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Abstract

The role of L-PRF and derivatives in maxillary reconstructive surgeries for dental implants

Hamilton Navarro Jr

University of Cidade de Sao Paulo - UNICID, Brazil

Abstract:

One of implantology's biggest challenges is the tissue maintenance, reparation and formation aiming the success and longevity of clinical cases. Among several tissue and bone grafts regeneration techniques described in literature, the use of L-PRF membranes has gotten notoriety in implantology. Our group in a recent research studied the expression of vascular endothelial growth factor (VEGF) during the healing process of rats' subcutaneous tissue with or without the presence of L-PRF membrane. It has been selected 12 rats (Rattus Norvegicus Albinus) and divided in 3 groups according to sacrifice time - 5/15/30 days (G5/G15/G30), considering that one rat's blood of each group has been collected to produce L-PRF membranes according to Choukroun's protocol 2. It has been made two bone defects, not critical, in both sides of rat's skullcap median sagittal suture, using a 2mm thickness drill trephine, after that the defects were filled in the right side with L-PRF and in the left side with clot. In times 5/15/30 days after the surgical procedures and euthanasia, the fragments were prepared to immuno-histochemical analyses. The VEGF expression was analyzed by assessment of cellular positive, scoring between 0 and 3 graduations, meaning 0 less than 10% of presence, 1 between 10 and 25% and 3 above 50% of positivity. The VEGF had been present in the initial phase and during all the tissue repair process in both groups. In five days, there weren't any VEGF's immunotaining difference between both groups. The use of L-PRF membrane reduces the VEGF's expression in 15 and 30 days groups when they are compared to control group. In the line of our work, at the presentation, the blood concentrate preparation protocols will be presented along with clinical cases performed by the author.

Biography:

Hamilton Navarro Jr graduated in Dentistry in 2001 at the University of Guarulhos, Brazil. He was an assistant at the Oral and Maxilo¬facial Surgery service at the University of Sao Paulo, School of Medicine. He is specialized in Dental Prosthesis at the University of Sao Paulo, School of Dentistry, in Dental Implant at the Mozarteum University of Sao Paulo and in Oral and Maxillofacial Surgery at Associa¬cao Brasileira de Odontologia de Sao Paulo, Brazil. He holds a Masters in Implantology

from Faculty of Sao Leopoldo Mandic, Campinas, Brazil, obtained in 2016. In 2018 he attended a fellow course in Oral and Maxillofacial Surgery and Advanced Implantology, at University of Gothenburg, Sweden. He is a professor at postgraduate courses at University of Cidade de Sao Paulo (UNICID), teaching Implantology and Oral and Maxillofacial Surgery. He also lectures as a visiting professor in Oral and Maxillofacial Surgery and Traumatology, Implant Dentistry, and Dental Prosthesis at renowned educational institutions. He has worked as a clinical director and principal surgeon for 11 years at Oral Rehabilitation Institute, Sao Paulo, Brazil, and he has also had his private practice for 18 years. Hamilton works also as traumatology surgeon in hospitals in Sao Paulo.

Publication of speakers:

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2. Navarro-Junior H, Dohan DM, et al. Platelet-rich fibrin (PRF): a second-generation platelet concentrate. Part I: technological concepts and evolution. Oral Surg Oral Med Oral Pathol Oral Radiol Endod. 2006 Mar;101(3):e37-44.
3. Navarro-Junior H, Dohan DM et al. Platelet-rich fibrin (PRF): a second-generation platelet concentrate. Part II: platelet-related biologic features. Oral Surg Oral Med Oral Pathol Oral Radiol Endod. 2006 Mar;101(3):e45-50.
4. 4-Dohan DM, Choukroun J, Diss A, Dohan SL, Dohan AJ, Mouhyi J, et al. Platelet-rich fibrin (PRF): a second-generation platelet concentrate. Part III: leucocyte activation: a new feature for platelet concentrates? Oral Surg Oral Med Oral Pathol Oral Radiol Endod. 2006 Mar;101(3):e51-5.

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