Evaluasi Radiografis Regenerasi Kerusakan Tulang Alveolar Horizontal Menggunakan Kombinasi Kitosan Arginylglycylaspartic Acid dan Periodontal Ligament Cell Sheet (Studi ex vivo pada Macaca nemestrina) = Radiographic Evaluation of Horizontal Alveolar Bone Defect Regeneration Using Combination of Chitosan Arginylglycylaspartic Acid with Periodontal Ligament Cell Sheet (Study ex vivo on Macaca nemestrina).

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Abstrak

ABSTRAK
Latar belakang: Terapi regeneratif pada kerusakan tulang vertikal telah memberikan hasil yang memuaskan, tetapi kerusakan horizontal masih menjadi tantangan bagi klinisi.
Tujuan Penelitian: Mengevaluasi penggunaan kitosan, kitosan RGD, dan kombinasi PDL cell sheet terhadap peningkatan densitas radiografis tulang alveolar dengan kerusakan tulang horizontal
Metode dan Bahan: Total sampel berjumlah 16 yang dibagi menjadi empat kelompok perlakuan, yaitu kitosan, kitosan RGD, kitosan PDL cell sheet, dan kitosan RGD PDL cell sheet. Evaluasi radiografis dilakukan empat minggu setelah bedah regeneratif.
Hasil: Hasil substraksi densitas radiograf tulang alveolar kelompok kitosan 7,31 10,27; kitosan RGD 16,70 13,17; kitosan PDL cell sheet 19,34 21,46; kitosan RGD PDL cell sheet 21,97 7,85.
Kesimpulan: Penggunaan kitosan, kitosan RGD, kitosan dan PDL cell sheet, serta kitosan RGD dan PDL cell sheet memiliki potensi meningkatkan densitas tulang alveolar.
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ABSTRACT
Background: Regenerative therapy in vertical bone defect has been shown to be satisfactory, but horizontal defect remains a challenge for clinicians.Objective Evaluate the use of chitosan, chitosan RGD, and combination of PDL cell sheet to increase radiographic density of alveolar bone with horizontal bone defect.
Method and Material: Total samples were 16 and divided into four treatment groups Chitosan, Chitosan RGD, Chitosan PDL cell sheet, and Chitosan RGD PDL cell sheet. Radiographic evaluation was performed four weeks after regenerative surgery.
Result: Alveolar bone radiograph density substraction in chitosan group is 7,31 10,27 chitosan RGD group is 16,70 13,17 chitosan PDL cell sheet group is 19,34 21,46 chitosan RGD PDL cell sheet group is 21,97 7,85.
Conclusions: Chitosan, chitosan RGD, chitosan PDL cell sheet, and chitosan RGD PDL cell sheet application have potential to increase the bone density.