Care of Burns in Scotland
National Managed Clinical Network

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Paediatric Guideline - Burn Dressing Guideline

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NOTE

This guideline is not intended to be construed or to serve as a standard of care. Standards of care are determined on the basis of all clinical data available for an individual case and are subject to change as scientific knowledge and technology advance and patterns of care evolve. Adherence to guideline recommendations will not ensure a successful outcome in every case, nor should they be construed as including all proper methods of care or excluding other acceptable methods of care aimed at the same results. The ultimate judgement must be made by the appropriate healthcare professional(s) responsible for clinical decisions regarding a particular clinical procedure or treatment plan. This judgement should only be arrived at following discussion of the options with the patient, covering the diagnostic and treatment choices available. It is advised, however, that significant departures from the national guideline or any local guidelines derived from it should be fully documented in the patient's case notes at the time the relevant decision is taken.

Contents

Superficial Dermal <3% TBSA

Small burns can be managed locally or within ED. Superficial dermal burn wounds of <3% should be treated as follows:

1. If key structures are involved (such as hands, feet, face, perineum) or if there are concerns about infections or mechanism of injury please discuss with your local burns' facility.
2. Deroof blisters and debride loose skin.
3. Cleanse with warmed normal saline or tap water.
4. Obtain wound swabs.
5. Apply a non-adherent dressing (as per local wound formulary). Ideally use an anti-microbial dressing, unless not immediately available.
6. Apply a secondary dressing of gauze/burns swabs and crepe bandage if required
7. Reassess wounds after 24-48 hours and redress as above
8. Further dressing changes should be carried out as dressing application guidelines dictate or if exudate strikes through or infection is present. Wounds should be redressed until area is completely re-epithelialised.
9. Apply moisturiser and massage healed skin 3-4 times daily.

Superficial Dermal >3% TBSA

Superficial dermal burn wounds >3% should be treated as follows:

1. Consider referral to local burns' facility for further management.
2. Deroof blisters and thoroughly debride loose skin
3. Obtain wound swabs
4. Cleanse with warmed normal saline or tap water
5. Apply a non-adherent dressing (as per local wound formulary). Ideally use an anti-microbial dressing, unless not immediately available.
6. Apply a secondary dressing of gauze swabs and crepe bandage.

Biobrane

For confluent superficial burns >3%, some plastic surgery facilities will use Biobrane. Please follow the steps below in this instance:

1. Where possible apply Biobrane biosynthetic dressing as per application guidelines
2. Consider cover with prophylactic antibiotics e.g. Co-Amoxyclav and / or anti-microbial dressings as per local guidelines
3. Inspect wounds 24-48 hours after application of Biobrane. Treat any pockets of fluid as per Biobrane guidelines.
4. Inspect wounds again at 72 hours post application and remove method of fixation
5. When Biobrane is well adhered and no exudate is evident allow the patient to bathe (no sooner than 5 days) and apply tubifast over the wound
6. Trim loose areas of Biobrane as the wound heals. Apply moisturiser to healed skin 3-4 times daily.

Deep Dermal (any and all TBSA)

Deep dermal burn wounds should be treated as follows:

1. Consider discussion with your local burns facility, if you think the wound may require skin graft.
2. Deroof blisters and debride loose skin
3. Cleanse with warmed normal saline or tap water
4. Obtain wound swabs
5. Apply an anti-microbial, non-adherent dressing (as per local wound formulary)
6. Apply a secondary dressing of gauze swabs and crepe bandage
7. Re-assess the wound within 24-48 hours
8. If the wound is not for surgical management continue to dress with an anti-microbial, non-adherent dressing until healed.
9. After wound healing has occurred moisturise and massage the wound 3-4 times daily.
10. Deep dermal burn wounds will most likely scar and will need review in the scar management/pressure garment clinic.

