Wearable Handmade Wound Dressing: Letter to the Editor

Giyilebilir El Yapımı Yara Pansumanı

Ozan BALIK, MD,[a]
Koray URGU, MD,[a]
Adnan MENDERES, MD,[a]

[a]Department of Plastic Reconstructive and Aesthetic Surgery, Dokuz Eylül University Medical Faculty, İZMİR

Geliş Tarihi/*Received:* 05.12.2007
Kabul Tarihi/*Accepted:* 14.12.2007

Yazışma Adresi/*Correspondence*:
Ozan BALIK, MD,
Dokuz Eylül University Medical Faculty, Department of Plastic Reconstructive and Aesthetic Surgery, İZMİR
ozanbalik@gmail.com

ABSTRACT Until the mid 1900s it was firmly believed that wounds healed more quickly if they were kept dry and left uncovered. After much careful research, we now understand that wounds heal faster and better when a moist environment is maintained. We suggested a new idea for dressing wide wounds. Underpants made from 100% cotton were treated with mupirocin and D-panthenol pomade in a steel container and then they were sterilized. In the last step, patients put on second underpants over the handmade dressing. This is time saving, easy to use make dressing easily and very cost effective. Furthermore, it is more comfortable for the patient and mobilization of the patient is easier than traditional dressing. Application areas may be multiple such as gloves, socks, undershirt, even brassiere for burn wounds, chronic ulcer wounds, crush injury, and skin grafted areas.

Key Words: Surgical wound infection, bandages, occlusive dressings, wound healing

ÖZET 1900'lü yıllara kadar, yaranın açık ve kuru bırakılması hızlıca iyileşmesine neden olduğuna inanılırdı. Birçok dikkatli çalışma sonrasında nemli ortamlarda yaranın daha iyi ve hızlı iyileştiği anlaşılmıştır. Geniş yaraların pansumanı için yeni bir fikir oluşturduk. Mupirosin ve D-pantenol emdirilmiş %100 pamuklu iç çamaşırı steril edildi. Bir sonraki basamak olarak hastaya giydirildi. Bu şekilde zamandan kazınılmakla birlikte, uygulaması kolay bir pansumandır ve son derece maliyeti uygundur. Daha da önemlisi hasta için daha konforludur ve daha önceki pansuman uygulamalarından daha fazla hasta mobilizasyonuna izin vermektedir. Yanık yaralarında, kronik ülserlerde, ezilme yaralanmalarında, deri greftlemesi yapılmış alanlarda kullanılmak üzere; eldiven, çorap, fanila hatta sütyen gibi uygulama alanları çoğaltılabilir.

Anahtar Kelimeler: Cerrahi yaralar, yara pansumanları, pansuman, yara iyileşmesi

Turkiye Klinikleri J Med Sci 2008, 28:107-109

Natural adhesive was used as early as 4000 years ago, as resins were applied to rags for "stickiness". Early Sumerians (around 2100 B.C.) recorded the first use of bandages. They described procedures for the treatment of wounds such as washing, malung plasters, and bandaging.[1]

Until the mid 1900s it was firmly believed that wounds healed more quickly if they were kept dry and left uncovered. After much careful research, we now understand that wounds heal faster and better when a moist environment is maintained. Keeping a moist environment for the wound is one of the major considerations in developing a dressing. The importance of the moist wound environment to wound healing was first outlined by Win-

ter and has been extensively reviewed in other publications.[2]

Wounds that are covered with skin grafts tend to be crack and scale. Especially split thickness grafts require lubrication until sebaceous and sweat secretion returns.[3,4] Topical antibiotics have been used in wound care for many years. A number of reports suggested the effectiveness of topical antibiotics for prevention of infection in surgical and traumatic wounds.[5-7]Occluded wounds were shown to heal with cosmetically superior results, which is likely related to a modification of the inflammatory process and the acceleration of collagen remodeling and wound contraction.[8,9]

In this article, we present a new wound dressing technique for a patient with hidradenitis suppurativa. The patient underwent excision and grafting; then a dressing was made with mupirocine and D-panthenol pomade absorbed gauze. This dressing provides lubrication and a moist environment that a skin graft requires. In addition, this combination prevents the most common bacterial skin infections and increases epithelial growth on grafted area.[10-12] We usually prepare wound materials handmade but this procedure may be difficult and time consuming as was in the presented case.

We suggested a new idea for dressing wide wounds. Underpants made from 100% cotton were treated with mupirocin and D-panthenol pomade in a steel container and then they were sterilized with ethylene oxide. The patient put on this handmade dressing after cleaning with 0.9% NaCl solutions. In the last step, the patient wore

FIGURE 1: Prepared underpant and a patient with hidradenitis suppurativa.

FIGURE 2: Putting on prepared underpant. Inner underpant was treated with antibiotic pomade. Outer underpant was dry for covering.

second underpants on the handmade dressing (Figure 1, 2).

This method is time saving, easy to use and very cost effective. Furthermore, it is more comfortable for the patient and mobilization of the patient is easier than with traditional dressings. Moreover, hospitalization period may be shorter since the patient can prepare wound dressing at home.

In conclusion, we suggest wearable handmade wound dressing materials such as we presented here. Application areas may be multiple such as gloves, stocks, undershirt, even brassiere for burn wounds, chronic ulcer wounds, crush injury, and skin grafted areas.

KAYNAKLAR

1. Majno G. The Healing Hand: Man and Wound in the Ancient World, Harvard University Press, Cambridge, 1975, p. 14.
2. Winter GD. Formation of the scab and the rate of epithelization of superficial wounds in the skin of the young domestic pig. Nature 1962;193:293-4.
3. Rudolph R. Inhibition of myofibroblasts by skin grafts. Plast Reconstr Surg 1979;63:473-80.
4. Rudolph R, Guber S, Suzuki M, Woodward M. The life cycle of the myofibroblast. Surg Gynecol Obstet 1977;145:389-94.
5. Leyden JJ, Kligman AM. Rationale for topical antibiotics. Cutis 1978;22:515-20, 522-8.

6. Moylan JA. The proper use of local antimicrobial agents in wounds. World J Surg 1980;4:433-7.
7. Benjamin JB, Volz RG. Efficacy of a topical antibiotic irrigant in decreasing or eliminating bacterial contamination in surgical wounds. Clin Orthop Relat Res 1984;184:114-7.
8. Thomas S. Wound Management and Dressings. London: The Royal Pharmaceutical Press; 1990. p. 9.
9. Menaker GM. Wound dressings in the new millennium. Curr Probl Dermatol 2001;13:86-9.
10. Yılmaz S, Sümer Z, Kaya S, Hasbek M, Erçöçen AR, Mcturk P. The in vitro efficacy of Nitrofurazone-Rifamycin combination. Ann Microbiol 2002;52:317-21.
11. Ebner F, Heller A, Rippke F, Tausch I. Topical use of dexpanthenol in skin disorders. Am J Clin Dermatol 2002;3:427-33.
12. Hendley JO, Ashe KM. Eradication of resident bacteria of normal human skin by antimicrobial ointment. Antimicrob Agents Chemother 2003;47:1988-90.