

## DAFTAR PUSTAKA

- Abreu, F. A. M., Ferreira, C. L., Silva, G. A. B., Paulo, C.O., Miziara, M. N., Silveira, F. F., dan Alves, J. B., (2013) Effect of PDGF-BB, IGF-I Growth Factors and their Combination Carried by Liposomes in Tooth Socket Healing. *Brazilian Dental Journal.* 24(4): 299–307.
- Chandran, P. dan Sidavas, A., (2013) Platelet-Rich Fibrin: Its Role in Periodontal Regeneration. *Saudi Journal for Dental Research.* 5(2): 117-122.
- Chang, J., Blanchard, S. B., Windsor, L. J., Gregory, R. L., dan Hamada, Y., (2019) Levels of Growth Factors from Platelet-Rich Fibrin from Chronic Periodontitis Versus Periodontally Healthy Subjects: A Pilot Study. *Clinical Oral Investigations.* 24(2): 823-832.
- Choukroun, J. dan Miron, R.J., (2017) Platelet Rich Fibrin: A Second-Generation Platelet Concentrate. dalam: Miron, R.J. dan Choukroun, J., eds. *Platelet Rich Fibrin in Regenerative Dentistry: Biological Background and Clinical Indications.* 1<sup>st</sup> ed. Hoboken: John Wiley & Sons. pp. 8.
- Civinini, R., Macera, A., Nistri, L., Redl, B., dan Innocenti M., (2011) The Use of Autologous Blood-Derived Growth Factors. *Clinical Cases in Mineral and Bone Metabolism.* 8(1): 25-31.
- Dabra, S., Chhina, K., Soni, N., dan Bhatnagar, R., (2012) Tissue Engineering in Periodontal Regeneration: A Brief Review. *Dental Research Journal.* 9(6): 671-680.
- Duruel, T., Çakmak, A. S., Akman, A., Nohutcu, R. M., dan Gümüşderelioglu, M., (2017) Sequential IGF-1 and BMP-6 Releasing Chitosan/Alginate/PLGA Hybrid Scaffolds for Periodontal Regeneration. *International Journal of Biological Macromolecules.* 104: 232–241.
- Ehrenfest, D.M.D., Bielecki, T., Mishra, A., Borzini, P., Inchingolo, F., Sammartino, G., Rasmusson, L., dan Everts, P.A., (2012) In Search of a Consensus Terminology in the Field of Platelet Concentrates for Surgical Use: Platelet-Rich Plasma (PRP), Platelet-Rich Fibrin (PRF), Fibrin Gel Polymerization and Leukocytes. *Current Pharmaceutical Biotechnology.* 13(7): 1131-1137.



- Fang, Y., Wang, L.P., Du, F.L., Liu, W.J., dan Ren, G.L., (2012) Effects of Insulin-Like Growth Factor I on Alveolar Bone Remodeling in Diabetic Rats. *Journal of Periodontal Research.* 48(2): 144–150.
- Fujioka-Kobayashi, M. dan Miron, R.J., (2017) Biological Components of Platelet Rich Fibrin: Growth Factor Release and Cellular Activity. dalam: Miron, R.J. dan Choukroun, J., eds. *Platelet Rich Fibrin in Regenerative Dentistry: Biological Background and Clinical Indications.* 1<sup>st</sup> ed. Hoboken: John Wiley & Sons. pp. 16, 19-23.
- Fujioka-Kobayashi, M., Miron, R. J., Hernandez, M., Kandalam, U., Zhang, Y., dan Choukroun, J., (2017) Optimized Platelet-Rich Fibrin with the Low-Speed Concept: Growth Factor Release, Biocompatibility, and Cellular Response. *Journal of Periodontology.* 88(1): 112–121.
- Hollinger, J. O., Srinivasan, A., Alvarez, P., Hsu, E., McBride, S., Eppell, S., Baskin, J., Waters, H., dan Gruber, R., (2011) Bone Tissue Engineering: Growth Factors and Cytokines. dalam: Ducheyne, P., ed. *Comprehensive Biomaterials II.* Waltham: Elsevier. pp. 281–301.
- Iwata, T., Yamato, M., Ishikawa, I., Ando, T., dan Okano, T., (2014) Tissue Engineering in Periodontal Tissue. *Anatomical Record.* 297(1): 16-25.
- Kementerian Kesehatan RI, (2019) *InfoDatin Pusat Data dan Informasi Kementerian Kesehatan RI.* Jakarta: Pusat Data dan Informasi Kementerian Kesehatan RI. pp. 1-2.
- Kementerian Kesehatan RI, (2019) *Laporan Nasional Riskesdas 2018.* Jakarta: Lembaga Penerbit Badan Penelitian dan Pengembangan Kesehatan. pp. 204.
- Kobayashi, E., Flückiger, L., Fujioka-Kobayashi, M., Sawada, K., Sculean, A., Schaller, B., dan Miron, R.J., (2016) Comparative Release of Growth Factors from PRP, PRF, and Advanced-PRF. *Clinical Oral Investigations.* 20(9): 2353-2360.
- Koffi, K. A., Doublier, S., Ricort, J.-M., Babajko, S., Nassif, A., dan Isaac, J., (2021) The Role of GH/IGF Axis in Dento-Alveolar Complex from Development to Aging and Therapeutics: A Narrative Review. *Cells.* 10(5): 1-29.



