

Concentrated Growth Factors Preparation (CGFP) is not only as a scaffolding structure for growing keratinocytes, fibroblasts and mesenchymal stem cells, but also a reservoir for monocytes and macrophages for wound healing



Chao Hsing Kao

Dermatologic Clinic, Republic of China

Abstract

The healing of skin wounds requires the tissues surrounding the wounds to initiate internal autologous regeneration. However, wherein the wound area is quite large such as, in large area burns or trauma or the ability to self-repair is insufficient, such as in patients with diabetes, or stasis varicose veins, external assistance would be required. The application of autologous “concentrated growth factors” is one of the external assistances for wound healing. The concentrated growth factors can be used as a gel implant for deep wounds or as a membrane to cover superficial wounds to stimulate skin regeneration. CGF gel is prepared using venous blood, which is centrifuged and clotted via the natural aggregation of blood. Following the gradient centrifugation, the lower one-third part of the gel— “the CGF gel”—is obtained, and clipper is used to compress the gel for obtaining the CGF membrane. The effects of CGF gel or membrane on wound healing, include (1) the fibrin mesh can provide the growing structure for keratinocytes or fibroblasts; (2) upon activation, the platelets and neutrophils of CGF gel can release various growth factors and cytokines that aid in wound healing; (3) monocytes and macrophages can be released from CGF gels and enter wound lesions to help wound healing. It is suggested that CGF gel preparation acts not only as a scaffolding material, as a reservoir to deliver certain growth factors or cytokines, but also as a source of monocytes, and macrophages at the site of application.

Biography

Chao Hsing Kao has completed his PhD. of Medical Science in Kaohsiung University, College of Medicine in 1990. He is the Fellow member in Department of Dermatology, Kaohsiung University Hospital. Currently he is the Chief Doctor of Kao Chao-Hsing Dermatologic Clinic.

Publications:

- Use of concentrate growth factors gel or membrane in chronic wound healing: Description of 18 cases



4th International Conference on Wound Care, Nursing and Tissue Science, Amsterdam, Netherlands, July 15-16, 2020

Citation: : Chao Hsing Kao: *Concentrated Growth Factors Preparation (CGFP) is not only as a scaffolding structure for growing keratinocytes, fibroblasts and mesenchymal stem cells, but also a reservoir for monocytes and macrophages for wound healing*: Wound Care Congress 2020: 4th International Conference on Wound Care, Nursing and Tissue Science, Amsterdam, Netherlands, July 15-16, 2020