Aim: The aim of this study was to evaluate the effects of periodontal treatment on serum lipoprotein-associated phospholipase A2 (Lp-PLA2) and high sensitive C-reactive protein (hsCRP) levels in hyperlipidaemic patients with periodontitis. 

Material and Methods: Fifty two patients with hyperlipidaemia and periodontitis, and 28 systemically healthy controls with periodontitis (C) were included in the study. Hyperlipidaemic groups were divided into two groups as suggested diet (HD) and prescribed statin (HS). Periodontal parameters including plaque index, gingival index, probing pocket depth, clinical attachment level, and percentage of bleeding on probing (BOP%) were recorded. Serum lipids, Lp-PLA2 and hsCRP levels were evaluated in venous blood. All serum parameters were assessed in each subject at baseline, one week after periodontal treatment (1WPT), and two months after the completion of non-surgical periodontal treatment (2MPT). 

Results: At baseline, the HS group had a higher value of BOP% when compared to the C and HD groups. The increases in serum Lp-PLA2 levels at 2MPT were statistically significant compared to baseline and 1WPT in HS group. There were no significant differences among the study periods regarding serum hsCRP levels. 

Conclusion: Serum Lp-PLA2 may be an important lipoprotein associated inflammatory mediator in hyperlipidaemic patients with periodontitis.