

AUTOGENOUS REVERSED DERMAL GRAFT : A BETTER ALTERNATIVE TO DERMIS GRAFT FOR ORAL SURGERY

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ABSTRACT:

Epithelialization of reversed dermal grafts whether from skin appendages contained inside the graft or from lateral epithelium or both was studied, in addition to the problem of hair regrowth. An experimental study on cheek mucosa of dogs was designed where a thick square plastic frame was made to separate the neighbouring mucosa from the reversed dermal graft to avoid lateral epithelialization. It was concluded that, when there are superficial skin appendages inside the graft, self epithelialization begins earlier than lateral epithelialization. If there are no superficial skin appendages lateral epithelialization alone will cover the graft. No hairs were seen on the grafts due to reversing the graft upside down.

INTRODUCTION and REVIEW OF LITERATURES:

To reconstruct intraoral mucosal defects many methods have been advocated, the commonest of which are the autogenous mucosal, split - thickness skin, dermis graft and reversed dermal grafts. The applications, merits and demerits of mucosal grafts, split - thickness skin grafts and dermal grafts have been studied by many research workers⁽³⁻¹⁶⁾.

This study aims at evaluation of reversed dermal grafts (RDG) as regards the source of epithelialization and hair regrowth. It is agreed that, dermis or reversed dermis are nearly epithelialized by the end of the first month^(5,8,15,16). Some investigators reported that the dermis grafts are epithelialized through the lateral extension of the neighbouring mucosa^(5,15,16), others reported that these grafts can be self epithelialized through skin appendages contained in the graft⁽⁸⁾.

When to expect each type? and which is faster? had no actual answer in the literature. As regards the regrowth of hair in dermis grafts, there was a few reports about the regrowth of a few hairs⁽⁵⁻¹⁶⁾. The epithelializa-

tion of the dermis and reversed dermis grafts is valuable because it shows that the graft is a true dependable one. Since the graft is epithelialized and made mainly of collagen, it is strong and resists infection and its viability can be predictable even in unfavourable conditions^(3,7,9,11).

MATERIALS and METHODS:

Six healthy adult male mongrel dogs, ranging from 20-25 kg in weight, were used in this study. Free autogenous reversed dermal grafts were transplanted to cover square surgically created mucosal defects on cheek mucosa bilaterally.

Dogs were anaesthetized using I.V. injection of 2.5% solution thiopental sodium 30 mg/kg body weight^{***}. After preparation of the lateral part of the thigh and making a split thickness skin flap, the partial thickness dermal graft was obtained using a Braithwaite skin graft knife^{****} with a depth of 0.56 mm thickness and about 2.5 X 2.5 cm to compensate for the immediate graft contraction. Mucosal square defects of about 2 X 2 cm were created on the central areas of the buccal mucosa on both sides, after control of bleeding, the site was ready to receive the graft after adjusting its size.

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*** Nesdonal - Specia - Paris - France. 500 mg dissolved in 20 ml sterile normal saline.

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