

## **Optimising Success in Transplantational Surgery for Vitiligo**

Non-cultured epidermal cell grafting (NCECG) has been used for the treatment of stable vitiligo for more than 3 decades. This technique harvests epidermal cells (including melanocytes) from an autologous split skin graft through the process of trypsin digestion. To maximise success of this technique, certain skill sets or processes need to be mastered. The first step, which involves harvesting the donor split skin graft (SSG), is most important. Skills are required to harvest an ultra-thin SSG; too thick a graft will hamper trypsin digestion and significantly reduces the yield of epidermal cells. The donor to recipient size ratio of 1:5 is generally preferred. Preparation of the recipient site with carbon dioxide laser needs to be optimised. Epidermal ablation till the depth of superficial papillary dermis is required. Too shallow an ablation will result in failure of cell engraftment, while too deep an ablation will result in scarring and collateral thermal damage of the recipient site. Prevention of “run-off” of cell suspension during its application onto recipient vitiligo areas is crucial in ensuring donor cell density. Collagen dressing is helpful for this purpose. Secure secondary dressing also plays an important role. Unlike mini-punch grafting, post-grafting phototherapy is generally not required for NCECG, although it may speed up the rate at which re-pigmentation occurs. This lecture highlights these surgical pearls to ensure success in repigmenting stable vitiligo.