

**ABSTRACT**

**EFFECT OF ATORVASTATIN ON LPL (LIPOPROTEIN LIPASE)  
AND LIPID PROFILE IN CHILDREN  
NEPHROTIC SYNDROME REFRACTER WITH HYPERLIPIDEMIA**

**Introduction**

Hyperlipidemia occurs in SN caused by decrease level of lipoprotein lipase (LPL). LPL is an enzyme that is directly involved and a determinant rate in lipid metabolism through two cholesterol metabolism pathways. In previous study, lipid lowering agents haven't always given however in the literature, however, in the literature, statin administration remains controversial in the condition of refractory nephrotic syndrome

**Objectives**

To analyze the effect and the relationship of atorvastatin on lipid profiles (total cholesterol, LDL, TG, HDL) and LPL

**Methods**

This study has met the ethical eligibility with No. 1668/KEPK/XI/2019. A RCT double blind, pre and post test control group study of 31 children nephrotic syndrome refracter with hyperlipidemia patients divided into 2 groups. The first group (n = 18 patients) treated with placebo and the other group (n = 13 patients) treated with atorvastatin. Observations carried out for four weeks. The efficacy of therapy was measured by lipid profile and LPL.

**Results**

We evaluated after 4 weeks, the total cholesterol and LDL from pre and post therapy of each group show the significant differences ( $p < 0,05$ ). However, TG and HDL did not make a significant difference. The LPL increased in the atorvastatin group but did not make a significant difference. There is no significant difference between changes in lipid profile and changes in LPL levels two group.

**Conclusion**

Atorvastatin therapy significantly decreases total cholesterol and LDL but not in TG. In contrast to total cholesterol, LDL and TG, administration of atorvastatin increases HDL and LPL. The relationship between LPL levels with total cholesterol, LDL, TG, and HDL levels has not been proven.

Keyword : atorvastatin, lipoprotein lipase (LPL), lipid profile (total cholesterol, LDL, TG, HDL)