XVIIth International Conference
THE TEACHER OF THE FUTURE
May 24-27 2018 Budva, Montenegro

PHO Dental Clinical Centre Sveti Pantelejmon
University "Ss Cyril and Methodius" Faculty of Dentistry, Skopje
"Goce Delcev" University
Faculty of medical science, Stip
R. Macedonia

ALVEOLAR RIDGE PRESERVATION USING PLATELET RICH FIBRIN AND BONE GRAFT

Biljana Evrosimovska, Daniela Veleska-Stefkovska, Cena Dimova

Introduction

- Platelet-rich fibrin (PRF) described by Choukroun et al. (Choukroun et al. 2000) is a second-generation platelet concentrate which allows one to obtain fibrin membranes enriched with platelets and growth factors, after starting from an anticoagulant-free blood harvest without any artificial biochemical modification.
- PRF has a proliferative effect on different types of cells: dental pulp cells, (Huang et al. 2010) human osteoblasts, (Dohan et al. 2009) human gingival and periodontal ligament fibroblasts, (Chang et al. 2011) dermal prekeratinocytes, and preadipcytes. (Dohan et al. 2009; Wu et al. 2012)
- PRF could serve as a resorbable membrane for guided bone regen-eration (Chang et al. 2011), preventing the migration of non-desirable cells into bone defect and providing a space that allows the immigration of osteogenic and angiogenic cells and permits the underlying blood clot to mineralize. (Molly et al. 2006.)

Case report

Figure 1.
Orthopantomogram X-Ray shows bone loss around the second upper right molar

Figure 2.
Preoperative view with expose of bone defect around tooth 17

Figure 5.
Application of "sticky" bone on surgical side for horizontal bone augmentation and guided bone regeneration (GBR)

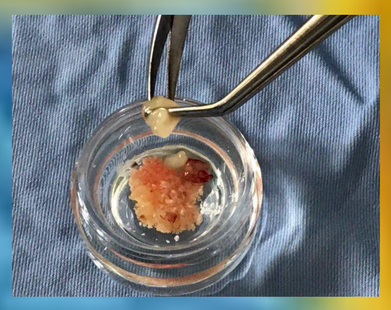

Figure 4.
Preparation of sticky bone

Figure 3.
Layers of centrifuged blood samples, tube with three fractions: a) acellular plasma at the top, b) fibrin clot in the middle of the tube, c) red corpuscles at the bottom.

Figure 6.
Surgical wound after removed sutures

Figure 7.
X-Ray taken after 6 mounts

Figure 8.
New prosthetic restoration.

Conclusion

Preparation of PRF is a simplified and efficient technique, with centrifugation in a single step, free and openly accessible for all clinicians. (Simonpieri et al. 2012; Dohan et al. 2007). It is obtained by autologous blood sample. (Choukrounet al. 2006)