conferenceseries.com

J Tissue Sci Eng 2017, 8:5(Suppl)
DOI: 10.4172/2157-7552-C1-043

2nd International Conference on

ADVANCES IN SKIN, WOUND CARE AND TISSUE SCIENCE

November 9-10, 2017 | Frankfurt, Germany

ADULT AND FETAL MESENCHYMAL STEM CELLS (MSCS)-DERIVED SECRETOME FOR TISSUE REGENERATION: CASE SERIES

Wisuda Putra Negara[a], Yuyun Rindiastuti[b], Nurul F[b], Ainun Julianto[b] and **Indah Julianto[ab]**
[a]Sebelas Maret University, Indonesia
[b]PT. Dermama Bioteknologi Laboratorium, Indonesia

The role of Mesenchymal Stem Cells (MSCs)-derived secretome in wound healing and tissue regeneration had been showed through much research. The surgical procedure as a treatment strategy for treating basalioma in older patients usually accompanied with comorbidity factors such as hypertension, diabetes mellitus or other degenerative diseases. Therefore, we used MSCs-derived secretome mixed with topical antioxidant instead of wound closure using Flap or Skin Graft. This combination treatment can also be given to improved wound healing and better aesthetic rejuvenation outcome after surgical procedure on face especially on young age patient. In this case series we reported some patients with basal cel carcinoma with hypertension and diabetes melitus and one patient with nevus pigmentosus on upper lip area overlapped with the vermilion border. We combined extirpation and application of topical MSCs-derived secretome with antioxidant. The MSCs-derived secretome mixed with antioxidant applied on the surface of the wound. Then, the wound closed with sterilized dressing. After 4 weeks of follow up, the wound showed improvement and minimum scar formation. MSCs-derived secretome contained many growth factors such as Hepatocyte Growth Factor (HGF), Keratonocyte Growth Factor (KGF), Platelet Derived Growth Factor (PDGF), Transforming Growth Factor (TGF), and Vascular Endothelial Growth Factor (VEGF). Those growth factors played an important role in wound healing and tissue regeneration. The use of MSCs-derived secretome in mouse model also showed reduced scar formation. Upregulation of IL-10 and HGF by MSCs-derived secretome contributed to reduced fibrosis in wound. The use of MSCs derived secretome had a potential benefit for tissue regeneration and wound healing, therefore also applicable for future treatment strategy.