Original Article

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Negative Pressure Therapy: An All-in-one Dressing for Skin Grafts

Manjunath K.N., Venkatesh M.S.

*Asst. Prof., Dept. of Plastic & Reconstructive Surgery, MSRMC, BENGALURU, Karnataka.
**Prof & HOD, Dept. Of Plastic & Reconstructive Surgery, MSRMC, BENGALURU, Karnataka.

Abstract

Purposes: The success of skin grafting surgery depends on various factors like contouring and pressure dressing, immobilization splints. The purpose of this study is to include all the factors in one single dressing. **Methods:** 20 patients with wounds of difficult geometry studied. Wound etiology varied and patients contraindicated for negative pressure therapy were excluded from study. **Results:** 19 patients had good take of skin grafts and one patient lost all the grafts because of associated co-morbities. **Conclusion:** Negative pressure therapy acts as an effective all-in-one dressing.

Keywords: Negative pressure therapy (NPT); Skin grafts; All-in-one dressing; Portable VAC pump.

Introduction

Skin grafts are simple and effective wound coverage tool. Traditionally skin grafts are maintained with tie over dressings, pressure bandages, splintage and immobilization. In spite of all above measures some time the take of grafts fails. We found that in our experience Limited negative pressure therapy applied over skin grafts serves all the purpose and acts as **all-in-one** dressing.

Corresponding Author: Dr. Manjunath K.N., Asst. Prof., Dept. of Plastic & Reconstructive Surgery, MSRMC, **BENGALURU,** Karnataka. **Prof & HOD, Dept. Of Plastic & Reconstructive Surgery, MSRMC, BENGALURU, Karnataka.

E-mail: drknmanjunath@gmail.com

Patients & Methods

This was a prospective, non comparative study. 20 patients who had wounds with healthy granulation and fit for skin grafting with difficult geometries were selected into the study. Patients known to have proved arterial disease and any other contraindications for negative pressure therapy were excluded from the study. Etiology of the wound was different type and the mode of wound bed preparation varied. Patient was operated once the wound was healthy. Presence of any other comorbities was not taken into consideration as it didn't influence the treatment modality.

Meshed split thickness skin graft was placed onto the wound bed secured with skin staples. A non adherent dressing was placed on top of the grafts. Gas sterilized, locally available foam (irrespective of pore size) was used on the non adherent dressing to conform skin grafts to wound bed. Suction tube was attached to the foam and secured with airtight thin adhesive dressing. The suction tube was then connected to 75-80 mm of Hg negative pressure. Negative pressure was used in continuous mode. Dressing material of any sort was not used and splintage was not used either. First dressing change was done on 5th postoperative day. Any granulation tissue through the mesh opening was scraped and negative pressure was reapplied as before. On 8th postoperative day the negative pressure was removed and assessed. The extent of graft take was considered "good", if patient required no further grafting, where as it was considered