

INTISARI

Periodontitis merupakan penyakit immuno-inflamatori akibat interaksi dari serangan bakteri dan respon inflamasi host. *Reactive Oxygen Species* (ROS) adalah suatu zat pengoksidasi yang sangat reaktif, jika terjadi inflamasi kronis maka produksi ROS akan berlebihan dan menyebabkan destruksi jaringan periodontal. Selain perawatan periodontal berupa kuretase, perlu ditambahkan antioksidan *Coenzyme Q₁₀* (CoQ₁₀) yang dapat menetralkan ROS. CoQ₁₀ topikal saja tidak cukup karena efeknya yang cepat hilang setelah pemberian, oleh karena itu ditambahkan CoQ₁₀ oral yang dapat meningkatkan konsentrasi CoQ₁₀ pada gingiva. Penelitian ini bertujuan mengetahui efektivitas pemberian kombinasi CoQ₁₀ topikal dan peroral pasca kuretase pada perawatan periodontitis kronis dengan parameter *bleeding on probing*, *probing depth* dan *relative attachment loss*.

Sampel 45 poket periodontal 4-6 mm, dibagi tiga kelompok; kuretase dan CoQ₁₀ topikal, kuretase dan CoQ₁₀ peroral, dan kuretase dan CoQ₁₀ topikal serta CoQ₁₀ peroral. Setiap poket diukur *bleeding on probing* (BOP), *probing depth* (PD), dan *relative attachment loss* (RAL). Pengambilan data BOP hari ke-0,14, dan 21, untuk PD dan RAL hari ke-0, 30, dan 90. Data BOP dianalisis dengan uji non parametrik, *Friedman Test* dan *Kruskal-Wallis Test*. Kemudian data reduksi PD dan RAL dianalisis dengan uji non parametrik *Kruskal-Wallis* dan *Mann-Whitney*.

Hasil penelitian menunjukkan pada BOP tidak terdapat perbedaan ($p > 0,05$). Pada PD dan RAL terdapat perbedaan ($p < 0,05$), sehingga disimpulkan bahwa kombinasi CoQ₁₀ topikal dan peroral pasca kuretase mengurangi *probing depth* dan *relative attachment loss* dibandingkan pemberian CoQ₁₀ topikal atau konsumsi peroral CoQ₁₀ saja pasca kuretase pada perawatan periodontitis kronis, sedangkan *bleeding on probing* tidak ada perbedaan.

Kata kunci : Periodontitis kronis, kuretase, *Coenzyme Q₁₀* oral, *Coenzyme Q₁₀* topikal, CoQ₁₀.

ABSTRACT

Periodontitis is an immuno-inflammatory disease caused by interaction of bacterial attacks and host's inflammatory response. Reactive Oxygen Species (ROS) is a highly reactive oxidizing agent, the production of ROS will be excessive if there is an inflammation and there will be destruction of periodontal tissue. Besides periodontal treatment, antioxidants need to be considered. Coenzyme Q₁₀ (CoQ₁₀) is an antioxidant that can neutralize ROS. Topical CoQ₁₀ alone is not enough because the effect is quickly lost shortly after application, therefore oral CoQ₁₀ is added. The aim of this study was to determine the effectiveness of topical and oral Coenzyme Q₁₀ combinations after curettage in the treatment of chronic periodontitis with bleeding on probing, probing depth and relative attachment loss parameters.

Sample of 45 periodontal pockets 4-6 mm, divided into three groups; curettage and topical CoQ₁₀, curettage and oral CoQ₁₀, and curettage and topical CoQ₁₀ and CoQ₁₀ oral. BOP data were measured on day 0, 14, and 21 after treatment. PD and RAL data were measured on day 0, 30 and 90 after treatment. BOP data were analyzed by Friedman Test and Kruskal-Wallis Test. Then the PD and RAL reduction data were analyzed by the Kruskal-Wallis test and Mann-Whitney.

The results showed that there was no difference in the BOP ($p > 0.05$). In PD and RAL there were ($p < 0.05$), so it can be concluded that the combination of topical and oral Coenzyme Q₁₀ post curettage reduced probing depth and relative attachment loss compared to topical Coenzyme Q₁₀ or oral Coenzyme Q₁₀ only post curettage in the treatment of chronic periodontitis, while assessed from bleeding on probing there is no difference.

Keywords: Chronic periodontitis, curettage, oral *Coenzyme Q₁₀*, topical *Coenzyme Q₁₀*, CoQ₁₀.