- Lang, N.P. dan Lindhe, J., (2015) *Clinical Periodontology and Implant Dentistry*, 6<sup>th</sup> ed. West Sussex: John Wiley & Sons. pp. 3, 26, 29.
- Larjava, H., Yang, Y., Putnins, E., Heino, J., dan Häkkinen, L., (2013) Biological Agents and Cell Therapies in Periodontal Regeneration. dalam: Larjava, H., ed. *Oral Wound Healing: Cell Biology and Clinical Management*. West Sussex: John Wiley & Sons. pp. 261–264.
- Miron, R. J., Fujioka-Kobayashi, M., Hernandez, M., Kandalam, U., Zhang, Y., Ghanaati, S., dan Choukroun, J., (2017) Injectable Platelet Rich Fibrin (I-PRF): Opportunities in Regenerative Dentistry? *Clinical Oral Investigations*. 21(8): 2619–2627.
- Molina, P.E., (2013) *Endocrine Physiology*, 4<sup>th</sup> ed. New York: McGraw-Hill Companies. pp. 64-65.
- Newman, M.G., Takei, H.H., Klokkevold, P.R., dan Carranza, F.A., (2019) *Newman and Carranza's Clinical Periodontology*. 13<sup>th</sup> ed. Philadelphia: Elsevier. pp. 19, 30-33, 36-38, 41-42, 45, 62-68, 89-90, 138-139, 642-650, 664-675.
- Nokhbehsaim, M., Winter, J., Rath, B., Jäger, A., Jepsen, S., dan Deschner, J., (2011) Effects of Enamel Matrix Derivative on Periodontal Wound Healing in an Inflammatory Environment In Vitro. *Journal of Clinical Periodontology*. 38(5): 479–490.
- Ochiai, H., Okada, S., Saito, A., Hoshi, K., Yamashita, H., Takato, T., dan Azuma, T., (2012) Inhibition of Insulin-like Growth Factor-1 (IGF-1) Expression by Prolonged Transforming Growth Factor-β1 (TGF-β1) Administration Suppresses Osteoblast Differentiation. *Journal of Biological Chemistry*. 287(27): 22654–22661.
- Panda, S., Jayakumar, N.D., Sankari, M., Varghese, S.S., dan Kumar, D.S., (2014) Platelet Rich Fibrin and Xenograft in Treatment of Intrabony Defect. *Contemporary Clinical Dentistry*. 5(4): 550-554.
- Peeran, S.W. dan Ramalingam, K., (2021) Bone Loss and Patterns of Bone Destruction. Dalam: Peeran, S.W. dan Ramalingam, K., ed. *Essentials of*



*Periodontics & Oral Implantology.* 1<sup>st</sup> ed. Tamil Nadu: Saranaj JPS Publication. pp. 2, 6-10.

Peng, J.X., Guan, X.Y., Li, G.H., Zhong, J.L., Song, J.K., Xiao, L.L., Jin, S.H., dan Liu, J.G., (2021) Recombinant Human Insulin-Like Growth Factor-1 Promotes Osteoclast Formation and Accelerates Orthodontic Tooth Movement in Rats. *Journal of Applied Oral Science.* 29(e20200791): 1-7.

