

Foam Dressing Material

.

Abstract

Treatment of Donor-site Wounds Using Foam Dressing Material

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Backgrounds : Donor-site wounds vary in thickness and have a nonadherent layer that provides nontraumatic removal. Foams create a moist environment and provide thermal insulation to the wound. General characteristics of dressings include nonadherents and may repel contaminants, be eased to apply and remove, absorb minimal to heavy amounts of exudate, and may be used under compression. Foam dressings may be used as primary and secondary dressings for wounds with minimal, moderate, or heavy drainage. The purpose of this clinical study was to evaluate the efficacy as a donor-site dressing for thermally injured patients.

Methods : We prospectively have analyzed 80 burned patients requiring split-skin grafts. All grafts were removed using a Zimmer dermatome set. We covered one side of each donor site with a hydrophilic polyurethane foam dressing are half the medifoam® (treatment group) and the other half the vaseline gauze (control group). After hemostasis had been obtained, each donor site was covered with a polyurethane foam dressing; vaseline gauze. At 2 days postoperatively, a dressing were removed (first opening) and then, the donor sites was observed daily until epithelization was complete or until a complication developed that required discontinuance of the study. We examined donor site about epithelization, discharge, infection, scar formation, color, and pain.

Results : Eighty patients had their donor sites heal without severe complication in a mean time (for complete healing) of 10.1 days for polyurethane foam areas, and 13.0 days for fine mesh vaseline gauze dressings. In seven cases, superficial wound infection occurred in the control group. the treatment group had cleaner wound surfaces because of absorption of discharge,

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no hematoma, no infection, and little pain. the Treatment group was healed with even homogeneous, and hypopigmentation compared with control group.

Conclusions : Polyurethane foam dressing improves epidermal wound healing by providing a moist environment for enhanced epidermal cell migration and by shortening the donor site healing time.

Key Words : Foam dressing, Wound healing

I. . 5/1000 ~ 10/1000

1. inch .

50 가 2.

가 . 1) 가

가 가 2)

가 가 3) 가 가

가 4) 가

가 가 3.

가 1) CCTech

, 2) , 3) , 4) Medifoam

Barrier , 5) Medifoam

, 6) , 7) 8)

(1 ~ 13). Foam

3 ~ 60µm pore

가 , 가

50-500µm open cell

(14 ~ 17). (Hydrophilic ,

Polyurethane Foam Dressing, Medifoam)가

가

II.

1. 가

2000 10 2001 9 . 4 × 4 inch,

8 × 8 inch .

가 가

80

4. 가
,
,
,
0.005 inch 0.01 inch 가
3 (0.006
inch) (Depth 1), 2
가 (0.018 inch) (Depth 2),
(0.01 inch) (Depth 3)
, 가
(NSAID)
, 2 Total Colony Count
Medifoam (가 10^5
) 가
5
가
SPSS 10.0
() T-test , $p < 0.05$
2
Medifoam
Medifoam III.
surgical tape 80
16 65 4.3:1
5. 5% 40%
62 , 12 , 4 ,
3 30 2
6. (Depth 1)가 28 ,
(Depth 2)가 25 ,
(Depth 3)가 27 가
1) ()
10.1 , 13.0 ,
2) 가 7.7
3) 가 (Depth 1), 9.4 (Depth 2), 13.2 (Depth 3)
4) 8.9 , 12.6 ,
5) 가 17.6 (Table 1). ,
7. , Depth 1
1 (2)

Medifoam

가
(Table 2, Fig. 1).

7 (8.8%)

77 (96.3%)

, Depth 1

1 (3.6%),

Depth 2

. Depth

2 (8.0%),

26 (92.9%), Depth 2

24 (96.0%),

Depth 3

4 (14.8%)

Depth 3 27 (100.0%)

가

Table 2. Discharge from wound

	Depth 1	Depth 2	Depth 3	Total
	No. of cases(%)			
Tx.	0(0)	0(0)	0(0)	0(0)
Control	26(92.9)	24(96.0)	27(100.0)	77(96.3)
P-value	0.001	0.001	0.001	0.001
Total	26	24	27	77

Table 1. Healing time (mean±SD, days)

	Depth 1	Depth 2	Depth 3	Total
Tx.	7.7±1.9	9.4±2.4	13.2±3.2	10.1±9.4
Control	8.9±4.6	12.6±5.9	17.6±6.1	13.0±6.6
P-value	0.063	0.010	0.001	0.000



Fig. 1. Donor site which covered by Foam dressing (arrow) in 27-year-old patient of flame burn 20%. (A) When uptake was done, (B) POD 4, (C) POD 7, (D) POD 10.

(Table 3). 가
가
75 (93.8%)
, 5 (6.2%) 가
가

(Table 4). 가
IV.

80 가
가
가
pigmenta
tion, pliability, height, vascularity
Medifoam 가 가 Vancouver
Scar Scale (18).
가

Table 3. Infection rate

	Depth 1	Depth 2	Depth 3	Total
	No. of Cases(%)			
Tx.	0(0)	0(0)	0(0)	0(0)
Control	1(3.6%)	2(8.0%)	4(14.8%)	7(8.8%)
P-value	0.326	0.161	0.043	0.007
Total	1	2	4	7

가
Visual Analog Pain Intensity
Scale Wong-Baker FACES Pain Rating
Scale 가

Table 4. Pain compared with two donor site

	Depth 1	Depth 2	Depth 3	Total
	No. of cases(%)			
little pain	27(96.4)	24(96.0)	24(88.9)	75(93.8)
no difference	1(3.6)	1(4.0)	3(11.1)	5(6.2)
Total	28	25	27	80

(93.8%) Medifoam
가
가

가

가

•

가

가

가

가

Medifoam

V.

가

가

, ,

Allevyn , Polyderm , PolyMem

가

. Me-

difoam

G7

(occlusive

dressing)

3

가

Medifoam

가 가

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