Full Thickness <1%TBSA

Full thickness injuries of less than 1% should be treated as follows:

1. Debride loose skin from wound
2. Cleanse with warmed normal saline/tap water
3. Obtain wound swabs
4. Apply an anti-microbial, non-adherent dressing (as per local wound formulary)
5. Apply a secondary dressing of gauze swabs and crepe bandage if required
6. A prompt referral to the burns/plastics clinic should be made for a surgical assessment to take place.
7. If the patient does not require surgical intervention then continue to dress the wounds as above until healing has taken place.
8. After wound healing has occurred the skin should be moisturised and massaged 3-4 times daily
9. Refer the patient to the scar management/pressure garment clinic.

Full Thickness >1% TBSA

Full thickness injuries of more than 1% TBSA should be treated as follows:

1. Admit to the appropriate ward for surgical/plastics review
2. If the injury is fully circumferential an urgent surgical referral to assess the need for escharotomy should be carried out.
3. Debride loose skin
4. Cleanse with warmed normal saline/tap water
5. Obtain wound swabs
6. Apply an anti-microbial, non-adherent dressing (as per local wound formulary)
7. Apply a secondary dressing of gauze/burns swabs and crepe bandage if required
8. A further surgical review should be carried out within 24 hours
9. The wounds will continue to be dressed as above until surgical intervention can occur

Facial wounds

Facial wounds will not usually have a dressing applied. They will be nursed exposed in a heated cubicle. If the wound does not require surgical management, the treatment would be as follows:

1. Any significant facial burns should be discussed with your local burns facility. Consider opthalmology review if any eye involvement. Consider anaesthetic review if any intraoral involvement.
2. Ensure cubicle is warm
3. Deroof blisters and gently debride loose skin
4. Cleanse wound with warmed normal saline or tap water
5. Obtain wound swabs
6. Apply topical ointments if prescribed
7. Repeat wound care 2-3 times daily
8. Nurse the child in an upright position to reduce swelling
9. When the crusts have lifted moisturise and massage the healed skin 3-4 times daily

Hand and feet wounds

Burn injuries to hands or feet should be treated as follows:

1. Consider discussion with local burns facility, particularly for any circumferential injury.
2. Deroof blisters and debride loose skin
3. Cleanse with warmed normal saline or tap water. The hand or foot may be placed into a basin of warm water for cleansing
4. Obtain wound swabs
5. If the digits are affected apply individual dressings to each digit
6. Dress with a non-adherent anti-microbial dressing
7. Apply a secondary dressing of gauze swabs. Bandage hands/feet into a position which will preserve function.
8. Reassess wounds within 24-48 hours
9. If no surgical intervention is required redress wounds as above until wound healing has occurred
10. All injuries which involve a joint should be assessed by the physiotherapist or occupational therapist.
11. After wound healing has occurred the skin should be moisturised and massaged 3-4 times daily
12. Refer to the scar management/pressure garment clinic for assessment

Perineal wounds

Perineal wounds should be treated as follows:

1. Consider discussion with local burns facility
2. Deroof blisters and debride loose skin
3. Cleanse with warmed normal saline/tap water
4. Consider the need for a urinary catheter
5. Obtain wound swabs
6. Apply a non-adherent wound dressing and burns swabs. If the child wears a nappy then put the nappy on over the dressings.
7. Renew dressings as child soils or exudate dictates
8. Cleanse and redress areas at least twice daily
9. Continue with this regime until wound has healed
10. After wound healing has occurred the skin should be moisturised and massaged 3-4 times daily

Recommended dressings

We would recommend a non-adherent antimicrobial dressing for all paediatric burn cases. This is to minimise the risk of infection, particularly toxic shock syndrome (TSS), which can occur in young patients. It can also reduce the need for systemic antibiotics.
The most commonly used dressings are:

- Urgotul Ag
- Acticoat
- Bactroban ointment with Mepitel

Toxic Shock

If concerned about Toxic Shock please refer to guidance and treatment algorithms from the British Medical Journal- Best Practice. Search for 'Toxic Shock Syndrome' on bestpractice.bmj.com.

Resources

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