Healing of periodontal tissue assisted by Coenzyme Q_{10} with Vitamin E – clinical and laboratory evaluation

Teresa Matthews-Brzozowska¹,², Anna Kurhańska-Flisykowska¹, Marzena Wyganowska-Świątkowska¹, Janina Stopa¹

¹Department of Conservative Dentistry and Periodontology, University of Medical Sciences, Bukowska 70, PL 60-812 Poznań, Poland
²Department of Dentofacial Orthopedics and Orthodontics, Wrocław Medical University, Pasekowa 1, PL 50-067 Wrocław, Poland

Correspondence: Marzena Wyganowska-Świątkowska, e-mail: marzena.wyganowska@periono.pl

Abstract:
The characteristics of the histopathological image of chronic periodontitis are alterations in the final section of blood vessels. Coenzyme Q_{10} by the influence on the vascular wall may have a favorable effect on the improvement of the parodontium condition. Vitamin E intensifies the cell type response.

The aim of the research was evaluation of the parodontium condition after oral application of Coenzyme Q_{10} with Vitamin E. Thirty patients with chronic periodontitis were examined. After the initial examination, scaling and root planning the hygiene indicators: plaque index (PlI), interdental hygiene index (HYG), parodontium indicators: gingival index (GI), sulcus bleeding index (SBI) ± and measurement of the periodontal pockets depth (PPD) and clinical attachment loss (CAL) was performed. The patients have been taking the Coenzyme Q_{10} with Vitamin E drug for two months. In this time the indicators were once again estimated and the measurement of the periodontal pockets depth was performed. The total antioxidant status (TAS) in the mixed saliva by the colorimetric method was determined twice.

The average value of PlI decreased from 1.0 to 0.36, and the average value of HYG was reduced from 39.51% to 6.97% after two months of taking the medicine. The parodontium condition also improved. Average values of GI decreased from 0.68 to 0.18, and the values of SBI decreased from 7.26 to 0.87. Periodontal pockets shallowed by 30%. The laboratory examination result improved by 20%.

Coenzyme Q_{10} with Vitamin E has a beneficial effect on the periodontal tissue.

Key words:
periodontal disease, tocopherol, coenzyme Q_{10}, ubiquinol