



DERMATOLOGICAL SURGERY

RANDOMIZED CONTROLLED STUDY ON EFFECTIVENESS OF BLOOD PLASMA AS A MEDIA IN AUTOLOGOUS NON-CULTURED EPIDERMAL CELL SUSPENSION IN THE TREATMENT OF STABLE VITILIGO

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Introduction: Replenishing melanocytes selectively in vitiliginous macules by autologous Non-cultured Epidermal Cell Suspension (NECS) is a promising approach if medical line of management fails. Limitation of this surgery is its expensive reagents. Blood plasma may replace these expensive reagents.

Methodology: Sixty stable vitiligo patients were divided into two groups comprising 30 each. Randomization was done on patients who visit our out patient department by assigning each patient a number. Later by lottery method cases and controls were allotted by allocation ration 1:1 which was concealed and was distributed into 2 groups- Group A and B. Group A patients received melanocytes suspended in their own Blood plasma (BP) and Group B received melanocytes suspended in DMEM (Dulbeco's Modified Eagle's Medium).

Results: Of sixty patients who were enrolled with stable vitiligo macules, thirty patients were placed in Group A & Group B respectively. Excellent repigmentation being seen in 96.7% of patients and poor repigmentation in 3% of patients at the end of 3 months in both the groups. Additionally, 3.3% macules achieved poor repigmentation in both Group A and B. Perigraft halo, hyperpigmentation and hypopigmentation was noted in one patient each in both the groups. Statistical analysis revealed no significant differences between the two groups with respect to the repigmentation achieved or adverse effects observed.

Discussion: Increased viability of melanocytes in blood plasma as shown in present study may possibly be due to growth factors in serum which may enhance the survival and activity of melanocytes .and also enhances the viscosity of cellular suspension. Trypsin inhibitor can be replaced by plasma as plasma contains alpha 1 antitrypsin which irreversibly inactivate the enzymatic action of trypsin.

Conclusion: Noncultured epidermal cell suspension with blood plasma can be a novel





surgical modality. It is safe, simple, cost effective and beneficial for our vitiligo patients.

