

RELAY GRAFTING OF SKIN

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Introduction

The increasing awareness among surgeons of the fact that skin is the best dressing for wounds whether caused by Burns, Mechanical trauma, or any other disease has enhanced the frequency of skin grafting procedures in day to day practice. It is seen that a part of the grafted skin does not take rendering some area raw. This may necessitate a second or even a third session of grafting. Thus, it prolongs the stay of the patient in the hospital which proves to be a drain on an already tottering economy of a poor country like ours. Smahel, J. (1972) propounded the idea of relay grafting between the 5th to 7th day. By lifting a portion of the graft from one place to another, he used to cover rendered raw at some other site due to rejection of graft without jeopardising the healing at the donor site.

In this work it was undertaken to find out the feasibility of the above procedures in our conditions.

Methods and Material

12 cases in which skin grafting had been undertaken to cover wounds produced by burn injury or trauma, whether produced by accidental injury or by the knife of surgeons, were taken up for study. Wounds were inspected in the dressing room under aseptic conditions on 5th post operative day. Areas of failure of graft-take were mapped out.

If the size of such a raw area was found to be more than 1" in either dimension then it was selected for relay grafting. Next step was to select a site for lifting away the required piece of skin graft under sedation and Ethyl chloride freezing by a number 11 B.P. blade. The required piece of graft was cut from the centre leaving behind the margins of the graft at the original site. The detached piece of graft was placed over the secondary site backed by Tulley Gras containing some antibiotic with the due aseptic and antiseptic care. The wounds were again inspected after 5 days and the take of the relay graft and epithelisation of the donor site were taken note of.

Observations and Discussion

Table 1

Showing etiology of cases in which skin grafting was primarily undertaken

Etiology of wounds	No. of cases	Percentage
Burn	6	50.0
Accidental Trauma	2	16.7
Iatrogenic	4	33.3

Out of the 12 cases taken up for study grafting had been done for burn wounds in 6 cases, accidental trauma in 2 cases and surgical wounds produced after excisional surgery in the rest of the cases.

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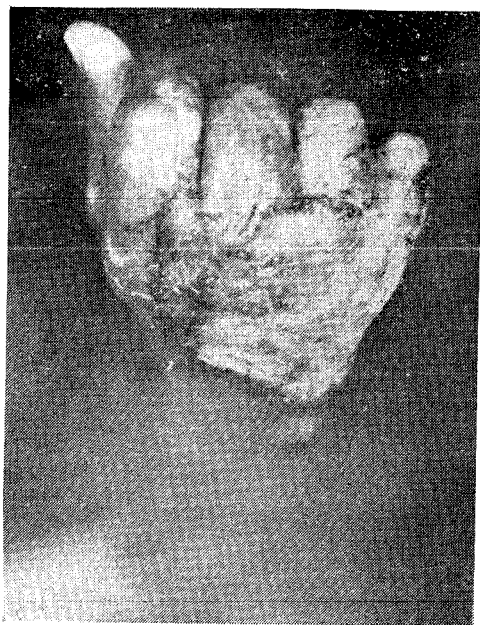


Fig 1. Area on which relay graft has been applied.



Fig 2. Showing complete take of the relay graft.

Table II.
Showing site for Relay Grafting.

Site of Relay grafting procedure	No. of cases	Per-centage
Trunk	3	25.0
Exteemities	9	75.0

The raw area to be covered were over the trunk of the body in 3 ccses and over the limbs in the rest of the cases.

Table III.
Showing the size of the wound in which Relay graft was done.

Size of the wound	No. of cases	Per-centage
Between 1"-1½"	10	83.3
1½"-2½"	2	16.7

The size of the wounds requiring secondary cover was around 1"- to 1 ½" in 10 cases and was between 1½" to 2½" in the rest of the cases. All the patients experienced varying amount of pain during the procedure. Hence, the patients for relay grafting were all adults as it was not expected to get coopeation from children for this relatively painful procedure.

Table IV.
Showing Take of Relay Graft.

Take of Relay Graft	No. of cases	Per-centage
Complete take	7	58.3
Partial take	4	33.3
Rejection	1	8.4

When the wound was again inspected after 5 days of relay grafting, it was found that the relay graft took well in 7 cases and had partial take in 4 cases. Whereas in one case there was complete rejection. In all the cases in which the graft was rejected wholly or partially evidence of infection mostly by *B. Pyocyneas*, *B. Coli*, *Staphylococcus* organisms was detected on swab culture. The epithelization at the donor site was complete in 7-10 days except in one case in which about 2½"×1" of skin was cut out which also healed after 15 days.

From the above observation it would be clear that relay graft can be an useful procedure for secondarily covering smaller areas of graft rejection on the 5th post-operative day provided infection could be reasonably prevented.

Summary

1. 12 cases in which skin grafting had been done for varied reasons were taken up for study of relay grafting.
2. Procedure of the taking and application of the relay graft was followed as layed down by Smahel (1972).
3. Raw areas varying from 1" to 2½" were covered by means of relay graft. There was complete take of the graft in 58.8%, partial take in 33.3% and complete rejection in 8.4% of the cases.

REFERENCES

1. Tanner. J.C. et al. : *Plast. Recon. Surg.*, 34:287, 1964,
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