FROSTBITE

Management in the Emergency Department

What you need to know

WHO IS AT RISK?

Frostbite often occurs in winter, but it’s important to remember that injuries can occur secondary to refrigerant chemicals, dry ice, CO2 fire extinguishers, etc.

- Homelessness
- Psychiatric disturbance
- Alcohol consumption
- Inadequate clothing

MANAGEMENT: FROZEN WOUNDS

Remove Constrictive Clothing & Jewellery
This improves blood flow to the wound

Tetanus Prophylaxis
Standard tetanus prophylaxis. No evidence for prophylactic antibiotics

Consider TPA Candidacy
In consultation with plastic surgery, consider for early presentations (<24h) of life-altering injuries. Practice varies by centre

Rapid Rewarming
Submerge wound in circulating water between 37-39°C until thawed

Reversible NSAIDs
Ibuprofen 6mg/kg PO BID for 5+ days

Avoid Refreezing
Significant morbidity can result – e.g. don’t discharge the homeless without a good plan!

HOW TO REWARM

DO
- Rewarm as soon as possible
- Completely submerge wound for faster thaw
- Target water temp 37–39°C
- Use flowing water (sink/shower) or change water frequently - i.e. keep water warm!
- Give analgesics

DON’T
- Use dry heat: this results in a slower thaw (damage and ischemia)
- Use hotter temperatures: this can result in burns!
- Allow refreezing

WOUND CARE TIPS

Clear Blisters
De-roof or aspirate clear and milky blisters. These contain inflammatory mediators that can harm underlying tissue.

Controversial. Some recommend de-roofing hemorrhagic blisters while others recommend leaving intact.

Hemorrhagic Blisters

Dressings
Use Polysporin & Adaptic dressings with dressing placed between digits to prevent adherence. Change every other day. Once demarcated & mummified, change to Betadine at margins only.

Use Aloe Vera
Although Aloe Vera is frequently cited, there is little evidence to support its use.

Resources:

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