

**“CLINICAL EVALUATION OF A CORONALLY ADVANCED FLAP ALONE OR  
IN COMBINATION WITH A PLATELET-RICH FIBRIN MEMBRANE IN THE  
TREATMENT OF GINGIVAL RECESSIONS”**



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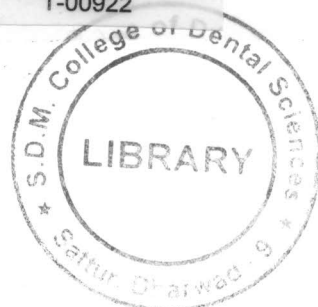
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## ABSTRACT

### Background:

The aim of this study was to determine whether the addition of an autologous platelet-rich fibrin membrane to a coronally advanced flap (test group) would improve the clinical outcome compared to a coronally advanced flap alone (control group) for the treatment of bilateral isolated Miller class I and II gingival recessions.

### Method:

Fifteen systematically healthy subjects presenting bilateral isolated Miller class I and II were enrolled in the study. Each patient was treated with a combination of coronally advanced flap and platelet-rich fibrin membrane (CAF+PRF) on the test site and coronally advanced flap (CAF) alone on the control site. Recession depth (RD), Probing depth (PD), Clinical attachment level (CAL), Width of keratinized gingiva (WKG), Recession width (RW) were measured at baseline, 1, 3 and 6 months at test and control sites. Comparison was done post surgically for these variables between baseline to 1, 3 and 6 months within and in between test and control groups.

### Results:

Mean root coverage after 1, 3, and 6 months was  $34.58\% \pm 15.84\%$ ,  $70.73\% \pm 21.24\%$ , and  $100\% \pm 0.00\%$ , respectively, in the test group and  $31.15\% \pm 20.53\%$ ,  $61.46\% \pm 19.56\%$ , and  $68.44\% \pm 17.42\%$ , respectively, in the control group. Differences between the two groups were statistically significant at 1, 3 and 6 months. At 6 months, the

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increase in CAL was statistically significant when comparing the test group (from  $4.75 \pm 1.29$  at baseline to  $1.00 \pm 0.00$  at 6 months) to the control group (from  $4.69 \pm 1.25$  at baseline to  $2.00 \pm 0.89$  at 6 months). It also showed statistically significant increase in WKG when comparing the test group (from  $2.94 \pm 0.77$  at baseline to  $5.38 \pm 1.67$  at 6 months) to control group (from  $2.44 \pm 0.81$  at baseline to  $4.63 \pm 0.81$  at 6 months). In the case of PD, there was no significant difference between the two groups, but a significant decrease in recession depth when comparing the test group (from  $3.44 \pm 1.09$  at baseline to  $0.00 \pm 0.00$  at 6 months) to control group (from  $3.44 \pm 1.21$  at baseline to  $1.13 \pm 0.72$  at 6 months). Moreover, a significant decrease in the recession width in test group (from  $3.44 \pm 0.81$  at baseline to  $0.00 \pm 0.00$  at 6 months) was observed when compared with control group (from  $3.38 \pm 1.09$  at baseline to  $1.25 \pm 0.86$  at 6 months).

#### **Conclusion:**

CAF is a predictable treatment for bilateral isolated Miller class I and II recession type defects. The addition of a PRF membrane in combination with the CAF provided superior root coverage with additional benefits of gain in CAL, WKG and decrease in RW, RD at 6 months compared to conventional therapy (CAF). In case of PD there was no significant difference between the two groups at 6 months

**Keywords-** Gingival Recession; Fibrin; Plastic Surgery.