Perry, D.A., Beemsterboer, P.L., dan Essex, G., (2014) *Periodontology for the Dental Hygienist.* 4<sup>th</sup> ed. St. Louis: Elsevier. pp. 70-71, 88-90.

Pumklin, J., Manokawinchoke, J., Bhalang, K., dan Pavasant, P., (2015) Intermittent Compressive Stress Enhanced Insulin-Like Growth Factor-1 Expression in Human Periodontal Ligament Cells. *International Journal of Cell Biology.* 2015(369874): 1-9.

Qiao, J., An, N., dan Ouyang, X., (2017) Quantification of Growth Factors in Different Platelet Concentrates. *Platelets.* 28(8): 774–778.

Rao, S.G., Bhat, P., Nagesh, K.S., Rao, G.H.R., Mirle, B., Kharbhari, L., dan Gangaprasad, B., (2013) Bone Regeneration in Extraction Sockets with Autologous Platelet Rich Fibrin Gel. *J. Maxillofac. Oral Surg.* 12(1): 11-16.

Reckenbeil, J., Kraus, D., Stark, H., Rath-Deschner, B., Jäger, A., Wenghoefer, M., Winter, J., dan Götz, W., (2017) Insulin-Like Growth Factor 1 (IGF1) Affects Proliferation and Differentiation and Wound Healing Processes in an Inflammatory Environment with P38 Controlling Early Osteoblast Differentiation in Periodontal Ligament Cells. *Archives of Oral Biology.* 73: 142–150.

Reddy, S., (2011) *Essentials of Clinical Periodontology and Periodontics.* 3<sup>rd</sup> ed. New Delhi: Jaypee Brothers Medical Publishers. pp. 20, 24, 25.

Sadeghi, R., Mahdavi, P., Lee, W. S., Quan, B., Sone, E., Ganss, B., dan McCulloch, C. A., (2018) A Novel, Cell-Permeable, Collagen-Based Membrane Promotes Fibroblast Migration. *Journal of Periodontal Research.* 53(5): 727-735.



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**Peran Kandungan Insulin-like Growth Factor-1 pada Platelet-Rich Fibrin terhadap Penyembuhan Jaringan Periodontal**

CINDY YOVITA CHANDRA, drg. Hendrawati, M. Kes; drg. Nur Rahman Ahmad Seno Aji, MDSc., Sp.Perio

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- Stavropoulos, A. dan Wikesjö, U. M. E., (2012) Growth and Differentiation Factors for Periodontal Regeneration: A Review on Factors with Clinical Testing. *Journal of Periodontal Research.* 47(5): 545–553.
- Suwondo, C.I., Herawati, D., dan Sudibyo, (2018) Effect of Advanced Platelet-Rich Fibrin Applications on Periodontal Regeneration in Infrabony Pocket Treatment. *Majalah Kedokteran Gigi Indonesia.* 4(3): 154-160.
- Wang, Z., Mudalal, M., Sun, Y., Liu, Y., Wang, J., Wang, Y., Sun, X., dan Zhou, Y., (2020) The Effects of Leukocyte-Platelet Rich Fibrin (L-PRF) on Suppression of the Expressions of the Pro-Inflammatory Cytokines, and Proliferation of Schwann Cell, and Neurotrophic Factors. *Scientific Reports.* 10(2421): 1-10.
- Yu, Y., Mu, J., Fan, Z., Lei, G., Yan, M., Wang, S., Tang, C., Wang, Z., Yu, J., dan Zhang, G., (2012) Insulin-like Growth Factor 1 Enhances the Proliferation and Osteogenic Differentiation of Human Periodontal Ligament Stem Cells via ERK and JNK MAPK Pathways. *Histochemistry and Cell Biology.* 137(4): 513–525.
- Zumstein, M.A., Berger, S., Schober, M., Boileau, P., Nyffeler, R.W., Horn, M., dan Dahinden, C.A., (2012) Leukocyte- and Platelet-Rich Fibrin (L-PRF) for Long-Term Delivery of Growth Factor in Rotator Cuff Repair: Review, Preliminary Results and Future Directions. *Current Pharmaceutical Biotechnology.* 13(7): 1196–1206.