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Introduction

- Primary excision and direct closure of deep/full thickness burn is historically contraindicated due to purported risk of complications.
- Self-adhering mesh (Prineo™ and glue (Dermabond™ combination has been shown to improve suture strength, patient comfort and give antimicrobial effect in elective surgery.

Aim

To demonstrate outcomes from direct closure of a series of burns over the last 18 months, all with the ancillary use of the DERMABOND® PRINEO® Skin Closure System

Method

- Patients with deep narrow burn underwent excision with a margin of 1 -2 mm and closed in 2 layers.
- Use of 3-0 PDS and Monocryl.
- Reinforced with Prineo™ and Dermabond™
- Discharged same / next day.



Fig:1 Method to apply DERMABOND® PRINEO® Skin Closure System for best results with excision and direct closure.



Fig:2 Pre-operative & post-operative

Case 1. 49 year lady with Neurofibromatosis of the donor area with deep burn, no complications



Fig:3 Pre-operative & post-operative

Case 2 . Mixed ethnicity 50 year old lady with radiator burn to back. Discharged next day to be followed up in OPD. No complications



Fig:4 Pre-operative & post-operative

Case 3. 70 year old with contact burn to right buttock. Patient discharged the same day no complication

Result & Discussion

6 Patients

No complications of dehiscence or infection

Healing time of 14 days

Reduced LOS

Reduced dressings

This study reinforces the benefits of using the combination of excision and direct closure with self-adhering mesh and glue

- Avoiding Skin grafting and its complication
- Reduced blood loss as compared to skin grafting
- Aesthetic result
- Shorter length of stay (discharged next day)
- Patient comfort with Prineo dressings
- useful in Neurofibromatosis patient
- No complication of infection or wound dehiscence

DERMABOND® PRINEO® Skin Closure System may be of value in limiting complications and dehiscence

Conclusion

- Excision and direct closure is a safe and effective means to manage selected patients with full thickness burns.
- DERMABOND® PRINEO® Skin Closure System provides the potential for additional benefit by minimizing tension across the wound.
- future studies designed to directly compare direct closure with and without the PRINEO system

Reference

- Bain, C.J. Safety and efficacy of excision and direct closure in acute burns surgery: outcome analysis in a prospective series of 100 patients and a survey of UK burns surgeons' attitudes. Burns, 2014
- Richter, D., A comparison of a new skin closure device and intradermal sutures in the closure of full-thickness surgical incisions. Plastic and reconstructive surgery, 2012