatory cytokines like TNF-α and stabilize atherosclerotic plaques.

Objectives – This study aims to determine the effect of atorvastatin 20 mg/day for 30 days in reducing the lipid profile and TNF-α inflammatory markers in patients with diabetes dyslipidemia.

Methods – Diabetes patient with dyslipidemia who included the inclusion criteria in this observational prospective cohorts studies treated with atorvastatin for 30 days (n = 19). The efficacy of statin therapy was measured by lipid profiles (LDL, TG, HDL, and total cholesterol) and TNF-α.

Result – The results of the study showed that atorvastatin decreased 40.55% of LDL levels, 15.34% of TG levels, and 30.70% of total cholesterol levels which statistically significant (p<0.05). As for HDL, there is an increase of 6.06% but statistically non-significant (p>0.05). TNF-α levels increased by 11.30% which statistically non-significant (p> 0.05).

Conclusion – The use of atorvastatin 20 mg for 30 days gave reduction in LDL, TG, and total cholesterol and increased in HDL. Atorvastatin doesn’t have a reducing effect on TNF-α. There was no correlation between lipid profile changes with TNF-α changes.

Keyword: Atorvastatin, lipid, TNF-α, diabetes, dyslipidemia