Often underestimated – Protection of wound margins assures efficient wound healing

Bernd v. Hallern
Introduction

Knowledge of importance of an intact wound margin is getting more and more into focus in wound management. Interaction of biological and molecular mechanisms in cell migration, cell regeneration and formation of extracellular matrix is prerequisite for wound healing, especially for chronic wounds. Thus a good activity and stability of wound margins are important for physiological wound healing.

In a post market application study experiences with skin protection series Cutimed® PROTECT (BSN medical) could be gained.

Protection of wound margins are essential procedures in the process of wound cleansing. During the last years advanced skin protection films have proven themselves practice. They provide protection to the skin for up to 72 hours. Within the total concept of advanced wound care these protection films have a high therapeutic importance and are nearly indispensable.

Following factors may contribute to an increase of complication rate and risk of recurrence and thereby lead to a severe reduction of life quality:

1. Maceration of wound margins
2. Allergic contact dermatitis
3. Mycosis
4. Residues of necrosis, e.g. after autolytic debridement

The wound margin and the surrounding of a wound not only give clear information about the efficacy of local therapy but also shows the understanding of the care staff for a complete concept of wound therapy.

In clinics an unstable and untended wound margin causes

- a delay of wound healing
- a higher risk of infections
- a reduction of life quality.

1. Maceration

Maceration is a common pathological change of the wound margin. Due to exposure of the intact epidermis to exudate the wound margin can be soaked and irritated. This can be caused by long intervals of dressing changes at semi occlusive therapy or conventional therapy. Additionally a high level of exudate and improper dressings can cause maceration which may lead to infections or pain.

A macerated wound margin from bodily fluids can be a reason for pain and infection (Fig. 1).

Fig. 1

It is better to take a skin protection creme rather than a fatty creme.

2. Allergic contact dermatitis

The event of sensitisation of wound patients is severely increased (80%) compared to healthy normal population (10-20%). One known cause among others is a long-time healing process for chronic wounds and a set of specific factors which promote sensitisation.

Many wound care patients suffer from chronic congestion that leads o an increased loss of water resulting in exsiccation eczema. This favours the invasion of potential allergens and promotes sensitisation.

Clinically papules, redning, desquamation, weeping and itching can be detected. It has to be distinguished between toxic contact eczema, maceration, local infection, mycosis, erysipelas and chronic skin diseases. If allergic contact eczema is suspected, the triggering substance has to be avoided. Generally it is recommended to treat wound patients with therapeutics that are low in allergens and without odorous substances. For cases with unknown cause a dermatologist should always be contacted.
3. Mycosis

Intact skin serves as a natural barrier for fungus and has to be protected in case of irritations like maceration or chronic skin disease. Thus mycosis often occurs in accordance with wounds and is easily overlooked and misjudged.

Predisposing factors for formation of mycosis are diabetes mellitus, adiposity or female gender. Symptoms for clinical evaluation are rending of the skin with a pale middle part and desquamation. For correct diagnosis scales should be cultured and analysed by microscopy.

4. Residues of necrosis

Every alteration of the wound margin accompanied with a delay of therapy has consequences for wound healing in case of operative wound closure or secondary healing is aimed.

Experience has shown that especially for long term autolytic debridement with hydrogels wound margins and wound surroundings are affected because a distribution of hydrogel on wound margin or surrounding skin cannot be avoided completely. This reveals the importance of a protection of wound margins and surrounding intact skin.

Cutimed® PROTECT – new products for skin protection

Experience with the new skin protection series Cutimed® PROTECT could be gained within a test on 25 patients (Fig. 2-7). Indications for the protection series, available as cream, spray or foam applicator, are all secondary healing wounds as

- leg ulcers
- decubitus
- diabetic foot in post surgery phase
- secondary healing wounds after surgery
- prevention of skin damage for incontinent patients.

Diagnostic is necessary to differentiate between:

- toxic contact eczema
- maceration
- local infection
- mycosis
- erysipelas
- chronic skin diseases (atopic dermatitis)

In particular could be observed:

- stinging neither on in intact skin nor in wounds after accidental application
- protection stays intact up to 96 hours depending on amount of exsudate and dressing changes
- maceration could be reduced
- a better adhesion of secondary dressings
- application time 30 seconds, during this time skin should not be manipulated or skin folds should be kept separately
- no allergic reactions could be observed.
Summary

Wound margins are neither in science nor in clinical daily routine in focus, even though transformations of wound margins have a strong influence in wound recovery as they are key factors for disturbed wound healing.

Prerequisite for effective wound healing is an evaluation of the wound by educated care persons. Efficient protection of wound margins requires three components: an adequate exudate management with regular dressing changes intervals, an effective protection of wound margins with long term skin protection films and an adequate skin care for the surrounding skin.

Cutimed® PROTECT is a product that provides skin and wound margin protection by forming a long lasting protection film. Due to three different application methods, protection cream, protection spray and foam applicator, Cutimed® PROTECT cannot only be applied for urinary and anal incontinence but for all wound margins and surrounding skin and is thereby an optimal protection that promotes efficient wound healing.

References


