Serum and GCF Myeloperoxidase Levels in Periodontal Disease and Hyperlipidaemia

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Aim:

Both periodontal disease and hyperlipidaemia are important public health problems in both developed and developing countries. The aim of this study was the evaluation of the serum and gingival crevicular fluid (GCF) myeloperoxidase (MPO) levels in interaction between periodontal disease and hyperlipidaemia.

Material and Methods:

One hundred and twenty three subjects with hyperlipidaemia and 68 systemically healthy controls (C) were included in the study. Hyperlipidaemic groups were divided
into two groups as suggested diet (D) and prescribed statin (S). Both groups were divided into three subgroups as healthy (h), gingivitis (g) and periodontitis (p). The clinical periodontal parameters including plaque index, gingival index, probing pocket depth and percentage of bleeding on probing and fasting venous blood were obtained to determine serum MPO levels.

Results:

In the Cp group, serum MPO levels were statistically significant higher than Cg and Ch groups (p<0.01). There were significant increases in the Dp group than in the Dg and Dh groups (p<0.05 and p<0.01, respectively). There were statistically significant correlations between clinical periodontal parameters and serum and GCF MPO levels in the C, D and S groups.

Conclusion:

Serum MPO levels may be an important pathogenesis stage of the interaction between periodontal disease and hyperlipidaemia. Further longitudinal studies in larger populations with different periodontitis and hyperlipidaemia phases are needed to clarify this association.