Epidermal Cell Suspension: Achieved by Incubation at Room Temperature

Sir,

Non-cultured autologous melanocyte transplantation is one of the surgical treatments commonly used to treat clinically stable vitiligo patients. It involves a series of steps that has been described in previous publications.[1] One of the steps involves transferring a thin skin shave biopsy sample from the thigh to a petri dish containing 0.2% w/v trypsin solution. This is typically followed by incubation at 37°C using an incubator for 50 min. This is thought to be important for trypsin activation and subsequent separation of the epidermis from the dermis. We conducted an experiment to check the possibility of separating the epidermis from the dermis at room temperature (RT) without the need to use an incubator.

One of the authors (Mohammed I. AlJasser) volunteered to undergo the procedure. Two thin shave biopsy samples were obtained from the right thigh under local anesthesia. Both specimens were transferred to a petri dish containing 0.2% w/v trypsin solution. One specimen was incubated at 37°C using an incubator and the other was incubated at RT in an air-conditioned room. After 50 min, we were able to separate the epidermis from the dermis in both specimens [Figure 1]. The final prepared melanocyte suspension was of similar quality [Figure 2].

This simple experiment shows that the use of an incubator may not be necessary to separate the dermis from epidermis in order to prepare epidermal cell suspension. The concept has been supported by Vielkind and Crawford who demonstrated trypsinization of epithelium under various conditions.[2] This helps to simplify the melanocyte-keratinocyte transplantation procedure; thus, making it simpler by eliminating the use of an incubator. Further studies in a larger sample size are required to validate this finding.

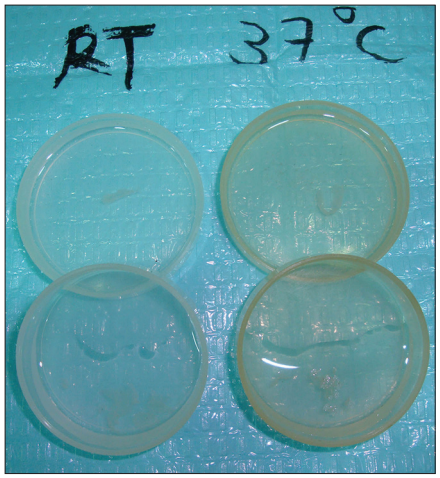

Figure 1: Separation process. The dermis (top) was separated from the epidermis (bottom) in both specimens. RT: Room temperature

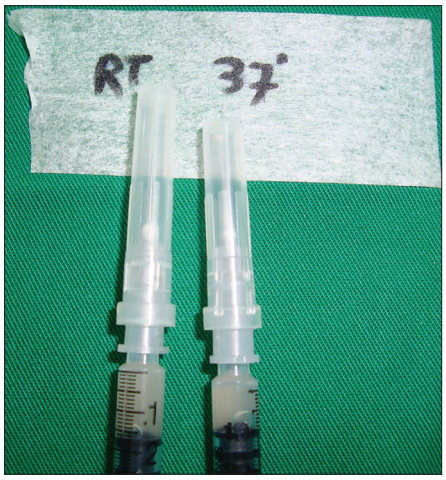

Figure 2: Final prepared melanocyte suspension with a similar quality in both specimens

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DOI: 10.4103/0974-2077.112680