

# **RELATIONSHIPS OF SALIVARY SIALIC ACID AND ITS FRACTION IN PERIODONTITIS WITH DEMOGRAPHIC PROPERTIES AND MEDICAL HISTORY**

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## **ABSTRACT**

### **Background and Objectives**

Periodontitis is among the most widespread chronic inflammation disease. The aim of the study was determination inflammation status by the levels of sialic acid and its fractions in periodontitis and their relation with demographic and clinical properties, in the center of Erbil City.

### **Method**

This study included total sample of (161) individuals. They consisted of (85 males and 76 females) and included two age groups; (18-44) years and (45-75) years. The levels of total sialic acid and its fractions; free sialic acid, lipid bound sialic acid and protein bound sialic acid in both supernatant and sediment of saliva were measured and their relation statistically with age, family history, and status of ; diabetes mellitus, hypertension, and medication were calculated.

### **Results**

The levels of salivary biochemical parameters in periodontitis were higher than healthy adults. There was inverse relation of ages with total free sialic acid . There was high relation of protein bound sialic acid with family history of periodontitis and diabetes mellitus. Hypertension was related to lipid bound sialic acid in the supernatant of saliva. Medication status was related significantly to total salivary sialic acid.

### **Conclusions**

These results conclude that immune responses and inflammation will decline with age. Familial effect and diabetes mellitus associated with severity of periodontitis. Mucin rich in lipid in hypertensive patient is a characteristic of periodontal diseases. In spite of specific action of each drug, they caused low flow rate of saliva which caused decrease in salivary protein and its sialylation.

**KEYWORDS:** Salivary Sialic Acid, Periodontitis, Age, Familial History, Medical History