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A Comparison of Blood Glucose Levels and Dyslipidemia in Patients with Chronic Periodontitis and Healthy Controls

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Abstract

Background: Numerous research studies have indicated a potential connection between periodontal disease and an increased susceptibility to cardiovascular conditions. This study aimed to assess fasting plasma lipid profiles and blood glucose levels in patients with chronic periodontitis. **Methods**: 25 participants diagnosed with chronic periodontitis were divided into mild, moderate, and severe groups based on clinical attachment loss (CAL). Additionally, 25 healthy controls matched for age and gender were included. Venous blood samples were collected after an overnight fast and analyzed for serum triglycerides, total cholesterol, LDL, HDL, and blood glucose in both study and control groups. Comprehensive periodontal measurements including probing pocket depth and CAL were taken at six sites per tooth using William's periodontal probe. **Results:** Blood glucose and triglyceride levels were notably higher in individuals with periodontal disease ($P<0.05$) compared to controls. When aggregating the mild, moderate, and severe periodontitis patients into a single group and comparing them with the control group, statistically significant differences were observed for Blood glucose and triglycerides. Additionally, blood glucose levels were significantly elevated in patients compared to the control group. **Conclusion:** In the present study, it was found that there is a deranged lipid profile in patients with periodontal diseases. Severity and poor control of periodontal disease might likely affect the level of lipids and glucose in blood which may increase the risk for CVD.