The management of non-complex burns within the community

Superficial burns and superficial partial-thickness burns can be managed at home or on an outpatient basis. More severe injuries should be referred for specialist treatment at a burns unit. If a superficial partial-thickness burn does not show signs of healing after 10 days, the patient should be referred to the local burns and plastic surgery service as the injury may be infected or deeper than had originally been suspected.

**Assessment** A complete assessment of a patient with a burns injury will include:
- The patient’s general health;
- Significant past medical history, for example, a history of respiratory or heart disease;
- Psychosocial problems;
- Burn injury (wound) – history, type, cause, depth and percentage (see p46–47);
- Pulse, blood pressure, respirations, temperature and weight.

It is important to inspect and measure the size of the burn in a systematic way, without causing the patient further pain (see p46).

Children may require narcotic analgesia to facilitate assessment and wound management. Simple measures such as covering the wound with clear film wrap reduces pain from air exposure while the wound is being assessed and the dressing prepared.

Patients with burns to the upper limbs may benefit from immobilisation and elevation using a sling, to help reduce oedema and relieve pain.

It is also important to assess the need for prophylactic tetanus (Gower and Lawrence, 1995).

**Referral to a specialist centre** If a patient with a minor burn is going to be referred to a specialist centre, avoid the use of topical agents such as silver sulfadiazine, as they may alter the appearance of the wound. It is also an expensive means of temporarily managing a superficial injury. If a dressing is required for transfer, for patient comfort and temporary wound protection, a simple paraffin-impregnated gauze, with a secondary pad, can be applied or the wound can be covered with clear film wrap.

**Immediate burn management**

**Cooling process** The first treatment for a burn injury is to stop the burning process by the application of cool water for a minimum of 10 minutes and no longer than 20 minutes (usually until the burning sensation stops). This cools the area, relieves pain and stops the injury from progressing to a deeper burn (Lawrence, 1987).

Circumstances where cool water should not be used include facial burns, electrical burns and certain chemical burns involving metallic sodium or metallic potassium. Never use ice or iced water because this can make the burn injury worse, resulting in a deeper wound due to reduced blood flow.

**Management of simple erythema** Patients with simple erythema may find their injury painful, and be anxious and fearful of moving the affected part of the body. Management of this condition is the same as that used with minor sunburn:
- Increase the patient’s oral fluid intake;
- Administer analgesia; and
- Apply aloe vera gel or after-sun lotions containing aloe vera gel to the burn.

Aloe vera gel alleviates pain and moisturises the area. It has been used successfully in the author’s unit for treating superficial burns, although it should be used with caution in patients with sensitivities to the preservatives used (methylparabens), as this may cause a stinging sensation.

A thin hydrocolloid foam or film dressing can be applied to areas that are likely to be subjected to friction, for example, by clothing.

The burn should be reviewed after 48 hours, either via a telephone inquiry, or a clinic or home visit. The patient should be asked to make contact if the area blisters before the review so the burn can be reassessed.

**Superficial partial-thickness burns** Patients with superficial partial-thickness burns experience pain, anxiety, fear of scarring, pain on movement and interference in normal daily activities. They will require analgesia and reassurance, while the wound should be covered with a protective dressing that can also absorb any exudate.

Following a thorough assessment, any loose skin over the burn can be debrided and the resulting wound can be gently cleansed with warmed tap water, sterile saline or water, in line with local infection control policies. A simple non or low-adherent primary contact dressing covered with a pad should be applied, and the dressing should be left intact for 48–72 hours. The wound should be kept covered, clean and dry.

A thin hydrocolloid dressing may be used for burns with low-exudate levels and is useful for children who have a superficial burn. The thin hydrocolloid enables easy assessment as the wound is visible through the dressing and it does not need to be removed at the 48–72 hour review. This dressing also has the advantage of being waterproof.
Management of blisters  There is no national consensus on blister removal. However, in the case of small non-complex burns it is acceptable to leave them intact. If the blister pops, then the dead skin should be removed and a non or low-adherent wound contact dressing should be applied.

Blisters act as a protective layer against infection, but if they are large it may prove easier to puncture or snip the blister to allow drainage of exudate. If a blister is impeding movement it may also be helpful to puncture or debride it.

First review at 48–72 hours  The patient’s general health and the wound should be reviewed at 48–72 hours after the injury. When the initial inflammatory response subsides, the period of maximum exudate production is over and local oedema has subsided. At each review it is important to assess the patient’s pain and how they are managing their wound care at home.

Epithelialising and granulating wounds require a moist, warm and protective environment. A variety of dressings can be used and nursing staff should be able to select an appropriate product based on the size, site and depth of injury. A combination of non or low-adherent dressings and a secondary dressing or hydrocolloid is widely used in burns care. Hydrocolloids are suitable for patients in the community because they provide an ideal healing environment and can be left undisturbed for up to a week.

Management of deep burns  Small deeper burns covered with eschar (or scab) may be managed conservatively if the patient is unfit for, or refuses to have a skin graft.

The patient may be managed on an outpatient basis from the local burns unit, plastic surgery facility or by community staff with the support of an outreach service from the local burns and plastic surgery service. The aim of wound care is to rehydrate the eschar, by promoting natural autolysis or debridement. A choice of hydrogels or antibacterial agents can be used, depending on the wound’s appearance, the aim of treatment, the patient’s condition and preference.

Mobility and movement  The patients’ dressings should not inhibit their movement. It is recommended that burns on the hands should be managed by placing the hand in a plastic or polythene bag that will allow movement and regular inspection of the burn wound. To prevent the bag sticking to the wound, 5ml of a cream, such as silver sulfadiazine or silicone oil can be put into the bag to act as a lubricant.

The bag should be changed twice a day as it will fill with unsightly exudate which can prove difficult for the patient to manage at home. If the injury has occurred to digits only, a simple non-adherent dressing with finger stalls can be used.

Patients with non-complex burns may require referral to an occupational therapist or to a physiotherapist for help with exercise, general day-to-day activities and scar management.

Scarring  Good infection control, nutritional intake and wound management will promote wound healing. It is important to tell a patient how long the wound will take to heal and how to manage the scar once the dressings are no longer required.

If any scabs are present at the wound site, nurses and patients should leave them in place because removal increases the risk of leaving a visible scar. If necessary, a hydrogel can be used to rehydrate the area.

Fresh scars are always more noticeable than old scars but nurses can do much to allay the anxieties of patients and their families through advice and information.

Patients with minor burn injuries should reduce the risk of trauma to newly healed wounds and scars by refraining from contact sports, for example.

They should also be advised to refrain from exposing the scar to direct sunlight. Scars generally have less pigment than the rest of the skin and lack the ability to develop a protective tan. They are, therefore, more vulnerable to sunburn. Total sunblock is required for the first year following a burn injury, gradually reducing to no less than factor 15.

Reassure the patient that the colour of the scar will fade over time. They should be encouraged to massage the area with a skin cream to moisturise the scar and prevent friction or abrasions. Dry, flaky skin tends to itch and is more liable to break down. Patients can be reviewed at four to six weeks following healing, to check the scar and to allay any anxieties.

Follow-up and aftercare  Patients may be referred to a specialist unit at any time if they need assessment for scar management, psychological or functional support. Written information about wound management and care of the wound at home should be provided for the patient to take home following treatment.

Patients may forget instructions when they are in pain and upset by a traumatic injury. Key information should be provided on how to manage the wound, dressings and scarring. Advice should be given on when and where to go for ongoing management or if any adverse events occur before the next review.

REFERENCES