

ASSESSMENT OF RESOLUTION OF GINGIVAL INFLAMMATION FOLLOWING ADJUNCTIVE TOPICAL APPLICATION OF OMEGA 3 FATTY ACID AFTER SCALING – A DOUBLE BLINDED INTERVENTIONAL TRIAL

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Periodontal disease is an inflammatory disease of polymicrobial origin. The periodontal therapy is principally targeted to eliminate the microbial plaque, which is responsible for the disease by performing scaling and root planing. Omega 3 fatty acids including docosahexaenoic acid (DHA) and eicosapentaenoic acid (EPA) were shown to have anti-inflammatory and protective actions in inflammatory disease including periodontitis (Ziboh 1999) due to reduction in superoxide anion generation.

The objective of this study was to evaluate the adjunctive effect of omega 3 fatty acid (topical application) in resolving gingival inflammation after scaling .

A total of 56 subjects were selected from patients visiting the Out- patient Department of Periodontology, Faculty of Dental Sciences, Sri Ramachandra Institute of Higher Education. At the baseline visit, all the patients received a complete dental examination and whole unstimulated saliva was collected. Initial therapy was performed on all patients and consisted of complete scaling with ultrasonic instruments following which subjects were randomly assigned to receive omega 3 fatty acid or placebo. The saliva samples were assayed for its total antioxidant capacity. Clinical and biochemical assessment was done at baseline & repeated at 3 weeks post therapy.

Subjects enrolled in this study were randomized into test group (n=29) and control group (n=27). The mean modified sulcular bleeding index, gingival index and oral hygiene index were recorded and in addition to this total antioxidant capacity of saliva was assessed at baseline and follow up visits. Increase in TAO levels attained a statistical significance difference ($p < 0.05$) when comparing the test and control groups.

The topical application of omega 3 fatty acid was found to increase the total antioxidant levels of saliva. Omega 3 fatty acid are useful adjuncts for non-surgical periodontal therapy.