

## INTISARI

Poket infraboni memerlukan terapi *open flap debridement* dengan penambahan bahan agar regenerasi jaringan lebih baik. Kitosan, dari deasetilasi kitin hewan krustasea, merupakan biomaterial yang dapat digunakan untuk regenerasi tulang dengan membentuk *scaffold*. *Scaffold* dari bahan tunggal masih belum optimal. *Ozonated olive oil* yang ditambahkan ke bahan perancah tulang menstimulasi *growth factor* sehingga meningkatkan aktivitas osteoblas yang menyebabkan peningkatan penyembuhan jaringan dan kekuatan *scaffold*. Tujuan penelitian ini adalah mengkaji efektivitas penambahan *ozonated olive oil*-kitosan terhadap regenerasi periodontal pada perawatan poket infraboni dengan *open flap debridement* ditinjau dari *probing depth*, *relative attachment loss*, dan tinggi tulang alveolar.

Sampel penelitian di ambil dari 30 titik poket infraboni yang dibagi menjadi dua kelompok, 15 dirawat dengan kitosan dan kelompok lain dirawat dengan *ozonated olive oil*-kitosan yang sebelumnya dilakukan *scaling* dan *root planing*, fiksasi gigi yang goyah, serta mencapai plak indeks O'Leary  $\leq 10\%$ , kemudian dilakukan prosedur bedah flap. Pengambilan data dilakukan sebelum bedah flap (*baseline*) dan saat kontrol bulan ke-1 dan ke-3. Analisa data *probing depth* dan *relative attachment loss* menggunakan *Repeated Anova* sedangkan tinggi tulang alveolar dianalisa menggunakan *Independent t-test*.

Hasil penelitian menunjukkan penurunan *probing depth* dan *relative attachment loss* yang lebih besar pada kelompok *ozonated olive oil*-kitosan dari *baseline* ke bulan ke-1 serta lebih meningkatkan tinggi tulang alveolar pada bulan ke-3 dibandingkan kelompok kitosan saja. Kesimpulan penelitian ini adalah penambahan *ozonated olive oil*-kitosan pada *open flap debridement* lebih efektif dalam menurunkan *probing depth*, *relative attachment loss*, dan meningkatkan tinggi tulang alveolar dibandingkan kitosan saja.

Kata kunci: Poket infraboni, *Open Flap Debridement*, kitosan, *ozonated olive oil*

## ***ABSTRACT***

Infrabony pocket therapy with open flap debridement needed material to be better in tissue regeneration but bone graft has limitations, now natural materials was developed for tissue regeneration because its simple and safety. Chitosan, from deacetylation of chitin crustaceans, is a biomaterial can be used for bone regeneration by forming scaffolds. Ozonated olive oil added to scaffold material stimulates growth factors that improve tissue healing and strength of scaffold. The purpose of this study is to examine the effectiveness of ozonated olive oil-chitosan to periodontal regeneration in the infrabony pockets treatment with open flap debridement (terms of probing depth, relative attachment loss, and alveolar bone height).

The objectives of this study were to see the difference outcome of infrabony pocket therapy between chitosan and chitosan with the addition of ozonated olive oil, evaluation on pocket depth (PD), relative attachment loss (RAL), and alveolar bone height. Samples were collected from thirty infrabony pocket points which divided into two groups. Fifteen samples which were treated with chitosan and other group with ozonated olive oil+chitosan, were previously performed with scaling root planing, mobile teeth fixation, plaque index OLeary less or same with 10%, then performed flap surgery procedures. Data collection was performed before the flap surgery (baseline) and after procedures 1 and 3 months. Probing depth and relative attachment loss analyzed with Repeated Anova and alveolar bone height analyzed with Independent t-test.

The result showed decreasing PD and RAL in 1 month and increasing alveolar bone height in 3 months after procedures in ozonated olive oil+chitosan group better than chitosan group. It could be concluded that the open flap debridement therapy with chitosan+ ozonated olive oil more effective than chitosan.

**Keywords:** Infrabony pocket, Open flap debridement, chitosan, ozonated olive oil