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EFFICACY OF TOPICAL PHENYTOIN ON WOUND HEALING OF THE DONOR SITE ON THE PALATE: A RANDOMIZED CONTROLLED TRIAL

By

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ABSTRACT

Background and objectives

Free gingival graft (FGG) is considered to be one of the longest known treatment modality with predictable clinical outcome for soft tissue augmentation procedure in Periodontics. However, the shortcoming to it is the prolonged healing time of the donor site causing increased post-operative discomfort and pain to the patient. Various agents have been tried for accelerated healing of the donor site on the palate. Phenytoin has been used as a topical agent in the field of medicine since four decades and it has shown promising results. There is limited literature available on the usage of topical phenytoin as a wound healing agent in dentistry. Thus, this study was aimed to assess the efficacy of topical phenytoin on the palatal donor site after FGG harvest.

Materials and Methods

A total of 32 systemically healthy participants indicated for FGG were inducted into this randomized controlled clinical trial. They were divided into two groups wherein, Group A consisted of 16 patients, received PHT gel and Group B consisted of 16 patients who received placebo gel. The clinical parameters and patients' experience via questionnaire were assessed on day 3^{rd}, 6^{th}, 14^{th} and 21^{st}.

Results

PHT gel showed faster healing on the donor site on all the follow-up visits when compared to the placebo gel with a mean of 4.63±0.62 ($p = 0.0002$) on day 3, 5.19±0.54 ($p = 0.0001$) on day 6, 5.81±0.40 ($p = 0.0001$) on day 14 and 6.88±0.34 ($p = 0.0001$) on day 21. The values were considered to be clinically and statistically significant on

all the follow up visits. The participants reported less discomfort on the PHT treated sites in the first week.

Conclusion

Topical application of PHT gel certainly has a positive impact on reduction of post-operative discomfort on the donor site after FGG harvest and accelerates the healing of the wound site on the palate.

Keywords: Graft; mucogingival surgery; phenytoin; wound; healing; pain