VANDERBILT UNIVERSITY MEDICAL CENTER

Guideline: Pediatric Friction Burn Management Guideline

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I. Purpose

To guide the evaluation and management of pediatric patients with friction burns.

II. Population and Inclusion Criteria

This protocol applies to the pediatric patients with friction burn injuries treated at Monroe Carell Jr. Children's Hospital at Vanderbilt (Monroe Carell). The following patients should have a burn consult placed:

a. Partial thickness friction burns ≥5% TBSA
b. Full thickness friction burn of any size
c. Friction burn involving the hands, feet, face (unless that area is actively managed by another service – plastic surgery, ortho, ENT, OMFS)
    i. Consider Plastics-Hand consult when there is a full thickness burn to the hand involving the palmar surface and/or crossing joints
d. Trauma or Emergency attending discretion

The following patients do not require a burn consult:

a. Trauma patients with only soft tissue injuries that are actively managed by the plastic surgery team
b. Involvement of only the joint that is actively managed by the orthopedics team

III. Definitions

A friction burn is characterized by mechanical tissue disruption and heat causing shearing of the epithelium. The extent of the wound is determined during initial debridement and follows that same methods as other burn mechanisms utilizing total body surface area (TBSA) for size and partial/full thickness classification for depth. The Lund-Browder, Rule of 9's, and Palmar Method can be used for determining the TBSA.

IV. Assessment

a. Patients with friction burns need to be evaluated for traumatic injuries and foreign bodies
b. Friction burns, particularly those caused in motor vehicle accidents, are at an increased risk for infection due to the exposure of dirt, debris, soil, and foreign bodies
c. Determination of TBSA/depth should follow routine burn wound care procedures

V. Diagnostics

a. Imaging and evaluation as needed per pediatric emergency medicine / pediatric trauma team
b. Repeat imaging following debridement when there is concern for retained foreign bodies

VI. Treatments

Initial evaluation and management follows standard burn treatment practices. The following considerations should be made:

a. Wound care
    i. Thorough, aggressive debridement (with a scrub brush) under sedation to remove all debris and foreign bodies
    ii. Possible need for OR debridement for deep wounds
    iii. Daily wound care per burn protocol or may be a candidate for extended wear dressings
        i. Daily wound care options may include:
            1. Bacitracin, xeroform, kerlix, ace
            2. Wet-to-dry: Dakins- or Puracyn-soaked gauze, kerlix, ace

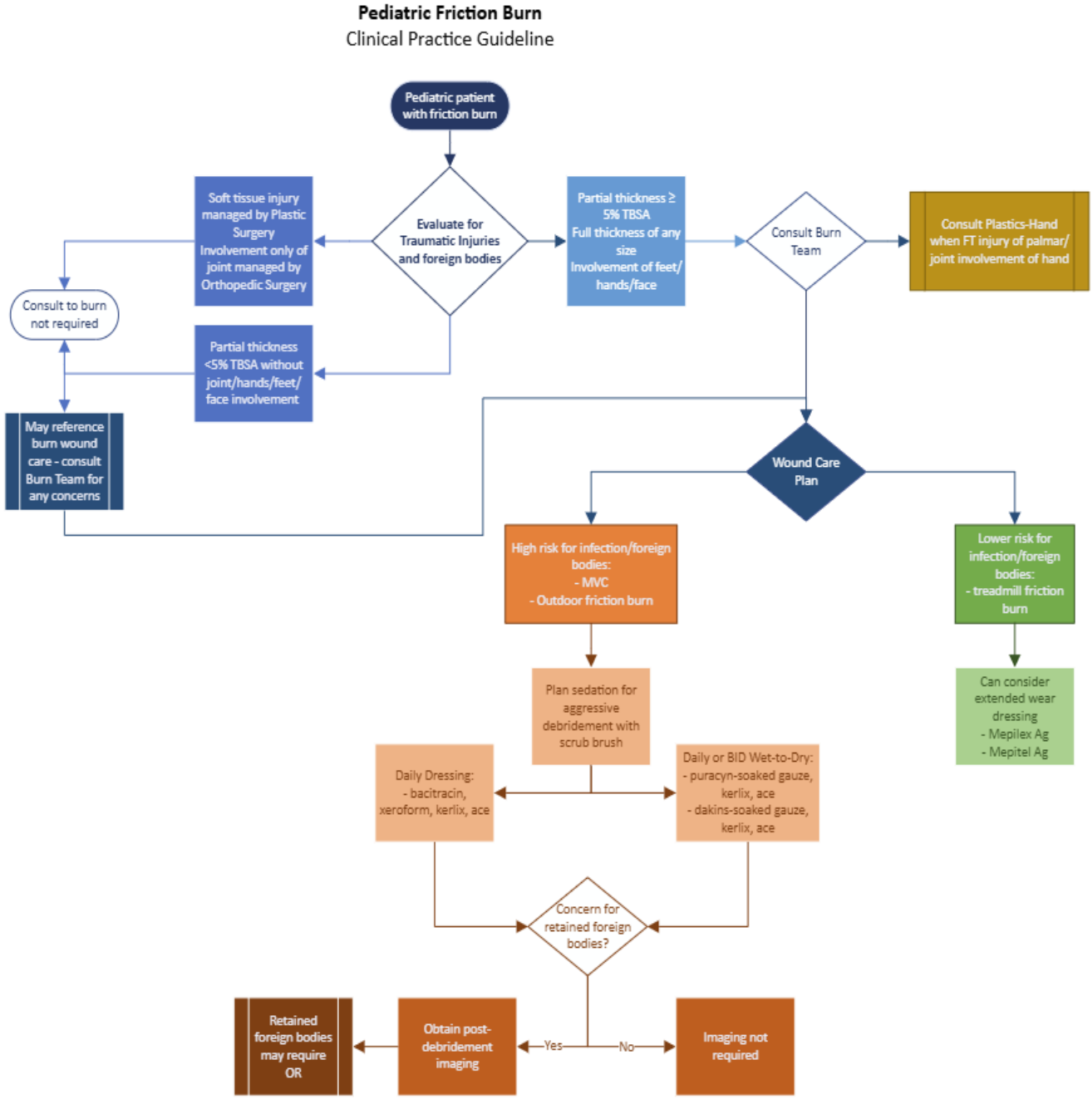
ii. Extended wear dressings are reserved for wounds with lower risk of infection and intolerance of daily wound care
    1. Mepitel Ag: ideal for hands to improve mobility, allows splint wear
    2. Mepilex Ag: ideal for larger surface areas of the body

b. Consults
   In addition to standard burn consults, consider:
   i. Pediatric Plastics – Hand: Full thickness burns of the hand involving joints
   ii. Pediatric Plastic Surgery: Full thickness burns with degloving for evaluation of flap

c. Follow-up
   i. All friction burn patients should be evaluated in burn clinic within 1 week of discharge

Appendix I: Algorithm

[CPG] Pediatric Friction Burns.pdf



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