Effect of Concentrated Growth Factors on alveolar ridge preservation

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Abstract

This study compared CGF treatment of extraction sockets with blank control, and that the use of CGF accelerate socket wound healing after tooth extraction as noticed by increased soft-tissue healing and reduced alveolar bone width resorption using clinical and radiographic methods. Further research is under way.

Results

Soft tissue healing is much faster than the control group. No significant differences in vertical bone changes in the medium region of the sockets were found ($P > .05$). Ridge width change is significant differences between the two groups, and the resorption of test group is less than the control group.

	Numbers	Ridge width change	vertical bone change
Control group	8	-1.6±1.27	-0.22±1.36
Test group	12	-0.14±0.48	-0.18±0.77
<i>P</i> 值		0.037	0.934

10 days after extraction

1 month after extraction

Background and Aim

Concentrated growth factors (CGF), a third generation of platelet concentrate products, appears to have more abundant growth factors because of its special centrifugation process. It is hypothesized that CGF will accelerate socket wound healing after tooth extraction, noticed by increased bone fill and reduced bone resorption.

However, there are few studies supporting this.

This study was designed to evaluate the effect of CGFs in alveolar ridge preservation.

Conclusion

The study outcomes demonstrate that the use of CGF accelerate socket wound healing after tooth extraction as noticed by increased soft-tissue healing and reduced alveolar bone width resorption using clinical and radiographic methods.

Further research is under way.

Methods and Materials

Twenty subjects needing molar tooth extractions were selected. Twenty extraction sockets were divided into test group (CGF Filled, $n = 12$) and control group (nature healing, $n = 12$). The soft tissue profile was evaluated before tooth extraction and after 10-day, 1-month, and 3-month healing. Cone-beam computed tomography scans were taken before extraction and 3 months after extraction. Vertical and horizontal bone changes were assessed radiographically. Data were analyzed with Mann-Whitney U test and $\alpha = 0.05$.

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