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Abstract

Evaluating the adhesion of human gingival fibroblasts and MG-63 osteoblast-like cells to Membranes, with and without activated Platelet-rich plasma

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Abstract:
objectives: Regeneration of periodontal tissues is affected by the biological and morphological characteristics of the membrane surface. The current study evaluated the adhesion of human gingival fibroblasts (HGF) and MG-63 osteoblast-like cells to Membranes, with and without activated PRP.

Materials and Methods: the line of human gingival fibroblast cells and MG-63 osteoblast-like cells were first prepared and cultured on three types of membranes, including Jason, CenoMembrane and TXT-200 in three groups (FBS 10%, FBS 0.5% and activated PRP). Cell viability was investigated by MTT assay and electron microscopy (SEM) was used to evaluate the cell morphology and adhesion on these membranes after 24 and 72 hours. Two-way ANOVA was carried out at the significance level of 0.05.

Results: The highest adhesion in the 10% FBS group for HGF and The MG-63 osteoblast-like cells was observed to the Jason membrane during 24h and 72h ($P<0.05$). However, there were no significant differences among the three membranes in PRP and FBS groups for HGF during 24h and for MG-63 cells during 72h. ($P> 0.05$).

Conclusion: Activated PRP had a positive effect on the viability and adhesion of both human gingival fibroblasts and osteoblast-like cells as compared to the FBS 0.5% group, but these effects were not as 10% FBS group. The results also showed that Jason membrane had the highest amount of cell viability and adhesion.

Biography:
Dr. surena vahabi, received his Doctor of Dental Surgery degree in 1996. After graduation, while serving in his obligatory national services, applied for post graduate periodontics and implant courses in 1999 and attended the first grade in the periodontics residency exam among all candidates all over IRAN. He has been nominated all his 3 years over his post graduate studentship period. Following the graduation, Dr. vahabi got his board certified and from 1999 to 2013, held an appointment as an assistant professor at some universities where he has trained around 750 students who wanted to be a dentist and also more than 15 dentists who would like to specialize in Periodontics and advanced Implant Dentistry. He is quite active in CMEs (Continuing Medical Education) to update scientific information of dentists and specialists. One of his major roles in university is to design and direct research projects both in basic sciences and clinical studies. He has presented the results of his scientific articles in around 20 countries in 5 continents since 2006. Offering the most advanced technology in Periodontics and Dental Implantology, Regenerative Periodontal Procedures and Soft Tissue Grafting are some examples of how we achieve healthy and natural smiles. Dr. Vahabi has many interests ranging from reading and sports to traveling and tourism and he would be honored to share it with you. Many of his patients are his close friends now..

Publication of speakers:

- Surena Vahabi; Effect of phenytoin and age on gingival fibroblast enzymes., 2014 May 31.
- Surena Vahabi; Interleukin-2, -16, and -17 gene polymorphisms in Iranian patients with chronic periodontitis., 2018 Feb 5.
- Surena Vahabi; Comparison of antimicrobial effect of Ziziphora tenuior, Dracocephalum moldavica, Ferula gummosa, and Prangos ferulacea essential oil with chlorhexidine on Enterococcus faecalis: An in vitro study, 2018 Mar-Apr
- Surena Vahabi; Association of vitamin D binding protein and vitamin D receptor gene polymorphisms in Iranian patients with chronic periodontitis., 2018 Aug 6.
- Surena Vahabi; Correction to: Comparison of the effect of activated or non-activated PRP in various concentrations on osteoblast and fibroblast cell line proliferation.., 2018 Sep.

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