

INTISARI

Open Flap Debridement (OFD) merupakan terapi periodontitis kronis dengan poket ≥ 5 mm namun regenerasi dan *new attachment* sulit didapatkan, sehingga *growth factor* dan *host modulation therapy* mulai diteliti dan ditambahkan. *Advanced Platelets Rich Fibrin* (A-PRF) adalah modifikasi PRF dengan jumlah *growth factor* lebih banyak dan neutrophil granulosit lebih merata. *Growth factor* seperti PDGF, IGF-1, VEGF, EGF, dan TGF- β berfungsi meningkatkan proliferasi fibroblast, produksi matriks ekstraselular, membantu proses reepitelisasi, menstimulasi angiogenesis dan membantu migrasi sel endothelial. Gel rosuvastatin 1,2% (RSV) adalah rosuvastatin dalam sediaan gel yang memiliki efek *pleiotropic* sehingga dapat memodifikasi respon *host* untuk meningkatkan jumlah BMSCs, BMP-2, OPG, ALP, RANKL, dan osteoblast sehingga mendukung proses regenerasi jaringan lunak dan jaringan keras periodontal. Penelitian ini bertujuan untuk mengetahui pengaruh aplikasi A-PRF disertai penambahan gel rosuvastatin 1,2% pada perawatan OFD dikaji dari parameter *probing depth* (PD), *relative attachment loss* (RAL), dan tinggi tulang alveolar.

Sebanyak 24 poket periodontal 5-7mm, dibagi menjadi dua kelompok: OFD+A-PRF+RSV dan OFD+PRF+RSV masing-masing 12 titik poket. Evaluasi klinis dilakukan pada *baseline*, hari ke-30, dan 90 untuk PD dan RAL serta *baseline* dan hari ke-90 untuk tinggi tulang alveolar. Data reduksi PD dan RAL dianalisis dengan uji non parametrik *Mann Withney* sedangkan tinggi tulang alveolar dengan uji parametrik *Independent T Test*.

Penurunan nilai PD dan RAL serta kenaikan tinggi tulang alveolar pada OFD+A-PRF+RSV signifikan lebih baik dibanding OFD+PRF+RSV. Dapat disimpulkan ada pengaruh aplikasi *advanced platelets rich fibrin* ditambah gel rosuvastatin 1,2% pada perawatan *open flap debridement*.

Kata Kunci : Periodontitis kronis, Poket periodontal, *Open flap debridement*, *Advanced platelet rich fibrin*, Rosuvastatin

ABSTRACT

Open flap debridement (OFD) is an invasive therapy for chronic periodontitis with 5mm pocket depth or more, but regeneration and new attachment is hard to achieve with this therapy. Periodontist start to add growth factor and local delivery drug as host modulation therapy in OFD. Advanced platelet rich fibrin (A-PRF) is a 2nd blood derivate growth factor which contain more growth factor than PRF. Growth factor such as PDGF, IGF-1, VEGF, EGF, and TGF- β play roll in promote fibroblast proliferation, reepithelization, produce extracellular matrix, and endothelial cell migration. Rosuvastatin gel 1.2% (RSV) is a local delivery drug which has pleiotropic effect that can modified host response to promote BMSCs, BMP-2, OPG, ALP, RANKL, and osteoblast so that regeneration in soft and hard tissue of periodontal can be achieved. This study aims to determine the effect of application A-PRF plus RSV in OFD therapy seen with parameters probing depth (PD), relative attachment loss (RAL), and alveolar bone height.

Twenty-four periodontal pocket with 5-7mm pocket depth were divided into 2 groups which contain 12 pocket each, OFD+A-PRF+RSV for group 1 and OFD+PRF+RSV for group 2. Clinical evaluation was carried out on baseline, day-30, and -90 for PD and RAL, while alveolar bone height on baseline and day -90. Reduction data of PD and RAL were analyzed with non-parametric test Mann Withney while reduction of alveolar bone height analyzed with parametric Independent T test.

Group 1 has a better result in reducing PD and RAL also adding alveolar bone height that statistically significant compare to group 2. The conclusion is there was an effect of application of advanced platelet rich fibrin plus rosuvastatin gel 1.2% in open flap debridement therapy.

Keyword: Chronic periodontitis, Periodontal pocket, Open flap debridement, Advanced platelet rich fibrin, Rosuvastatin