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## ORIGINAL ARTICLE

**EVALUATION OF PENTRAXINS 3 IN CHRONIC PERIODONTITIS PATIENTS BEFORE AND AFTER THE TREATMENT**

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### **Abstract**

**Background:** Pentraxins are a super family of evolutionarily conserved proteins considered as markers of inflammation. They are produced on exposure to pro-inflammatory stimuli like TNF- $\alpha$ , IL-1 $\beta$  and even microbial moieties. Periodontitis is an inflammatory condition initiated by gram negative organisms which cause an up regulation of pro-inflammatory mediators which in turn amplifies the production of PTX3, an acute phase protein. Since it has an extra hepatic synthesis unlike its counterpart CRP, PTX3 is used as a marker to assess the disease activity in periodontitis patients. **Materials and Methods:** A total of 30 patients were divided into three groups, Group I 10 periodontally healthy subjects, Group II 20 patients with moderate to severe chronic periodontitis, Group III same as group II one month after receiving Scaling and Root Planing. Clinical parameters were recorded and gingival crevicular fluid (GCF) samples were collected from each subject for measuring PTX3 levels at baseline, and 1 month after treatment. **Results:** In all evaluation periods, there was statistically significant difference in each of the studied clinical parameters and PTX3 level between Group I and Group II. There was also statistically significant reduction in each of the studied clinical parameters and PTX3 level between Group II and Group III. **Conclusions:** Tissue PTX3 values can be considered as an inflammatory marker for chronic periodontitis. However further interventional studies with a larger sample size and longer follow up are required to use PTX3 as a true diagnostic marker for periodontal diseases.

**Key words:** Pentraxins, Periodontitis, Gingival crevicular fluid, CRP