

INTISARI

Resesi gingiva adalah ketidaktepatan posisi tepi gingiva ke arah apikal dari *cemento-enamel junction* dan mengakibatkan terbukanya akar gigi, sehingga prosedur penutupan akar mulai menjadi perhatian. Platelet rich plasma (PRP) banyak mengandung *growth factor*, salah satunya *Fibroblast growth factor-2* (FGF-2) yang berpartisipasi dalam proses angiogenesis dan proliferasi sel. Perbedaan lama aktivasi mempengaruhi jumlah platelet dan kadar FGF-2. Tujuan penelitian adalah untuk mengetahui pengaruh lama aktivasi *platelet rich plasma* dengan kolagen terhadap kadar *fibroblast growth factor-2* cairan sulkus gingiva pada terapi resesi gingiva.

Sampel penelitian adalah cairan sulkus gingiva yang diambil menggunakan *paper point #30* selama 30 detik sebanyak 18 sampel. Sampel diambil pada hari ke-0 (baseline) sebelum tindakan bedah *Coronally advanced flap*, hari ke-5 dan hari ke-7 sesudah tindakan bedah *Coronally advanced flap*. Sampel dibagi menjadi 2 kelompok, kelompok 1 waktu aktivasi PRP-kolagen 1 jam dan kelompok 2 waktu aktivasi PRP-kolagen 24 jam. Perubahan kadar FGF-2 pada cairan sulkus gingiva diperiksa menggunakan ELISA. Uji *repeated meassue ANOVA* dilakukan untuk membandingkan beda tiap pengamatan waktu dan *post hoc* dilakukan untuk membandingkan beda antar kelompok terhadap tiap pengamatan waktu.

Hasil penelitian menunjukkan tidak terdapat perbedaan yang signifikan kadar FGF-2 dalam cairan sulkus gingiva pada tiap pengamatan waktu dan antar kelompok.

Kesimpulan penelitian yaitu tidak terdapat pengaruh lama aktivasi *platelet rich plasma* dengan kolagen terhadap kadar *fibroblas growth factor-2* cairan sulkus gingiva pada terapi resesi gingiva.

Kata kunci: *Platelet rich plasma*, kolagen, *fibroblast growth factor-2*, cairan sulkus gingiva

ABSTRACT

Gingival recession is defined as an apical displacement of gingival margins to the cemento-enamel junction which results in root exposure. Thus, root coverage procedures have gained popularity. Platelet rich plasma contains many growth factor, including Fibroblast growth factor-2 (FGF-2), which plays key role in angiogenesis and cell proliferation. Differences of length activation influences number of platelets and concentration of FGF-2. The aim of this study was to determine effect of long activation platelet rich plasma using collagen into level of fibroblast growth factor-2 in gingival crevicular fluid (GCF) on gingival recession treatment.

Eighteen gingival crevicular fluid samples were collected using paper point #30 for 30 seconds. Samples were taken day-0 (baseline) before coronally advanced flap, 5 days and 7 days after coronally advanced flap. Samples were divided into 2 groups, 1st group time activation of PRP-collagen was an hour and 2nd groups time activation was 24 hours. FGF-2 were examined using ELISA. The repeated measure ANOVA test was used to compare the collected data each time of observation. Independent t-test was used to compare collected data between groups. Significant was set at $p < 0,05$.

Result showed no significant differences of FGF-2 in GCF between the two groups and no significant in each time of observation.

The conclusion of this study was there was no effect of long activation platelet rich plasma using collagen into level of fibroblast growth factor-2 in gingival crevicular fluid on gingival recession treatment.

Key words : Platelet rich plasma, Collagen, Fibroblast Growth Factor-2, Gingival crevicular fluid.