

**CS4.**

**EFFECT OF CO-ENZYME Q-10 ON HEALING OF MICROULCERS  
ON GINGIVA OF ADULTS**

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Bleeding gingiva is an important symptom to the patient as well as a significant sign for the dental practitioner. Micro-ulcers in the gingiva is the cause of gingival bleeding and the slightest trauma will lead to bleeding. The Micro-ulcers are formed at the attached epithelium initially and spreads to the crevicular epithelium subsequently. Healing of an ulcer is time consuming. Therefore, even though the plaque control is good, the bleeding gingiva will persist for a longer period of time. Periodontal researchers are concerned with this problem. They have used various substances to reduce the healing time of the gingival microulcers. Co-enzyme Q10 is one such substance.

Co-enzyme Q10 or ubiquinone is an endogenous quinone. It is an essential link in the respiratory chain of cells of the inner mitochondrial membranes. This means that co-enzyme Q10 is of fundamental importance for continuous mitochondrial synthesis of adenosine tri-phosphate the main source of cellular energy. In this study the effect of co-enzyme Q10 on the healing of gingival ulcers will be studied.

40 subjects were selected for the study. 20 in 21 - 30 age group, 9 in the 31 - 40 age group and 11 in the 41 - 50 age group. 15 were male and 25 were female. They were otherwise healthy subjects with mild to moderate adult periodontitis. The American academy of periodontology classification was used to diagnose the type of periodontal disease. The type of periodontitis was diagnosed considering the bleeding on probing (BOP), loss of attachment (LOA), radiographic bone loss, topography and mobility of teeth. Bleeding on probing is present in both mild and moderate adult periodontitis, loss of attachment is less in mild form which is less than 4 mm and moderate form it is >4mm and <6 mm. Radiographic bone loss is severe in both conditions. In the moderate type more sites are involved. There is no mobility in the mild type in contrast to the grade I mobility seen in the moderate type.

The plaque index (PLI) and the bleeding index (BI) were recorded. The plaque control methods were started and scaling was done where it was necessary. Half the group was given 30mg Co-enzyme Q10 (Bioquinous/Pharma Nord) and the rest were given a placebo. The patients were monitored in two weeks, one month, two months, three months and four months intervals and PLI and BI recorded.

Preliminary studies of our research has suggested a decrease in gingival bleeding among the subjects who were given Co-enzyme Q10 ( $P < 0.02$ ). Therefore, Co-enzyme Q10 may be used as an adjuvant in the treatment of adult periodontitis.