DERMATOLOGICAL SURGERY

COMPARATIVE STUDY OF RECIPIENT SITE PREPARATION WITH FRACTIONAL CARBON DIOXIDE LASER VS. DERMABRASION IN VITILIGO SURGERY AND THEIR EFFECT ON RESPONSE TO PHOTOTHERAPY USING TWO DIFFERENT MODALITIES

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Introduction: Accurate preparation of recipient area is a critical step in melanocyte-keratinocyte transplantation procedure(MKTP) for vitiligo. It is an important potential step for adaptation in the quest to achieve better results and lasers potentially offer excellent precision over margin and depth control in achieving that.

Objectives: Comparing efficacy of recipient site preparation by fractional carbon dioxide laser(FCo2) versus dermabrasion(DA) in vitiligo surgery & Effect of post-operative targeted phototherapy versus narrow band UVB therapy.

Materials and methods: A randomized control trial was performed for 60 stable vitiligo patches undergoing MKTP. Recipient site was then prepared with FCO2 / DA.Phototherapy started after 1 month.Clinical photographs taken at 0, 2 ,4 and 6 months. Photographs analysed by two examiners & results calculated with different grades.

Results: Out of 60 patches,30 were prepared with FCo2 & 30 by DA, followed by 30 TPT & 30 NB-UVB, located on the legs (43%), feet/ankles (35%), hands/wrists (11%) and trunk (12%). The treated areas ranged from 21 to 204 cm2 in size. Repigmentation for DA was graded as excellent(11%), very good(11%), good(56%), fair (22%) & poor (16.6%).FCO2 demonstrated excellent (22%), very good (22%), good(28%) & fair(17%), poor (11%).70% & 61% of DA & FCO2 sites demonstrated good colour match, respectively. Better repigmentation was seen with TPT. Statistical analysis was done.

Conclusion: we conclude that FCO2 is faster & simpler method to achieve uniform denudation.DA provided better repigmentation than FCO2. Hyperpigmentation from both techniques faded with time.TPT gives better repigmentation than NBUVB. To our knowledge, this is the first study to compare FCO2 laser & dermabrasion, followed by phototherapy .