

Title -SALIVARY TOTAL PROTEIN LEVELS IN PATIENTS WITH CHRONIC GINGIVITIS AND CHRONIC PERIODONTITIS

Abstract

Background: Periodontal diseases are one of the most common chronic infectious and inflammatory diseases in the world that can be diagnosed by clinical, radiographic signs, and some biomarkers. Saliva contains locally and systemically derived markers that can aid in diagnosis of periodontal diseases. The aim of present study was designed to evaluate salivary total protein levels in patients with chronic gingivitis and chronic periodontitis.

Material and Methods: 5ml of unstimulated whole saliva samples were collected from a total of 113 subjects; each of healthy and chronic gingivitis group was included 39 subjects and 35 subjects in chronic periodontitis group. Salivary total protein levels, gingival index, papillary bleeding index, probing pocket depth and clinical attachment level were recorded in respective groups. Salivary protein estimation was done by direct UV Absorption method and determination was based on biuret method.

Results: The mean salivary total protein levels in the healthy, chronic gingivitis and chronic periodontitis groups were 1.52 g/dl, 2.58g/dl and 6.30 g/dl respectively. Salivary total protein levels of gingivitis and periodontitis subjects were 1.6 and 4.2 times higher than healthy subjects which were statistically significant ($p < 0.001$). In addition, gingival index ($r = 0.476$) and papillary bleeding index ($r = 0.490$) were significantly correlated with protein levels in gingivitis subjects. However, probing pocket depth was significantly correlated with protein contents in only periodontitis subjects ($r = 0.387$).

Conclusions: Increased total protein levels are related to the severity of periodontal diseases and it may serve as biomarker in inflammation of the periodontium.

Keyword: Saliva, salivary total protein, healthy, gingivitis, periodontitis