

Burn Wound Bed Preparation and Blister Management in the Acute Adult Burn

Site Applicability

All VCH & PHC Acute sites

Exception: This document is not intended for Ambulatory and Community.
See Ambulatory & Community document (in development).

Practice Level

RN: Specialized skill

- RNs working on the BC Professional Firefighters' Burn (BCPFF), Plastic and Trauma Unit (BPTU)
- WOCN/NP

Policy Statement

Burn wound debridement and blister management outside the BC Professional Fire Fighters' Burn, Plastic and Trauma Unit:

- When burn wound debridement is required outside of the BCPFF BPTU, a WOCN, NP or physician consult is required

Burn Wound Debridement and Blister Management on BPTU:

- Prior to debridement, the burn wound must be assessed by the physician and an order obtained to carry out the debridement and wound bed preparation
- Using an instrument pack of scissors and forceps only, BPTU RN's debride only loose non-adherent devitalized tissue, intact blisters, non-intact blisters, slough and pseudo-eschar build up resulting from preceding dressing applications
- BPTU RN's DO NOT debride intact tissue, adhered necrotic tissue or debride in areas where actual or potential underlying structures may be present including surgical hardware, organs, bone, tendons and blood vessels.
- In the event that debridement is required under these circumstances it becomes the physician responsibility to complete the debridement

Need to Know

Burn wounds must be assessed by a physician to determine burn wound depth and total body surface area affected. In order to effectively assess the depth of a burn wound, it is important to remove as much de-vitalized tissue and blistering as possible. This serves several functional purposes when managing a burn wound including:

- Improved wound bed visualization
- Improved contact between topical dressing materials and the wound bed
- Decreased bacterial growth
- Improved mobility over joints

Burn wound depth is described as epidermal, superficial dermal, deep dermal or full thickness. The appearance of the wounds can be described as follows:

- **Epidermal** – involves only the epidermis. The wound is typically pink to dark red in colour and dry. No blisters will be present in the wound bed. Sunburn is an example of an epidermal burn. Epidermal burns should not be included when calculating the patient's total body surface area (TBSA).

- **Superficial Dermal** – injury extends into the papillary dermis and is characteristically blistered, edematous and painful. The colour of the wound bed may be pink to dark red with a wet appearance. Superficial dermal wounds maintain good capillary refill.
- **Deep Dermal** – injury extends into the reticular dermis and may initially have the presence of blisters and edema and may or may not be painful. The wound bed may be pink, red, white or yellow in colour and small petechiae may be present throughout the wound indicating a deeper injury. Capillary refill is not present.
- **Full Thickness** – involves the entire dermis and extends into the subcutaneous tissue. Some full thickness wounds may also involve muscle and bony structures. The wounds are generally dry and/or waxy and may be yellow, brown, black or charred in appearance. The wound(s) will have no capillary refill present, are generally insensate and hair can be removed freely from the follicles when pulled with fingers or forceps.

In general, epidermal burns require no wound care. Superficial dermal will likely heal within 2 to 3 weeks with appropriate wound care. Deep dermal and full thickness injury requires surgical intervention to excise the damaged area and cover with a skin graft. Wound debridement of a full thickness wound is never completed by an RN. Debridement and wound bed preparation of superficial and deep dermal injury including pseudo-eschar removal is commonly carried out by the RN when education and training has been provided.

Pseudo-eschar is an adherent surface that forms over the wound bed when antimicrobial cream products combine with wound exudate. Pseudo-eschar has a shiny yellow appearance and can often be mistaken for eschar. Pseudo-eschar can be difficult to remove from the wound bed, especially if it is allowed to build up on the wound surface over a number of days. It is important to remove any pseudo-eschar build up with each dressing change to promote wound healing and improve wound bed visualization.

Equipment & Supplies

- Instrument pack (metal scissors and forceps)
- Dressing tray
- Non-Sterile Bowl
- Gloves
- Tap water
- Agency approved antiseptic - *optional*
- Non-Sterile Gauze
- Personal protective equipment
- Dressing supplies as per physician, WOCN or NP order

Procedure

Note: Tap water used in this procedure is municipally treated tap water. If water source is not municipally treated use sterile normal saline, sterile water or boil water source prior to using.

