



PIGMENTATION

## THE EFFICACY OF AUTOLOGOUS NON-CULTURED EPIDERMAL CELL SUSPENSION COMBINED WITH PLATELET RICH FIBRIN AND PLATELET RICH PLASMA FOR THE TREATMENT OF STABLE VITILIGO

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**Introduction:** Vitiligo is the most common depigmenting dermatosis that characterized histologically by an absence of melanocytes along the epidermal basal layer. Non-cultured epidermal cell suspension (NCECS) is a relatively new cellular grafting technique for vitiligo. There were some studies about this technique with its different modification. Platelet rich fibrin (PRF) is a platelet and immune concentrate gather on a single fibrin membrane which contains all the components of a blood sample which are favorable for healing and immunity. PRF can be used in conjunction with grafts, which has several advantages, such as promoting wound healing, haemostasis, and give better handling properties or scaffolding to graft materials. Platelet rich plasma (PRP) is an autologous preparation of platelets in concentrated plasma with various growth factors which can regulate many processes including cell migration, attachment, proliferation, differentiation and promoting extracellular matrix accumulation. In this study we modified the technique by adding PRP and PRF to the autologous NCECS which never done in other study before.

**Objective:** This study was conducted to determine the efficacy of NCECS combined with PRF and PRP in patients with stable vitiligo.

**Materials and Methods:** Seven patients with stable vitiligo which not responding to topical and phototherapy for more than 12 months were included in the study. The melanocytes were harvested as an autologous melanocyte rich suspension from a donor skin. The non cultured melanocyte then resuspended with PRP and transplanted to recipient area that had been superficially dermabraded and smeared with PRF gel.

**Results:** Of all 7 patients, 2 patients showed excellent pigmentation (90-100%), 1 had good repigmentation (60-89%), 2 had fair repigmentation (25-59%) and 2 patients had a poor response (0-24%)





Conclusions: This non cultured epidermal cell suspension (NCECS) transplantation combined with PRF and PRP is a safe and promising surgical modality for stable vitiligo.

