"A COMPARATIVE EVALUATION OF SUB-EPITHELIAL CONNECTIVE TISSUE GRAFT (SCTG) VERSUS PLATELET CONCENTRATE GRAFT (PCG) IN THE TREATMENT OF GINGIVAL RECESSION USING CORONALLY ADVANCED FLAP TECHNIQUE – A NINE MONTH STUDY."

By

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ABSTRACT

BACKGROUND:

Gingival recession is an apical shift of the gingival margin with the exposure of root surface. It presents destruction of both soft and hard tissues. The objective of this study was to clinically evaluate and compare the efficacy of platelet concentrate graft (PCG) with that of sub epithelial connective tissue graft (SCTG), using coronally advanced flap in terms of root coverage, clinical attachment level (CAL), width of keratinized gingiva (WKG), post-surgical discomfort levels (PSDL) and aesthetic outcome.

METHODS:

The study population consisted of 12 patients with a total of 24 gingival recession defects. The selected gingival recession sites were randomly assigned either to experimental site-A (SCTG) or experimental site-B (PCG). The clinical parameters like plaque index, gingival index, probing depth, width of keratinized gingiva, clinical attachment level were recorded at baseline and 9 months post operatively, whereas vertical recession depth (VRD) was recorded at baseline, 1 week, 1 month, 3 months, 6 months, and 9 months post operatively. Paired t test, unpaired t test, Mann-Whitney U test, Wilcoxon signed rank matched pairs test were used to assess statistical significance ($P < 0.05$).

RESULTS:

Mean VRD statistically significantly decreased from 2.50 ± 0.48 mm presurgery to 0.54±0.50 mm with PCG (77% ± 18.42%root coverage) and from 2.75 ± 0.58 mm to 0.54 ± 0.45 mm with SCTG (83%±14.5%, root coverage) at 9 months. No statistically significant differences between the treatments were found for VRD, CAL and PD, while KTW gain was statistically significant (P = 0.05) in both the groups. Complete root coverage was achieved in 33.33% of the PCG group and in 41.6% of the SCTG group. Though the PSDL was significantly lower in both the groups at 1 month follow up, the PSDL values were slightly higher for SCTG at baseline and 1 week recordings in comparison to PCG group. Soft tissue in the PCG group demonstrated a superior contour and texture when compared to SCTG group.

CONCLUSION:

Within the limits of the study both SCTG and PCG groups resulted in significant amount of root coverage. The PCG technique was less invasive, required minimal time and clinical manoeuvre. It resulted in superior aesthetic outcome and lower post-surgical discomfort in comparison to SCTG group despite a slight decline in the VRD from 6 months to 9 months follow up.

KEY WORDS:

Gingival recession, platelet concentrate graft, sub-epithelial connective tissue graft, coronally advanced flap, aesthetics.