



Republic of Iraq
Ministry of Higher Education
And Scientific Research
University of Baghdad
College of Dentistry



EVALUATION THE EFFECTS OF DENTIFRICE CONTAINING PROPOLIS EXTRACT IN THE CONTROL OF GINGIVITIS WITH MEASURING IL-1B AND IL-6 SALIVARY CYTOKINES LEVELS

A thesis

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requirements for the Degree of Master of Science in
Periodontics**

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ABSTRACT

Background

Phytotherapy is the usage of herbal species with medicinal properties for the management of various diseases. Gingivitis and periodontitis are diseases that involve the role of both the bacteria and the host immune response. Tooth brushing with dentifrice are effective in reducing levels of dental plaque. Over the years, various researches have shown the importance of herbal products in the management of periodontal diseases. Propolis is a resinous substance obtained from the bee hives that has antioxidant, anti-bacterial, anti-virus, antifungal, anti-tumor and anti-inflammatory activities.

Aim of the study

The aim of study is to evaluate the effects of the toothpaste containing propolis on control of the plaque and gingivitis clinically and immunologically.

Subjects and methods

Twenty patients diagnosed with generalized dental biofilm induced gingivitis with intact periodontium were selected randomly to use toothpaste containing propolis and Colgate total toothpaste with modified bass technique method for tooth brushing, for 7days for each type, and wash out period 7 days between them. A week before trial, all participants received motivation, oral hygiene instruction, scaling and polishing.

Clinical periodontal evaluation is undertaken which include plaque by using a modification of the Quigley-Hein index, and bleeding assessment by modified sulcus bleeding index, in addition to saliva samples collection to estimate interleukin-1 β and interleukin-6 levels. Both clinical periodontal parameters and immunological markers collected at baseline 1st visit after

24h refrain from oral hygiene measures and after 7 days' 2nd visit of tooth pastes usage. Enzyme-linked immunosorbent assays were used for the estimation of interleukins concentration.

Results

Regarding means of modified Quigley Hein plaque index and modified sulcus bleeding index there were significant decrease in both groups Colgate and Ecodenta at 2nd visit compared to that at baseline 1st visit, also there were significant differences in mean percentages of changes between study groups at 2nd visit compared to that of baseline visit. Mean of interleukin-1 β was significantly decreased in group Ecodenta at 2nd visit compared to that at baseline, but there were non-significant differences in means of interleukine-6 at 2nd visit compared to that at baseline 1st visit for both groups. While there were significant differences between groups at 2nd visit compared to that at baseline 1st visit in mean percentages of change for both interleukins. Finally, there was significant strong positive correlation between interleukins.

Conclusion

Propolis containing tooth paste was found to be more effective in reducing plaque accumulation and controlling the gingival inflammation clinically as well as through the reduction of interleukin 1beta and interleukin 6 salivary levels when compared to Colgate total toothpaste. Also, Interleukine-6 and Interleukine-1 beta could be used as inflammatory biomarkers in subjects



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تقييم آثار معجون الأسنان المحتوي على خلاصة العكبر في السيطرة على التهاب انسجة ما حول الاسنان مع قياس مستويات الساييتوكينات الالعبية انترلوكين بيتا ١ و انترلوكين ٦

رسالة مقدمة الى مجلس كلية طب الاسنان في جامعة بغداد كجزء من متطلبات نيل
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