

21. Dressing Selection

FACTORS THAT IMPACT UPON DRESSING SELECTION

The choice of an appropriate dressing or dressing system for a specific wound is determined by a number of factors. These include:

Condition of the wound

- Necrotic/Sloughy
- Dry/exuding
- Epithelializing
- Infected
- Overgranulating
- Malodorous
- Malignant
- Painful

Aim of treatment

- Facilitate healing
- Promote debridement
- Combat infection
- Absorb exudate or donate moisture
- Relieve pain
- Prevent or treat scarring
- Combat odour
- Provide concealment

Condition of surrounding skin

- Fragile
- Macerated

Influence of aetiology

- Is external compression indicated or contraindicated
- Does the wound have a realistic prospect of healing or is palliative treatment required
- Are specific topical therapies indicated e.g. use of steroids antibiotics etc

Practical considerations

- Cost
- Availability (reimbursement issues)

Anatomical location

- Difficult to dress
- Dressings affect use of normal clothing or shoes etc

The importance of some of these factors is discussed below. It is important to recognize, however, that this chapter is *not* intended to provide detailed advice on the management of specific types of wounds such as leg ulcers or pressure ulcers for example, as many excellent texts have been published on these and related topics.

Rather it seeks to illustrate how the key properties of particular dressings, may be made best utilized to provide the optimum conditions for the treatment of some types of problem wounds at a particular point in their healing cycle. It also attempts to show how an inappropriate dressing choice can adversely affect wound healing. To this end, wounds have been categorized according to their condition, using the simple black-yellow-red-pink colour classification system as a guide.

It is also important to emphasise that before any form of topical treatment is administered, every patient should be subjected to a thorough examination by a suitably qualified practitioner to identify and address any underlying medical/surgical conditions in so far as this may be possible.

BLACK NECROTIC WOUNDS

Wounds linked to a disease state

Black necrotic tissue is formed when previously healthy tissue dies and becomes dehydrated or desiccated. This can be due to a number of factors, but is most commonly caused by local ischaemia induced either by occlusion of a major blood vessel or capillary network, perhaps associated with diabetes or some other metabolic or clinical disorder.

Alternatively ischaemia can be caused by occlusion of blood vessels by unrelieved locally-applied external pressure when soft tissue is compressed between bone and an unyielding surface such as a hard chair or mattress, leading to the formation of a pressure ulcer (pressure sore).

For any necrotic wound it is therefore clearly important to identify the underlying cause, as this will to a large extent determine the nature of the treatment applied. In some instances, however, like that shown in Figure 94, no treatment is either indicated or required.

Figure 94: A necrotic toe before and after auto-amputation



In the example shown above an entire toe has become devitalized, due, it is assumed, to an interruption to the local blood supply. In this instance the toe can safely be left to auto-amputate, although there remains a real possibility that further problems caused by ischaemia may later develop in adjacent tissue. During this process the affected digit should be kept dry to prevent maceration and reduce the possibility of infection. The separation process can be relatively pain free, causing the patient little or no discomfort.

The prognosis when larger areas of tissue are affected in this way is much less favourable, typical resulting in major surgery or amputation, particularly if infection is present.

Figure 95 shows the extensive necrotic areas that developed on both feet of a patient with advanced vascular disease. The gentleman concerned was in considerable continuous pain, which was greatly exacerbated when the affected areas were dressed.

In this instance the wounds were kept as dry as possible, and an effective low-adherent silicone dressing applied until a surgical referral could be arranged.

Figure 95: Extensive areas of dry necrosis caused by ischaemia



Sometimes the necrotic tissue does not dry out and in these circumstances proteolytic bacteria begin to liquefy the dead tissue, a process which can generate a noxious odour and potentially lead to a serious infection (Figure 96).

Figure 96: Area of wet necrosis associated with diabetes



Other medical conditions, such as system lupus erythematosus, can also cause local ischaemia, which may result in widespread necrosis of limbs and digits.

Figure 97 records extensive damage, caused by this condition, which resulted in the loss of one digit and major damage to the remaining ones. The entire area was weeping and extremely painful, so an alginate dressing was applied to absorb the exudate. This also offered the advantage that it could be easily removed by irrigation with saline solution, thereby minimising the need for direct physical contact with the affected area.

With this treatment, despite the extensive tissue damage, remarkably some evidence of the formation of new granulation tissue was visible in the wound at the interface between the junction of the damaged and healthy tissue.

Figure 97: Necrosis associated with systemic lupus erythematosus