1. Appropriate personal protective equipment (PPE) should be worn when performing wound care to protect the caregiver(s) from blood and body fluid exposure. PPE should include a mask with eye protection, non-sterile gown, non-sterile gloves and hat.
2. Provide appropriate analgesic as per physician order or as per Healthy Authority/agency policy prior to procedure. Ensure enough time has elapsed prior to the procedure to ensure the analgesic has had time to take effect.
3. Additional IV analgesic may be required during the procedure
4. Explain the procedure to the patient and encourage the patient to ask for breaks if required.
5. Burn wound cleansing, debridement and blister management is a clean technique while dressing application is considered a sterile technique.

6. Wound cleansing, debridement and blister management may occur at the bedside or in a bathing area such as a tub or shower.
7. Cleanse wounds with non-sterile gauze, tap water and wound cleanser of choice as per Health Authority/agency policy.
8. As cleansing of the burn wound progresses, the texture of the gauze is often adequate to remove loose tissue from the wound bed.
9. If necessary, grasp loose tissue with the forceps and remove from the wound bed with a gentle pulling motion.
10. Hold the scissors in a parallel plane to the burn wound so the patient is not stabbed with the scissor end.
11. If the tissue remains attached to intact wound edges, do not forcibly remove by pulling on the tissue. instead gently trim the dead tissue away from the intact edges using the scissors while using the forceps to gently hold the tissue up and away from the burn wound bed.
12. If intact and non-intact blisters greater than 2 cm in diameter are present in the wound bed or overlying joints, they must be de-roofed and removed.
13. If the blister is intact, grasp a small piece of the blister near the top with forceps and pierce the blister sac with scissors to release the blister contents.
14. Once the blister is broken, grasp the remaining loose tissue with forceps and remove with a gentle pulling motion. If the blister is adhered to intact tissue, do not forcibly remove by pulling the tissue, instead gently trim the dead tissue away from intact edges using scissors while using the forceps to gently hold the tissue up and away from the burn wound bed.
15. If the blister has spontaneously broken, use forceps to grasp any remaining loose tissue and gently pull away from the wound bed.
16. If pseudo-eschar is present in the wound bed, use forceps to loosen and lift the eschar at the wound edge. Once the pseudo-eschar is loose, grasp the loose edge with forceps and gently pull away from the wound bed.
17. In general, de-vitalized tissue present in a superficial or mid dermal injury is easily pulled away from the wound bed as it is non-adherent and will not cause any additional trauma to the underlying wound bed.
18. Once all the loose tissue and blistering has been removed from the entire wound bed, cleanse the wound again to ensure all debris has been removed from the wound.
19. Apply wound products as ordered by physician, WOCN or NP.

Patient/Client/Resident Education

- Educate the patient regarding the various pain management modalities that will be used throughout the procedure (oral analgesics, IV analgesics, nitrous oxide use and/or conscious sedation).
- Explain to the patient the process of burn wound debridement.
- Educate the patient regarding the expected outcomes of burn wound bed preparation.

Site Specific Practices

VGH BPTU uses Chlorhexidine Gluconate 2% Soap (Germi-Stat Gel 2%®) as the wound cleansing agent of choice.

Documentation

- Document any wound care provided as per Health Authority/agency policy including wound dimensions (TBSA), colour, drainage and topical dressing products applied.
- Document pain assessment and any analgesics given throughout the procedure as per Health Authority/agency policy.
- Update patient care plan and/or Kardex with specific wound management practices and subsequent dressing changes.

Related Documents

- Acute Burn Care Including Initial Assessment and Resuscitation (*in development*)
- CPD B-140: [Application of a Topical Antimicrobial Cream Dressing \(Flamazine\) to a Burn Wound](#)

- CPD B-151: [Facial Care for Burns](#)
- BC Provincial Nursing Skin and Wound Product Information Sheet: [Acticoat Flex for Burns](#)
- [Adult Major Burn Clinical Practice Guideline](#)

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