

Clinical Application Of Natural Tissue Expansion In The Face

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Citation

A Mahajan, T Chapman. *Clinical Application Of Natural Tissue Expansion In The Face*. The Internet Journal of Plastic Surgery. 2006 Volume 3 Number 1.

Abstract

Full thickness skin grafts always leave a scar irrespective of where they are taken from. If scars are inevitable for other concomitant surgery we should use this to our advantage. Here, we describe the use of an area of naturally expanded skin on the face for full thickness skin grafting.

INTRODUCTION

Full thickness skin grafts form an important part of our reconstructive ladder. They are most commonly used for resurfacing the skin of the face following excision of malignant lesions. Full thickness skin grafts are harvested from various donor areas, the best colour match for such donor skin being obtained by using skin from as near the recipient site as possible. Donor areas for the face that are commonly used are the post auricular, pre auricular and supra clavicular areas. Non hair-bearing skin from a distant area such as the groin may have to be used if a large area needs to be grafted. But the colour match is poor in these cases. We would like to present the use of naturally expanded skin as a full thickness graft, harvested from an area adjacent to the recipient area on the face.

CASE REPORT

Our patient (figure 1) had presented to us with a basal cell carcinoma on the left alar area of the nose and a sebaceous cyst on the left cheek.

Figure 1

Figure 1: Patient with a basal cell carcinoma on the left ala of the nose and sebaceous cyst on left cheek.



The basal cell carcinoma needed to be excised and the area resurfaced with a full thickness skin graft as patient was not keen on any additional scars from local flaps. The patient also wished the sebaceous cyst to be excised on the same occasion. The sebaceous cyst was excised with an overlying ellipse of expanded skin and the resultant defect closed primarily. The expanded skin was then dissected off the sebaceous cyst and used to resurface the defect following the excision of the basal cell carcinoma. The resultant post operative outcome was good at both the donor and recipient areas (figure 2).

Figure 2

Figure 2: Sebaceous cyst was excised and overlying expanded skin used as full thickness skin graft for resurfacing defect following excision of basal cell carcinoma of nose.



DISCUSSION

Harvesting full thickness grafts results in a full thickness wound at the donor area which needs to be closed primarily. Hence, no matter which donor area is selected a scar at the donor site is inevitable. Best colour match seems to be obtained by use of skin immediately adjacent to the recipient area and this can be achieved by using local flaps. Local flaps however also lead to additional scars and may cause distortion of anatomical features such as the nasolabial fold.

The amount of skin harvested is often limited by the amount of skin available at the donor area. To overcome this issue, tissue expanders have been used to expand skin and such expanded full thickness skin grafts have been harvested from the groin to cover large areas on the foot with good results^[1]. Such expansion techniques have also been used for expansion of the pre auricular skin^[2]. Expanded skin has

been used for resurfacing single cosmetic unit, multiple units or even the entire face^[3]. On the other hand, expansion of skin can occur due to inherent causes and our case is an example of the same.

As excision of the sebaceous cyst would have resulted in a scar we used this inevitable scarring to our advantage. Instead of using another site as a donor area we were able to use the expanded skin overlying the sebaceous cyst. Moreover as the skin was expanded, it resulted in a much smaller donor scar. Also the colour match was as close as possible because skin quite near the recipient area was used. Concerns of increased risks of infection may be raised but the micro organisms around an uninfected sebaceous cyst would not be different from normal commensals of sebaceous glands in any other donor area.

Patients do not always have a combination of a skin malignancy and a sebaceous cyst, but when they do, one can always consider using the skin rather than throwing it away and saving the patient an additional scar at a different donor area.

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