

2nd International Conference on**ADVANCES IN SKIN,****WOUND CARE AND TISSUE SCIENCE**

November 9-10, 2017 | Frankfurt, Germany

PLATELET-RICH PLASMA PARTNERSHIP WITH MESENCHYMAL STEM CELL FOR TISSUE REGENERATION IN ACNE SCAR: A CASE SERIES**Willa Damayanti^a, Yuyun Rindiastuti^b, Nurul F^b, Ainun Julianto^b, and Indah Julianto^{ab}**^aSebelas Maret University, Indonesia^bPT. Dermama Bioteknologi Laboratorium, Indonesia

Acne scar is one of the major complications in acne, numerous treatment options available for acne scarring. Platelet-rich plasma as autologous scaffolding plays a major role in reducing scar formation following regeneration of tissue that guides the regenerating cells to the area of wound healing. PRP also enhance the works of Adipocyte Activated Protein Extract (AAPE) as derived Mesenchymal Stem Cells (MSCs) in scar post acne. Growth Factor effects platelets providing an ideal growth factor delivery system at the site of the scar. Some in vitro studies have shown promising result, with PRP effects in human MSCs that may encourage the clinical application of MSCs along with PRP. In this cases series we evaluated some patients with acne scar, and the methods we used were, first we applied topical anesthesia around the scar for 30-45 minutes before treatment, then we did subcision and injected with PRP. After that, we applied MSCs derived, which is AAPE or Mesenchymal Secretory Vascular derived secretomes, given with topical antioxidant. In 4 weeks follow up, we measured the improvement of acne scar. The acne scar showed improvement with this combination therapy within a month. MSCs activities are regulated by the molecular microenvironment that instructs MSCs to remain quiescent, proliferate, migrate and/or differentiate. The foundation of PRP use is the release of a pool signaling factors that will create cell adhesion and colonization of biomaterial scaffold. Growth factors from PRP such as Platelet derived growth factors (PDGF) and Transforming growth factors (TGF) was 2,5- 6 times higher than in the whole blood. Their acting on "healing cascade" to promote the synthesis of extracellular matrix and collagen. Over all PRP stimulates MSCs proliferation, preserves MSCs multipotency and does not interfere with any lineage differentiation.

Biography

Willa Damayanti graduated as a general practitioner in 2006. After graduation, she worked for Ministry of Health of Republic Indonesia. Since 2015, she is studying dermatovenereology as a resident in Sebelas Maret University of Surakarta. Her current research explore about wound healing. She is also passionate about Stem Cell. Three papers written by her has been published in International and National Congress of Dermatology.

damayantiwilla@yahoo.com

Notes: